

Optical Filters

Catalogue

POTAPENKO GLASS & FILTERS

EXPORT DIVISION

Version 3, 2010

www.opticalglass.com.ua

The Standard DIN 58191 is used to describe the filter effect and for identification (see the data section). According to the intended application and spectral range being considered, one filter type can have several DIN identifications.

Long pass filters Code letters LP

A long pass filter is characterized by the fact that a range of low transmission (blocking area) in the short wavelength region is joined to an area of high transmission (pass band) in the long wavelength region (see Figure 1).

λ_p : The limit of the pass range. Above this wavelength, the spectral internal transmittance does not fall below τ_{ip} within a certain spectral range.

The most important characteristics are:

τ_{max} : Maximum of the spectral transmittance in the pass range

λ_m : Center wavelength (spectral position):
If those wavelengths in which the spectral transmittance is $\tau_{max}/2$ are identified as $\lambda'_{1/2}$ and $\lambda''_{1/2}$, then
$$\lambda_m = (\lambda'_{1/2} + \lambda''_{1/2})/2$$

HW: Half-width: Curve width at $\tau_{max}/2$

The DIN identification is composed of the code letters BP, the center wavelength, and the half-width in nm, which are separated by a slash. The information refers to the appropriate reference thickness.

Neutral density filters Code letter N

Neutral density filters exhibit nearly constant spectral transmittance in a limited spectral range, for example from 400 nm to 700 nm, and are therefore only slightly wavelength dependent.

The DIN identification for neutral density filters is composed of the code letter N and the target transmittance level at 546 nm. The information is based on the appropriate reference thickness.

The DIN identification for long pass filters consists of the letters LP together with the edge wavelength in nm. The edge position is based on the appropriate reference thickness.

Short pass filters Code letters KP

In principle, the same comments which apply to the long pass filters apply to the short pass filters, only their pass range is at lower wavelengths than the blocking range.

The DIN identification for short pass filters consists of the letters KP and the edge wavelength in nm. The edge position is based on the appropriate reference thickness.

Band pass filters

Code letters BP
Band pass filters are characterized by the fact that they connect an area of high transmission (pass band) and shorter and longer wavelength areas with lower transmission (blocking ranges).

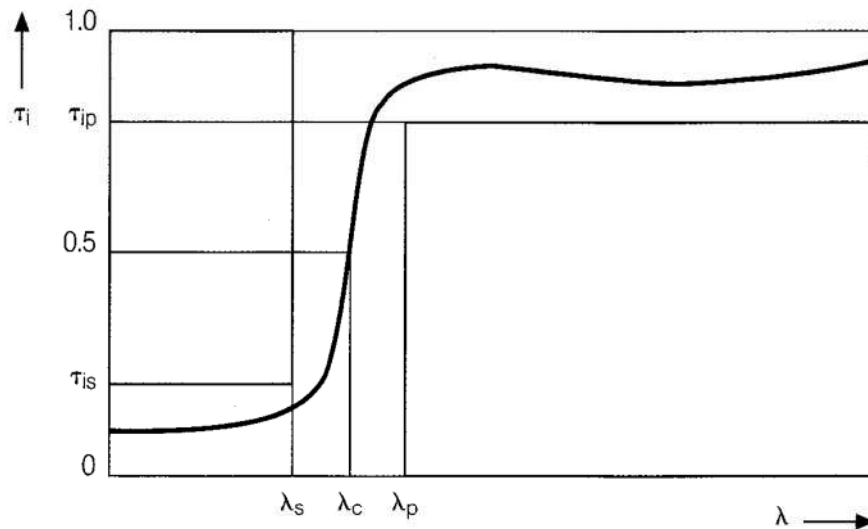


Figure 1: Long pass filter

The important properties applicable to filter glasses are:

λ_c : Edge wavelength at which point the spectral internal transmittance is one-half of the maximum value of the pass range.

λ_s : The limit of the blocking range. Below this wavelength, the internal transmittance τ_{is} not exceeded for a certain spectral region.

Catalogue Thickness 2.5 mm

Reflection Factor 0.9135

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.005	0.158	0.465	0.661	0.772	0.866	0.928	0.955	0.966	0.977	0.983	0.977	0.972	0.955	0.912	0.818	0.582	0.266	0.067	0.016	0.004
Ti	0.000	0.000	0.000	0.005	0.173	0.509	0.723	0.845	0.948	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.998	0.895	0.637	0.291	0.073	0.017	0.005
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.003	0.002	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.025
Ti	0.003	0.002	0.002	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.027
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.126	0.335	0.501	0.592	0.631	0.613	0.579	0.531	0.487	0.410	0.345	0.299	0.282	0.251	0.237	0.237	0.224	0.237	0.237	0.251	0.266	0.282	0.224	0.150
Ti	0.138	0.367	0.549	0.648	0.691	0.671	0.634	0.581	0.533	0.449	0.377	0.327	0.309	0.275	0.260	0.260	0.245	0.260	0.260	0.275	0.291	0.309	0.245	0.164
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.100	0.075	0.063	0.053	0.056	0.067	0.067	0.067	0.067	0.084	0.100	0.141	0.178	0.200	0.237	0.266	0.251	0.234	0.211	0.119	0.027	0.002		
Ti	0.109	0.082	0.069	0.058	0.062	0.073	0.073	0.073	0.073	0.092	0.109	0.155	0.195	0.218	0.260	0.291	0.275	0.257	0.231	0.130	0.029	0.002		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n								1.5400					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.384	0.190	2.000	1.0
B	0.237	0.106	1.900	1.0

Properties

Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
D	1	490	89	2.84	0.39	1.8	0.2	ultra-violet	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

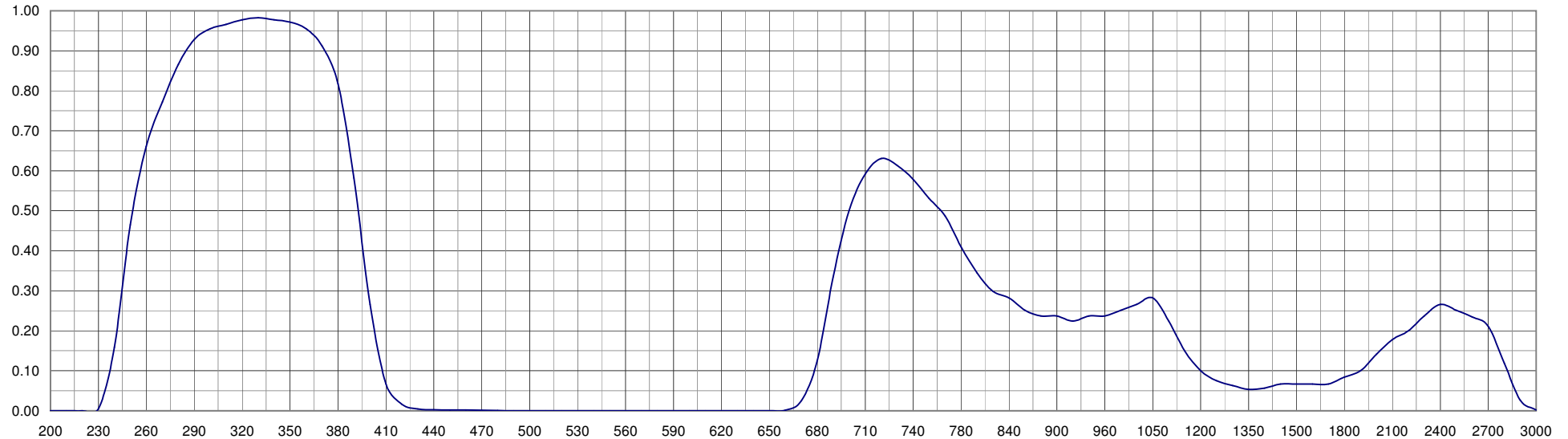
GOST UVC1

CLOSE TO

SCHOTT GLASS UG5

&

HOYA GLASS U330



Catalogue Thickness 2.5 mm

Reflection Factor 0.909

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.141	0.376	0.596	0.737	0.808	0.851	0.861	0.846	0.813	0.729	0.537	0.211	0.009	0.000	0.000	0.000	0.000
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.155	0.413	0.655	0.810	0.889	0.936	0.947	0.931	0.894	0.801	0.591	0.232	0.010	0.000	0.000	0.000	0.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.000	0.009	0.024	0.045	0.060	0.045	0.027	0.013	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.000	0.010	0.026	0.049	0.066	0.049	0.029	0.015	0.006	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.003	0.002	0.000	0.000	0.000		
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.003	0.003	0.003	0.000	0.000	0.000		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n								1.5570					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.719	0.257	0.072	1.0
B	0.663	0.231	0.036	1.0

Properties

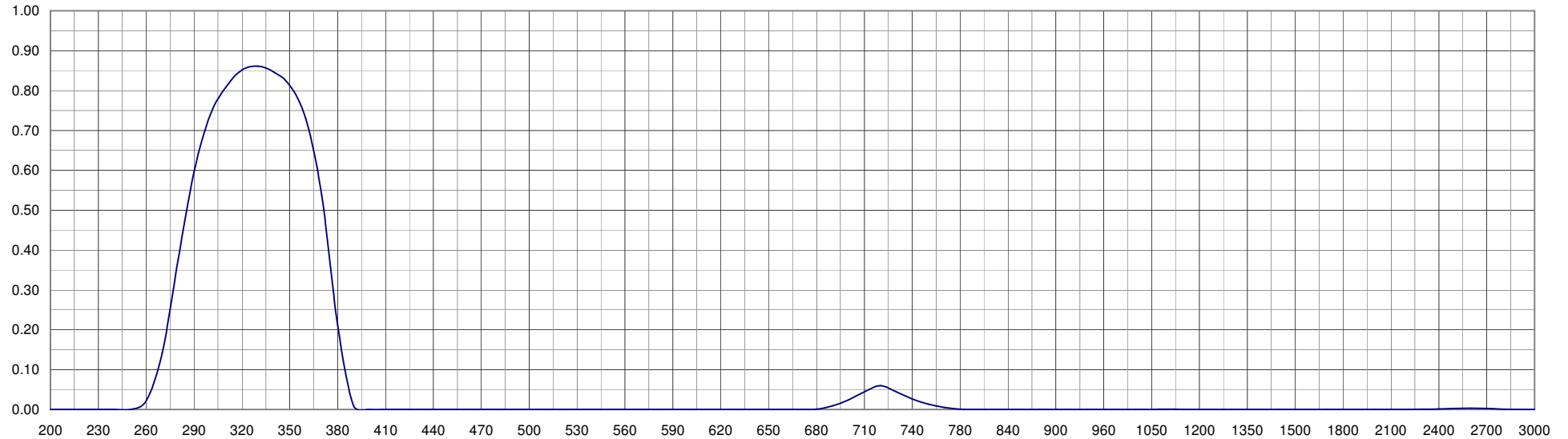
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
D	1	480	93	2.65	0.51	1.8	0.3	ultra-violet	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST UVC2 CLOSE TO SCHOTT GLASS UG11 & HOYA GLASS U340



Catalogue Thickness 2.5 mm

Reflection Factor 0.914

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.001	0.106	0.447	0.696	0.818	0.902	0.944	0.961	0.972	0.983	0.983	0.983	0.966	0.950	0.891	0.733	0.398	0.094	0.007	0.000	0.000
Ti	0.000	0.000	0.000	0.001	0.116	0.489	0.762	0.895	0.987	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.976	0.802	0.436	0.103	0.007	0.000	0.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.018	0.089
Ti	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.019	0.098
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.224	0.410	0.531	0.575	0.556	0.522	0.468	0.398	0.345	0.251	0.200	0.158	0.141	0.126	0.126	0.126	0.133	0.150	0.168	0.188	0.211	0.266	0.266	0.211
Ti	0.245	0.449	0.581	0.630	0.609	0.571	0.512	0.436	0.377	0.275	0.218	0.173	0.155	0.138	0.138	0.138	0.146	0.164	0.184	0.206	0.231	0.291	0.291	0.231
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.150	0.119	0.084	0.071	0.063	0.063	0.063	0.079	0.100	0.100	0.100	0.106	0.126	0.141	0.158	0.168	0.168	0.162	0.141	0.100	0.035	0.003		
Ti	0.164	0.130	0.092	0.077	0.069	0.069	0.069	0.087	0.109	0.109	0.109	0.116	0.138	0.155	0.173	0.184	0.184	0.177	0.155	0.109	0.039	0.003		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n								1.5400					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.488	0.355	3.000	1.0
B	0.349	0.325	3.000	1.0

Properties

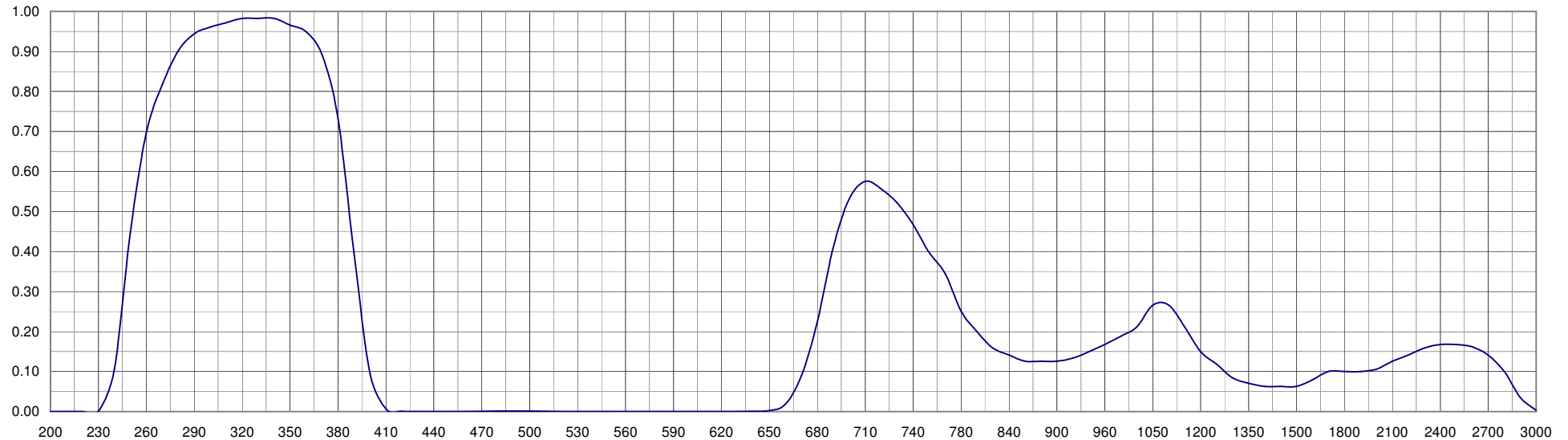
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
D	2	480	104	2.84	0.4	1.8	0.2	ultra-violet	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST UVC5 CLOSE TO SCHOTT GLASS UG5 & HOYA GLASS U330



Catalogue Thickness 2.5 mm

Reflection Factor 0.918

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.063	0.237	0.473	0.653	0.772	0.818	0.827	0.763	0.550	0.178	0.008	0.000	0.000	0.000
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.069	0.258	0.515	0.711	0.840	0.890	0.901	0.831	0.598	0.194	0.009	0.000	0.000	0.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.000	0.000	0.006	0.035	0.094	0.168	0.200	0.178	0.126	0.067	0.038	0.021	0.011	0.007	0.006	0.005	0.004	0.004	0.004	0.004	0.003	0.002	0.001	0.000
Ti	0.000	0.000	0.006	0.039	0.103	0.183	0.217	0.194	0.137	0.073	0.041	0.023	0.012	0.008	0.006	0.005	0.005	0.004	0.004	0.004	0.004	0.002	0.001	0.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.007	0.008	0.018	0.050	0.032	0.027	0.038	0.047		
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.008	0.009	0.019	0.055	0.034	0.029	0.041	0.052	0.000	0.000

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n								1.5200					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
V									

Color Specifications

	x	y	T	Thick
A	-	-	0.037	1.0
B	0.378	0.101	0.018	1.0

Properties

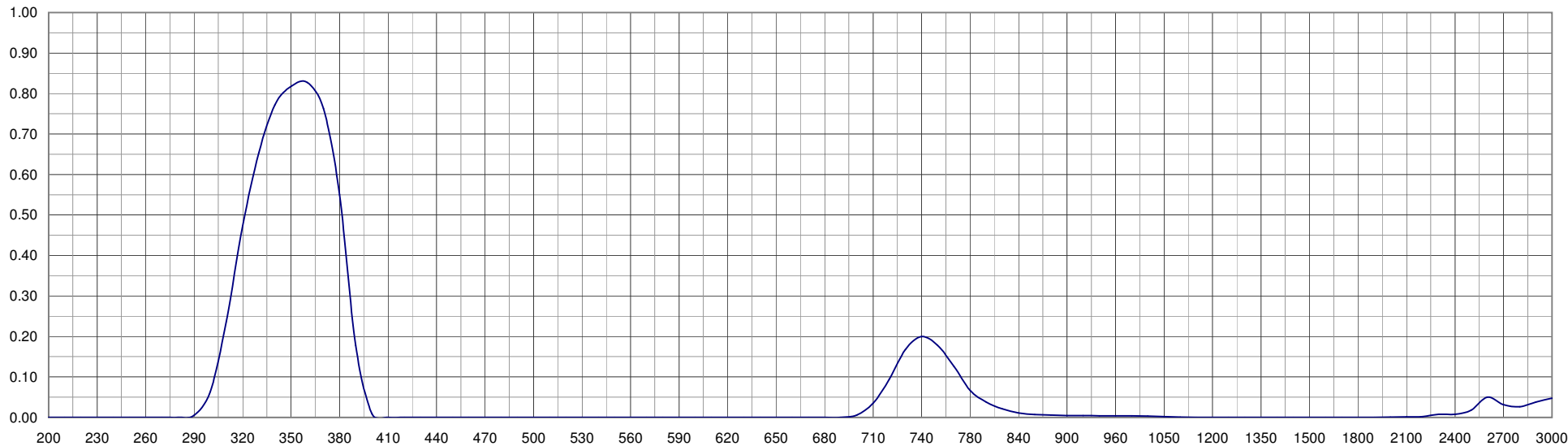
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
A	1	490	92	2.58	1.05	2.9	0.3	ultra-violet	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST UVC6 CLOSE TO SCHOTT GLASS UG1 & HOYA GLASS U360



Catalogue Thickness 1.5 mm

Reflection Factor 0.921

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.014	0.086	0.234	0.407	0.566	0.684	0.740	0.689	0.623	0.422	0.172	0.038	0.006	0.001	0.001
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.016	0.093	0.255	0.442	0.614	0.743	0.804	0.748	0.677	0.458	0.187	0.041	0.006	0.002	0.001
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.001	0.006	0.035	0.106	0.197	0.269	0.320	0.331	0.320	0.269	0.234	0.211	0.204	0.197	0.197	0.197	0.197	0.197	0.191	0.191	0.178	0.145	0.102	0.072
Ti	0.001	0.006	0.038	0.115	0.214	0.292	0.347	0.360	0.347	0.292	0.255	0.229	0.222	0.214	0.214	0.214	0.214	0.214	0.207	0.207	0.193	0.157	0.111	0.079
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.053	0.027	0.017	0.017	0.014	0.014	0.011	0.011	0.014	0.014	0.014	0.016	0.029	0.040	0.061	0.078	0.130	0.166	0.191	0.219	0.155	0.080		
Ti	0.058	0.029	0.018	0.018	0.016	0.016	0.012	0.012	0.015	0.015	0.015	0.017	0.031	0.044	0.066	0.084	0.142	0.180	0.207	0.238	0.168	0.087	0.000	0.000

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n								1.5090					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	-	-	0.028	1.0
B	0.191	0.023	0.018	1.0

Properties

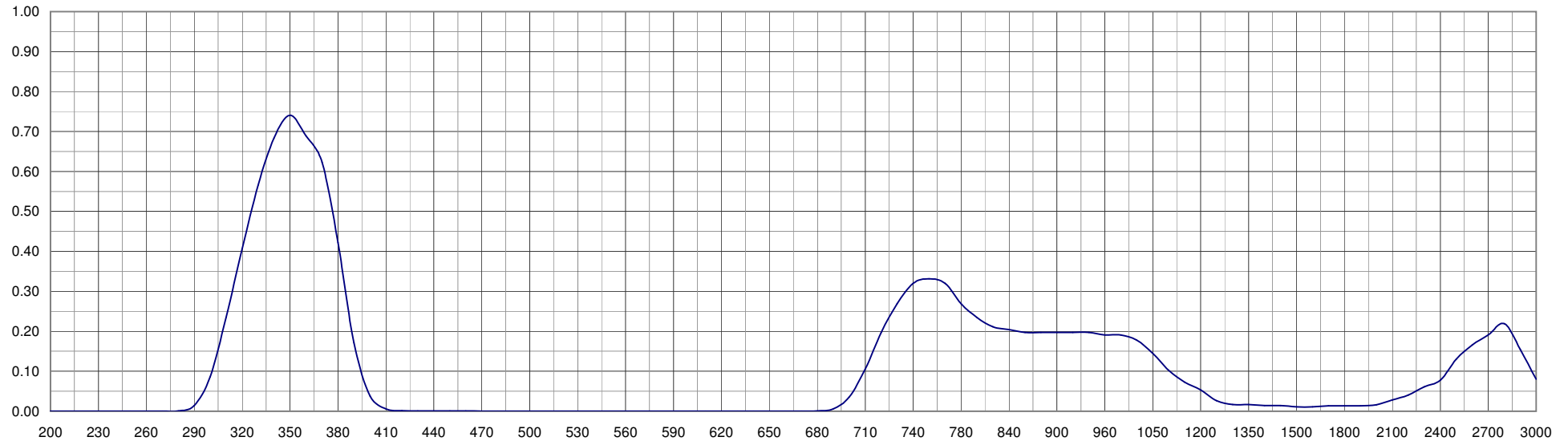
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
A	5	540	60	2.46	1.11	2.8	0.3	ultra-violet	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST UVC8 CLOSE TO SCHOTT GLASS UG1 & HOYA GLASS U350



Catalogue Thickness 2.5 mm

Reflection Factor 0.917

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.079	0.237	0.437	0.649	0.794	0.827	0.827	0.813	0.750	0.661	0.543
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.087	0.258	0.476	0.708	0.866	0.901	0.901	0.886	0.817	0.720	0.592
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.422	0.299	0.178	0.067	0.017	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.460	0.325	0.194	0.073	0.018	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.000	0.002	0.013	0.035	0.067	0.084	0.094	0.094	0.094	0.094	0.094	0.100	0.112	0.119	0.126	0.141	0.158	0.168	0.178	0.178	0.158	0.112	0.060	
Ti	0.000	0.002	0.015	0.039	0.073	0.092	0.103	0.103	0.103	0.103	0.103	0.103	0.109	0.122	0.130	0.137	0.154	0.173	0.183	0.194	0.173	0.122	0.065	
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.025	0.015	0.014	0.020	0.024	0.019	0.017	0.028	0.033	0.042	0.119	0.251	0.376	0.501	0.631	0.708	0.794	0.708	0.447	0.316	0.282	0.299		
Ti	0.027	0.016	0.015	0.022	0.026	0.021	0.018	0.031	0.037	0.046	0.130	0.274	0.410	0.546	0.688	0.772	0.866	0.772	0.487	0.345	0.307	0.325	0.000	0.000

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n								1.5240					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.160	0.017	0.160	2.0
B	0.161	0.016	0.410	2.0

Properties

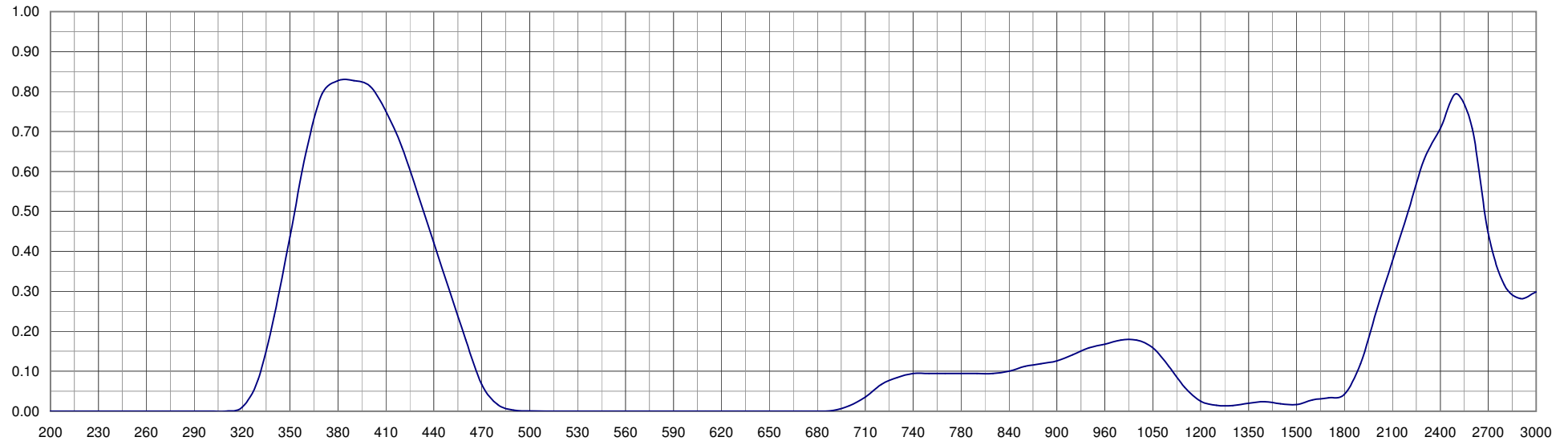
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	1	520	103	2.53	1.11	2.6	0.2	violet	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST VC1 CLOSE TO SCHOTT GLASS BG25 & HOYA GLASS B390



Catalogue Thickness 2.5 mm

Reflection Factor 0.924

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.038	0.168	0.335	0.495	0.617	0.716	0.781	0.832	0.866	0.881	0.876	0.861	0.818	0.724	0.624	0.484
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.041	0.182	0.362	0.536	0.667	0.775	0.845	0.900	0.937	0.953	0.948	0.932	0.885	0.784	0.675	0.524
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.335	0.178	0.075	0.020	0.004	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.362	0.192	0.081	0.022	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.000	0.000	0.001	0.012	0.084	0.251	0.473	0.680	0.813	0.923	0.939	0.933	0.923	0.907	0.891	0.871	0.846	0.818	0.785	0.741	0.692	0.531	0.345	0.211
Ti	0.000	0.000	0.001	0.013	0.091	0.272	0.512	0.736	0.879	0.998	1.000	1.000	0.998	0.981	0.964	0.942	0.916	0.885	0.850	0.802	0.749	0.574	0.373	0.229
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.112	0.063	0.053	0.050	0.042	0.035	0.033	0.047	0.050	0.047	0.063	0.112	0.178	0.224	0.299	0.376	0.447	0.501	0.398	0.133	0.089	0.119		
Ti	0.121	0.068	0.057	0.054	0.046	0.038	0.036	0.051	0.054	0.051	0.068	0.121	0.192	0.242	0.323	0.407	0.483	0.542	0.431	0.144	0.096	0.129		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n								1.4950					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
V									

Color Specifications

	x	y	T	Thick
A	0.165	0.021	0.120	2.0
B	0.163	0.016	0.290	2.0

Properties

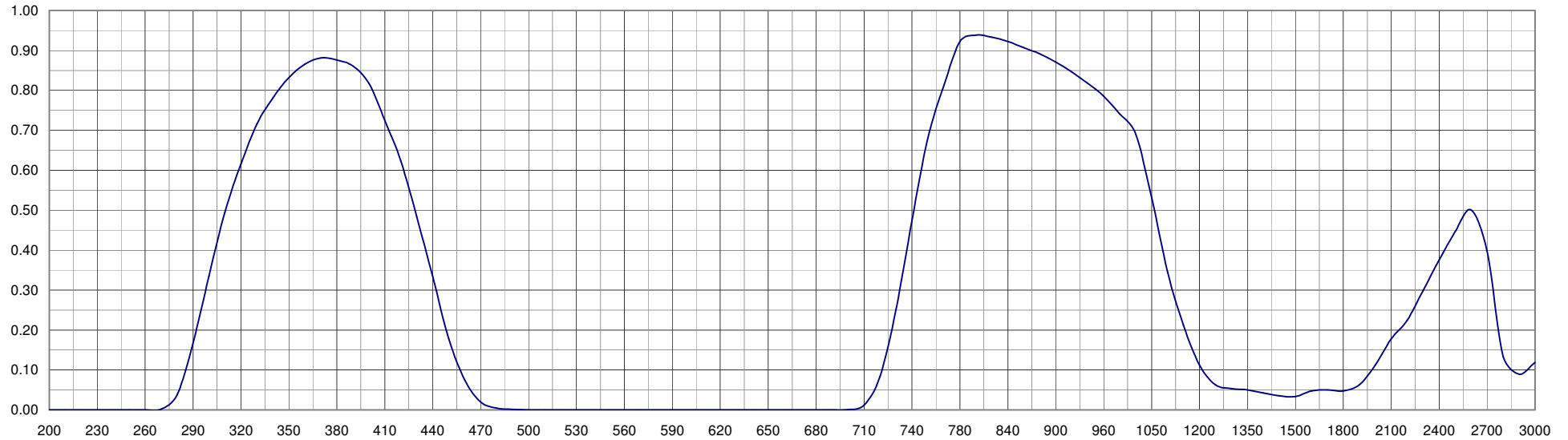
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
A	1	600	59	2.4	1.05	2.9	0.2	violet	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST VC6 CLOSE TO SCHOTT GLASS BG3/BG4 & HOYA GLASS B370



Catalogue Thickness 2.5 mm

Reflection Factor 0.917

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.063	0.299	0.562	0.794	0.866	0.902	0.923	0.944	0.950	0.944	0.933	0.923
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.069	0.326	0.613	0.866	0.944	0.983	1.000	1.000	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.907	0.891	0.861	0.827	0.772	0.700	0.635	0.562	0.490	0.434	0.422	0.452	0.460	0.398	0.316	0.237	0.211	0.211	0.200	0.188	0.178	0.158	0.168	0.200
Ti	0.989	0.972	0.939	0.902	0.842	0.763	0.692	0.613	0.534	0.473	0.460	0.493	0.501	0.434	0.345	0.259	0.230	0.230	0.218	0.205	0.194	0.173	0.183	0.218
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.237	0.282	0.316	0.335	0.335	0.316	0.316	0.299	0.299	0.299	0.299	0.299	0.316	0.316	0.335	0.335	0.355	0.376	0.398	0.422	0.434	0.479	0.513	0.534
Ti	0.259	0.307	0.345	0.365	0.365	0.345	0.345	0.326	0.326	0.326	0.326	0.345	0.345	0.365	0.365	0.387	0.410	0.434	0.460	0.473	0.522	0.559	0.582	
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.562	0.596	0.631	0.649	0.668	0.688	0.708	0.729	0.750	0.772	0.794	0.818	0.841	0.841	0.856	0.866	0.856	0.841	0.763	0.939	0.886	0.896		
Ti	0.613	0.649	0.688	0.708	0.729	0.750	0.772	0.794	0.818	0.842	0.866	0.891	0.917	0.917	0.933	0.944	0.933	0.917	0.832	1.000	0.966	0.977		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5340		1.5290	1.5250		1.5230		1.5200			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.350	0.373	37.300	2.0
B	0.257	0.276	40.400	2.0

Properties

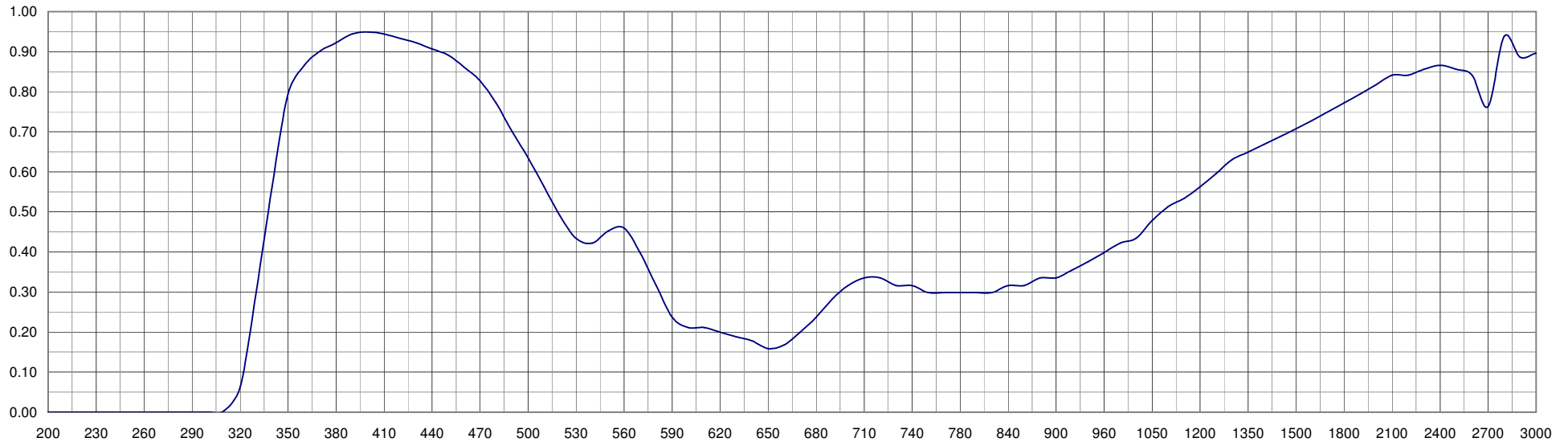
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
B	1	520	104	2.51	1.14	2.5	0.1	blue	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BC1 CLOSE TO SCHOTT GLASS BG26 & HOYA GLASS B460



Catalogue Thickness 2.5 mm

Reflection Factor 0.918

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.158	0.437	0.724	0.881	0.955	0.983	0.983	0.977	0.972	0.966	0.955	0.944	0.923
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.173	0.476	0.789	0.960	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.902	0.866	0.827	0.750	0.649	0.543	0.447	0.335	0.282	0.224	0.224	0.282	0.316	0.266	0.168	0.106	0.112	0.126	0.133	0.126	0.119	0.119	0.158	0.237
Ti	0.982	0.943	0.901	0.817	0.708	0.592	0.487	0.365	0.307	0.244	0.244	0.307	0.345	0.290	0.183	0.115	0.122	0.137	0.145	0.137	0.129	0.129	0.173	0.258
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.376	0.613	0.790	0.886	0.944	0.972	0.977	0.983	0.989	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.989	0.989	0.983	0.977	0.972	0.939	0.881	0.808
Ti	0.409	0.668	0.860	0.965	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.960	0.881
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.741	0.688	0.661	0.668	0.676	0.661	0.642	0.661	0.657	0.668	0.720	0.785	0.846	0.891	0.939	0.955	0.955	0.955	0.841	0.562	0.473	0.473		
Ti	0.808	0.749	0.720	0.728	0.737	0.720	0.699	0.720	0.716	0.728	0.785	0.856	0.922	0.971	1.000	1.000	1.000	1.000	0.917	0.613	0.516	0.516		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5220							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.308	0.317	25.200	2.0
B	0.223	0.213	27.900	2.0

Properties

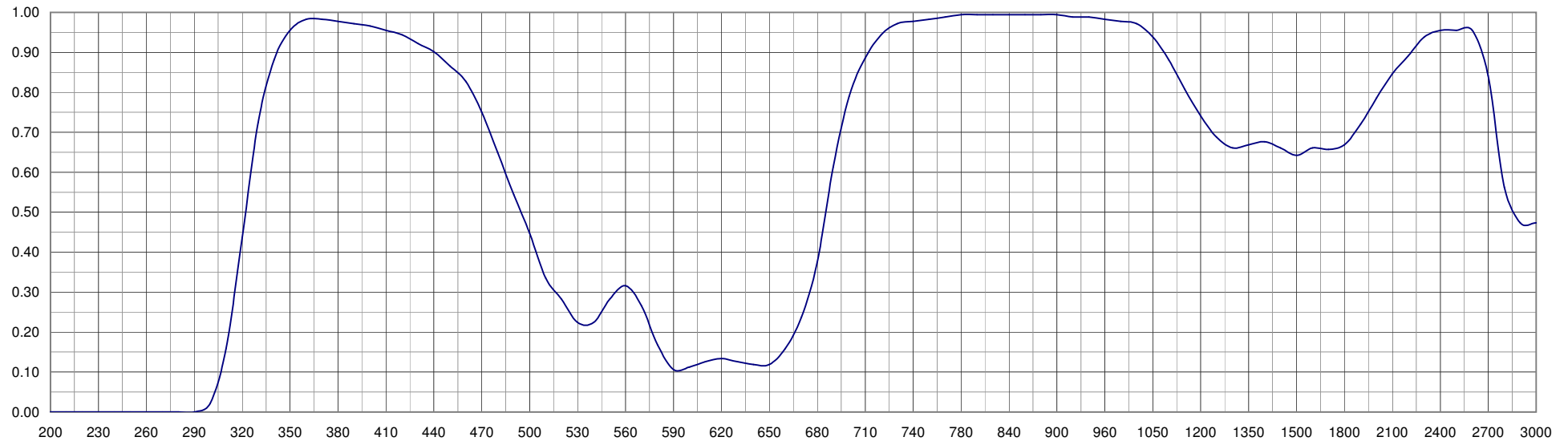
Chimic		Termic		Mechanic			Other	
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color
B	1	520	103	2.51	1.14	2.5	0.2	blue

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BC2 CLOSE TO SCHOTT GLASS BG12 & HOYA GLASS B410



Catalogue Thickness 2.5 mm

Reflection Factor 0.918

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.042	0.237	0.537	0.700	0.832	0.917	0.955	0.955	0.944	0.928	0.907	0.866	0.763	0.668
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.046	0.258	0.585	0.762	0.906	0.999	1.000	1.000	1.000	1.000	0.988	0.943	0.831	0.728
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.562	0.447	0.316	0.168	0.063	0.019	0.007	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.613	0.487	0.345	0.183	0.069	0.021	0.008	0.002	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.004	0.060	0.251	0.550	0.720	0.866	0.928	0.961	0.972	0.972	0.972	0.961	0.955	0.950	0.939	0.928	0.917	0.896	0.876	0.846	0.808	0.657	0.447	0.266
Ti	0.004	0.065	0.274	0.599	0.785	0.943	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.999	0.977	0.954	0.922	0.881	0.716	0.487	0.290
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.168	0.100	0.079	0.084	0.089	0.079	0.067	0.079	0.075	0.084	0.133	0.224	0.355	0.501	0.668	0.750	0.841	0.841	0.750	0.422	0.237	0.251		
Ti	0.183	0.109	0.087	0.092	0.097	0.087	0.073	0.087	0.082	0.092	0.145	0.244	0.387	0.546	0.728	0.817	0.917	0.917	0.817	0.459	0.258	0.274		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n								1.5220					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.164	0.038	0.460	2.0
B	0.158	0.027	0.960	2.0

Properties

Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
B	1	520	104	2.51	1.14	2.5	0.2	blue	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

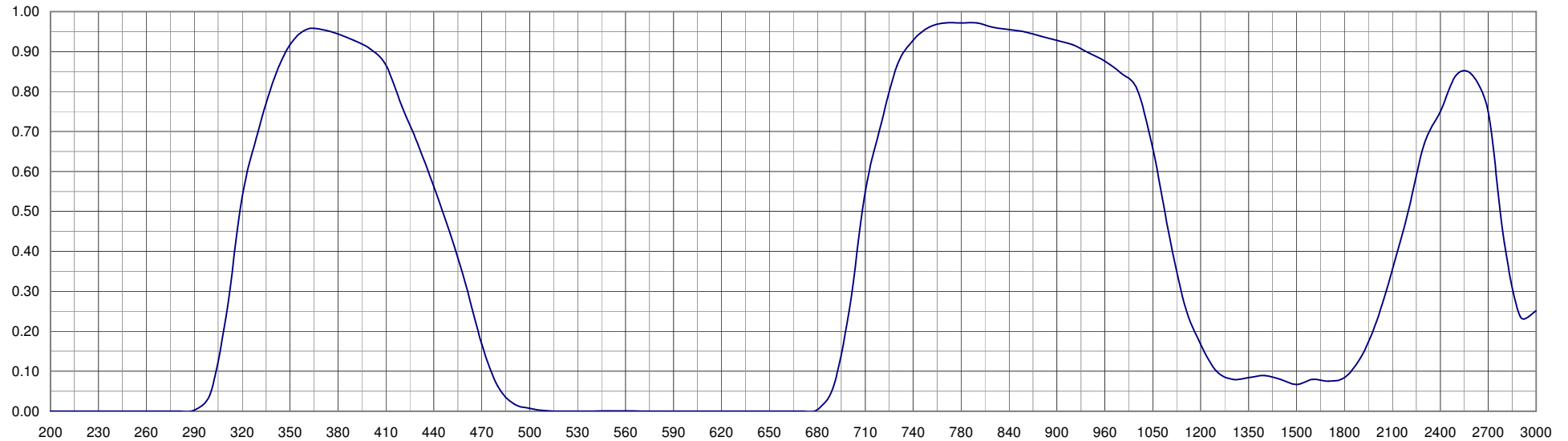
GOST BC4

CLOSE TO

SCHOTT GLASS BG3/BG4

&

HOYA GLASS B370



Catalogue Thickness 2.5 mm

Reflection Factor 0.903

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.038	0.158	0.355	0.531	0.631	0.729	0.750	0.750
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.042	0.176	0.393	0.588	0.699	0.807	0.831	0.831
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.750	0.708	0.668	0.562	0.398	0.237	0.133	0.060	0.018	0.004	0.001	0.001	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.831	0.784	0.740	0.623	0.441	0.263	0.148	0.066	0.020	0.005	0.001	0.001	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.006	0.035	0.071	0.094	0.112	0.112	0.112	0.119	0.112	0.106	0.100	0.100	0.094	0.094	0.094	0.100	0.106	0.106	0.112	0.112	0.126	0.133	0.150	0.150
Ti	0.007	0.039	0.078	0.105	0.124	0.124	0.124	0.132	0.124	0.117	0.111	0.111	0.105	0.105	0.105	0.111	0.117	0.124	0.139	0.148	0.166	0.176	0.166	0.166
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.119	0.079	0.060	0.056	0.071	0.075	0.063	0.084	0.089	0.106	0.211	0.376	0.531	0.668	0.750	0.841	0.891	0.891	0.841	0.668	0.501	0.501		
Ti	0.132	0.088	0.066	0.062	0.078	0.083	0.070	0.093	0.099	0.117	0.234	0.416	0.588	0.740	0.831	0.932	0.987	0.987	0.932	0.740	0.555	0.555	0.000	0.000

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5980			1.5850							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.142	0.072	2.000	2.0
B	0.146	0.051	3.400	2.0

Properties

Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	2	470	89	3.25	0.67	3.1	0.2	blue	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

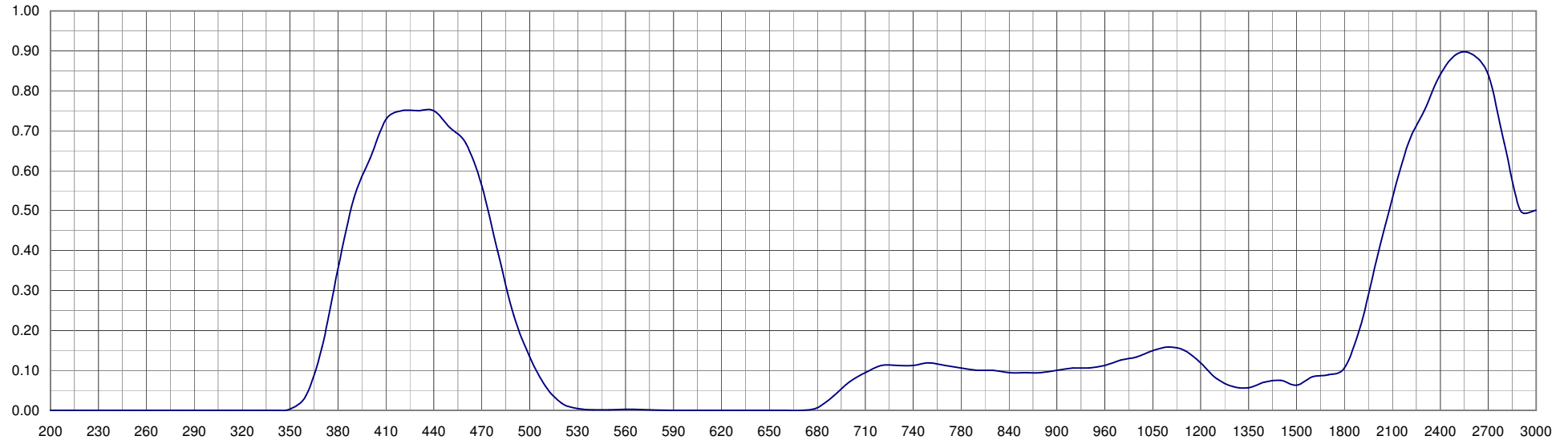
GOST BC5

CLOSE TO

SCHOTT GLASS BG12

&

HOYA GLASS B460



Catalogue Thickness 2.5 mm

Reflection Factor 0.918

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.112	0.355	0.501	0.596	0.631	0.668	0.668	0.668	0.631
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.122	0.387	0.546	0.649	0.687	0.728	0.728	0.728	0.687
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.596	0.531	0.460	0.376	0.251	0.150	0.100	0.050	0.024	0.014	0.012	0.017	0.016	0.007	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.649	0.578	0.501	0.409	0.274	0.163	0.109	0.055	0.026	0.015	0.013	0.018	0.017	0.008	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.006	0.008	0.011	0.016	0.022	0.033	0.042	0.056
Ti	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.005	0.006	0.009	0.012	0.017	0.024	0.036	0.046	0.061
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.063	0.084	0.100	0.141	0.178	0.200	0.211	0.266	0.299	0.316	0.376	0.473	0.562	0.646	0.708	0.750	0.794	0.794	0.750	0.596	0.447	0.447		
Ti	0.069	0.092	0.109	0.154	0.194	0.217	0.230	0.290	0.325	0.345	0.409	0.516	0.613	0.703	0.771	0.817	0.865	0.865	0.817	0.649	0.487	0.487		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5350			1.5220							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.157	0.126	3.000	2.0
B	0.152	0.078	4.500	2.0

Properties

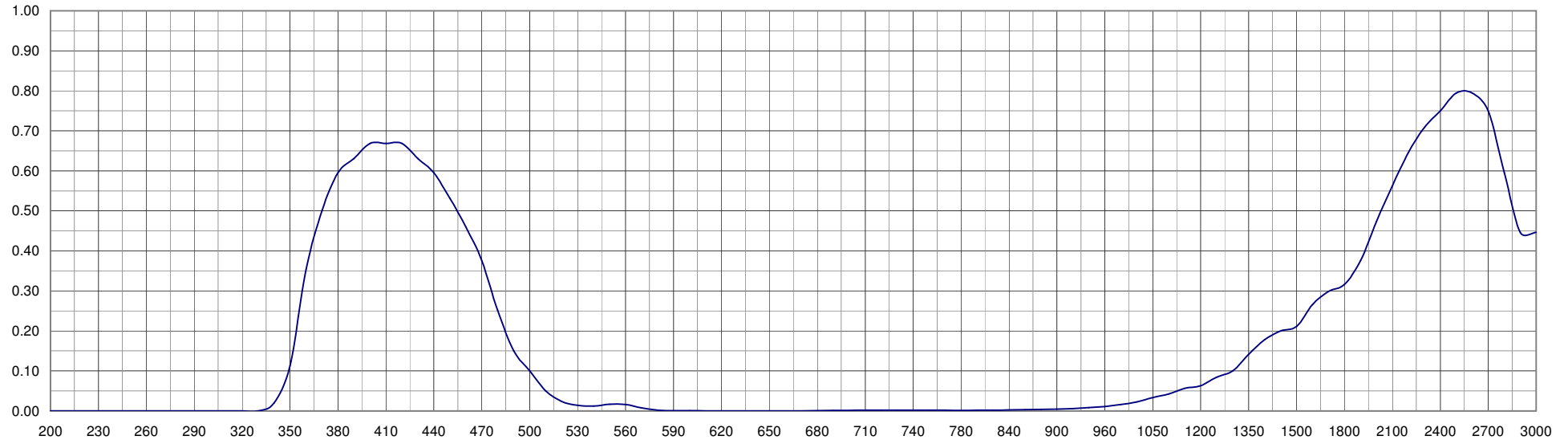
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
B	1	500	91	2.52	1.12	2.5	0.2	blue	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BC8 CLOSE TO SCHOTT GLASS BG28/BG12 & HOYA GLASS B410



Catalogue Thickness 2.5 mm

Reflection Factor 0.919

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.100	0.299	0.566	0.776	0.891	0.944	0.966	0.955	0.966	0.939	0.886	0.818	0.763
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.109	0.325	0.616	0.845	0.970	1.000	1.000	1.000	1.000	1.000	0.965	0.890	0.831
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.720	0.716	0.712	0.708	0.696	0.672	0.642	0.606	0.569	0.537	0.540	0.582	0.596	0.556	0.490	0.434	0.432	0.442	0.447	0.434	0.422	0.422	0.447	0.522
Ti	0.784	0.780	0.775	0.771	0.758	0.732	0.699	0.660	0.619	0.585	0.588	0.634	0.648	0.605	0.533	0.472	0.470	0.481	0.486	0.472	0.459	0.459	0.486	0.568
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.603	0.712	0.767	0.785	0.794	0.799	0.799	0.799	0.799	0.790	0.790	0.790	0.790	0.790	0.790	0.799	0.804	0.813	0.818	0.822	0.827	0.837	0.832	0.822
Ti	0.656	0.775	0.835	0.855	0.865	0.870	0.870	0.870	0.870	0.860	0.860	0.860	0.860	0.860	0.860	0.870	0.875	0.885	0.890	0.895	0.900	0.911	0.906	0.895
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.813	0.794	0.790	0.794	0.799	0.794	0.790	0.794	0.799	0.813	0.827	0.841	0.851	0.866	0.881	0.891	0.891	0.861	0.772	0.531	0.422	0.398		
Ti	0.885	0.865	0.860	0.865	0.870	0.865	0.860	0.865	0.870	0.885	0.900	0.916	0.927	0.943	0.959	0.970	0.970	0.937	0.840	0.578	0.459	0.433		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5280		1.5230	1.5190		1.5170		1.5150			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.409	0.400	52.000	2.0
B	0.309	0.327	53.700	2.0

Properties

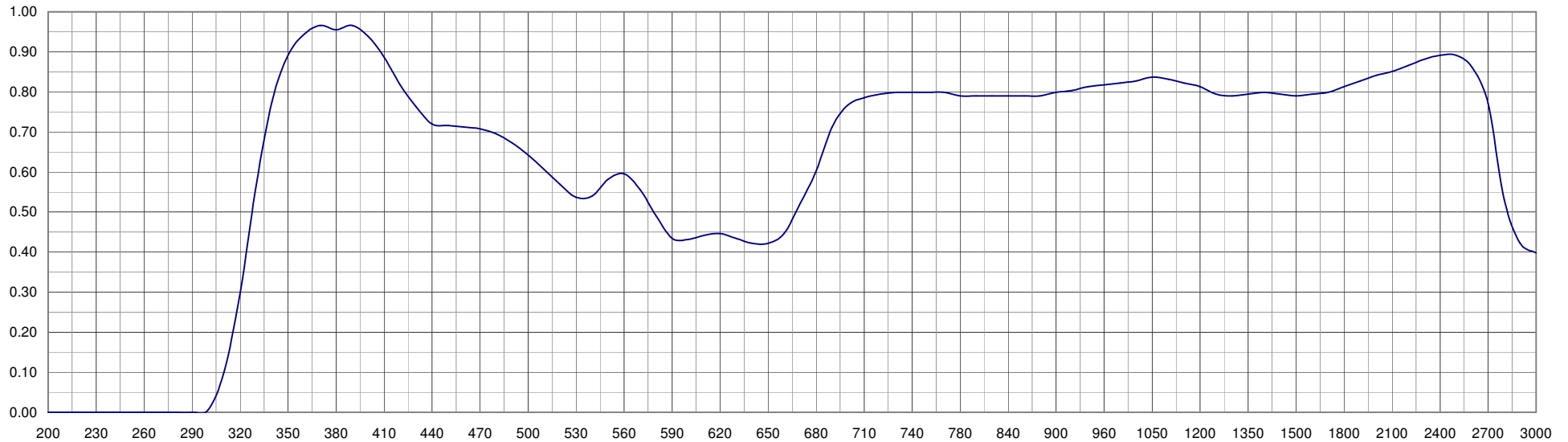
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
B	1	520	103	2.52	1.15	2.5	0.1	blue	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BC9 CLOSE TO SCHOTT GLASS BG26 & HOYA GLASS B460



Catalogue Thickness 2.5 mm

Reflection Factor 0.916

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.055	0.218	0.442	0.585	0.680	0.738	0.696	0.645	0.479	0.318
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.060	0.237	0.482	0.638	0.742	0.805	0.760	0.704	0.522	0.348
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.269	0.213	0.161	0.103	0.056	0.027	0.011	0.004	0.001	0.000	0.000	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.294	0.232	0.176	0.112	0.061	0.030	0.012	0.004	0.001	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.002	0.017	0.036	0.055	0.064	0.063	0.054	0.046	0.039	0.028	0.019	0.013	0.011	0.008	0.007	0.005	0.005	0.004	0.004	0.004	0.003	0.003	0.002	0.002
Ti	0.002	0.018	0.040	0.060	0.070	0.069	0.059	0.050	0.042	0.030	0.021	0.014	0.012	0.009	0.007	0.006	0.005	0.005	0.004	0.004	0.004	0.003	0.002	0.002
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.002	0.002	0.002	0.003	0.005	0.006	0.007	0.012	0.021	0.032	0.046	0.060	0.082	0.107	0.138	0.187	0.299	0.287	0.164	0.123	0.095	0.072		
Ti	0.002	0.002	0.003	0.003	0.006	0.007	0.008	0.013	0.022	0.035	0.050	0.066	0.089	0.117	0.150	0.204	0.326	0.314	0.179	0.134	0.103	0.078		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5290							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A				
B				

Properties

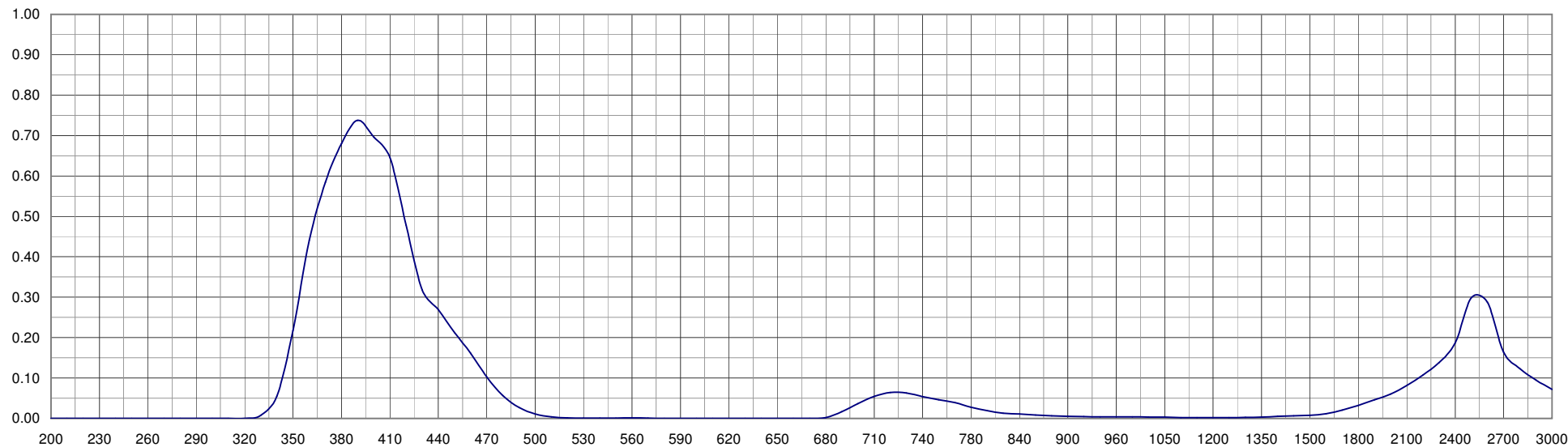
Chimic		Termic		Mechanic			Other	
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color
								blue

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BC14 CLOSE TO SCHOTT GLASS BG12/BG25 & HOYA GLASS B390



Catalogue Thickness 2.5 mm

Reflection Factor 0.920

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.063	0.224	0.398	0.553	0.649	0.708	0.754	0.767	0.759	0.741	0.692
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.069	0.243	0.433	0.601	0.706	0.770	0.820	0.835	0.825	0.806	0.752
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.635	0.553	0.447	0.282	0.133	0.042	0.013	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.690	0.601	0.486	0.307	0.145	0.046	0.015	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.000	0.001	0.003	0.005	0.005	0.005	0.005	0.005	0.004	0.004	0.004	0.004	0.004	0.004	0.005	0.007	0.008	0.010	0.012	0.015	0.019	0.025	0.032	0.025
Ti	0.000	0.001	0.003	0.005	0.005	0.006	0.006	0.005	0.005	0.004	0.004	0.004	0.004	0.005	0.006	0.008	0.009	0.011	0.013	0.016	0.020	0.027	0.034	0.027
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.016	0.010	0.007	0.007	0.010	0.013	0.012	0.013	0.027	0.027	0.040	0.084	0.158	0.251	0.355	0.447	0.501	0.501	0.501	0.447	0.316	0.266		
Ti	0.017	0.011	0.008	0.008	0.011	0.015	0.013	0.015	0.029	0.029	0.043	0.092	0.172	0.273	0.386	0.486	0.545	0.545	0.545	0.486	0.344	0.289		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5150							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.150	0.032	0.600	2.0
B	0.153	0.027	1.300	2.0

Properties

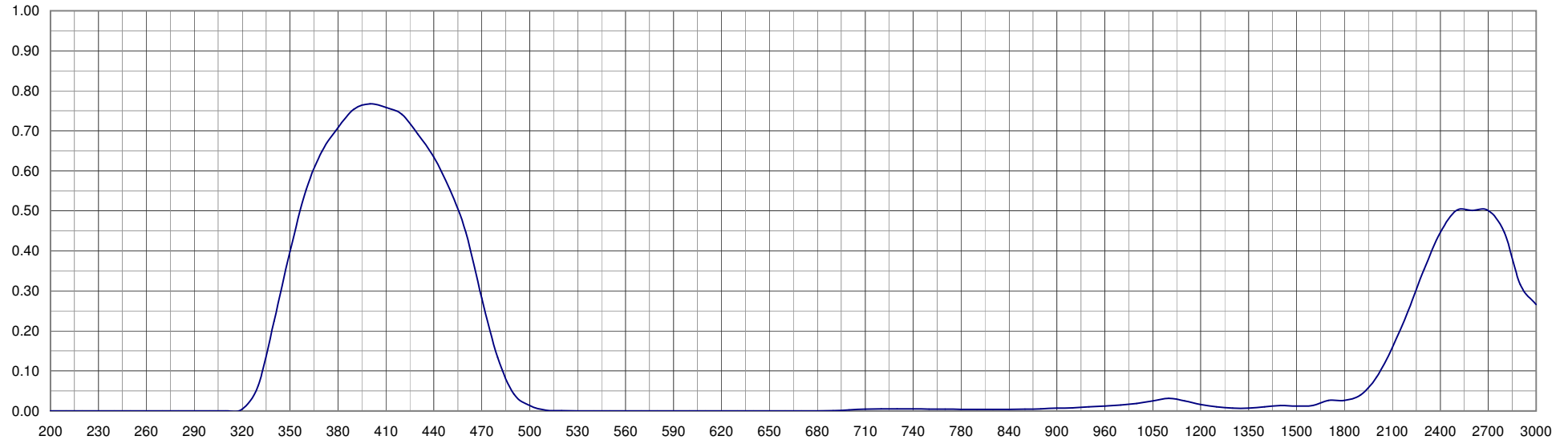
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	2	475	103	2.48	0.92	2.9	0.2	blue	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BC15 CLOSE TO SCHOTT GLASS BG12 & HOYA GLASS B390



Catalogue Thickness 2.5 mm

Reflection Factor 0.924

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.005	0.023	0.091	0.305	0.569	0.804	0.950	0.983	0.989	0.989
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.005	0.024	0.099	0.331	0.616	0.870	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.977	0.955	0.928	0.896	0.861	0.837	0.827	0.818	0.827	0.837	0.841	0.837	0.841	0.772	0.746	0.733	0.724	0.720	0.712	0.700	0.676	0.657	0.653	0.676
Ti	1.000	1.000	1.000	0.970	0.932	0.906	0.895	0.885	0.895	0.906	0.911	0.906	0.911	0.835	0.807	0.793	0.784	0.780	0.771	0.758	0.732	0.711	0.707	0.732
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.733	0.790	0.837	0.846	0.907	0.944	0.966	0.972	0.977	0.983	0.983	0.983	0.983	0.977	0.977	0.972	0.972	0.966	0.961	0.955	0.950	0.944	0.928	0.912
Ti	0.793	0.855	0.906	0.916	0.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.987
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.891	0.886	0.881	0.876	0.876	0.871	0.871	0.871	0.866	0.871	0.871	0.871	0.871	0.876	0.876	0.881	0.886	0.876	0.861	0.841	0.596	0.376	0.422	
Ti	0.965	0.959	0.954	0.948	0.948	0.943	0.943	0.943	0.937	0.943	0.943	0.943	0.943	0.948	0.948	0.954	0.959	0.948	0.932	0.911	0.645	0.407	0.456	

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5150							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.440	0.407	83.000	2.0
B	0.340	0.347	83.600	2.0

Properties

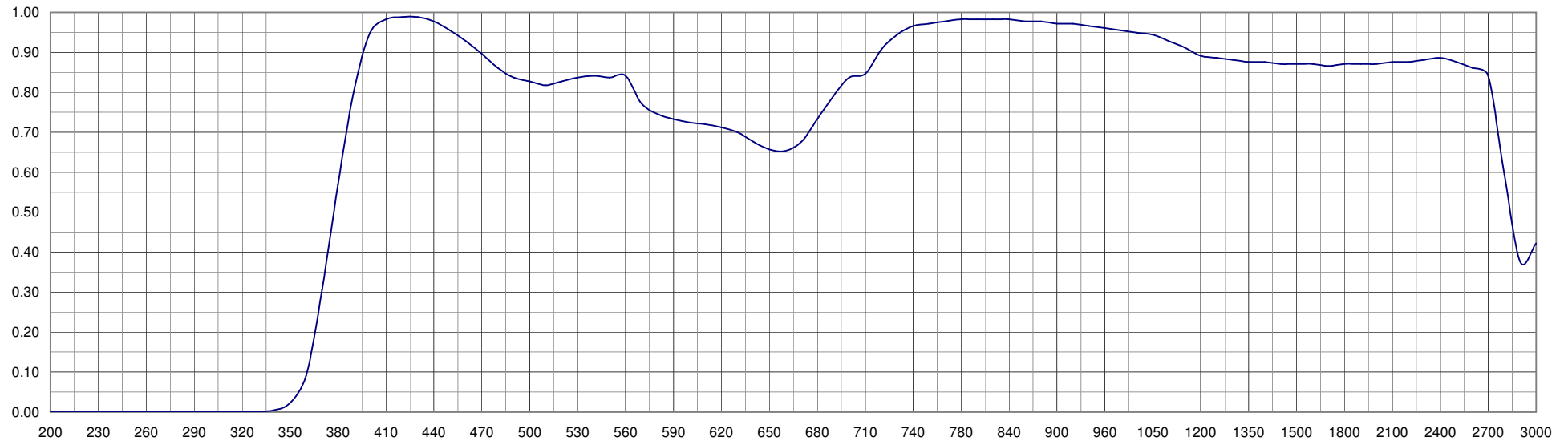
Chimic		Termic		Mechanic			Other	
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color
B	6	530	83	2.5	0.76	3.75		blue

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BC16 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS LB20



Catalogue Thickness 2.5 mm

Reflection Factor 0.924

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.021	0.048	0.069	0.094	0.150	0.253	0.407	0.704	0.861	0.950	0.989	0.994	0.994	0.994
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.022	0.052	0.074	0.102	0.162	0.273	0.441	0.762	0.932	1.000	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.994	0.977	0.972	0.955	0.944	0.933	0.933	0.933	0.944	0.944	0.944	0.944	0.923	0.907	0.896	0.886	0.871	0.886	0.876	0.871	0.861	0.851	0.861	0.881
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.999	0.982	0.970	0.959	0.943	0.959	0.948	0.943	0.932	0.921	0.932
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.912	0.933	0.944	0.955	0.972	0.983	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.989	0.983	0.966	0.977	0.977	0.977	0.977	0.977	0.966	0.955
Ti	0.987	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.955	0.955	0.950	0.950	0.944	0.944	0.944	0.944	0.944	0.944	0.944	0.917	0.923	0.923	0.933	0.939	0.923	0.907	0.891	0.772	0.447	0.562		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.993	0.999	0.999	1.000	1.000	0.999	0.982	0.965	0.835	0.484	0.609		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.4970							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.424	0.404	66.700	2.0
B	0.323	0.335	68.000	2.0

Properties

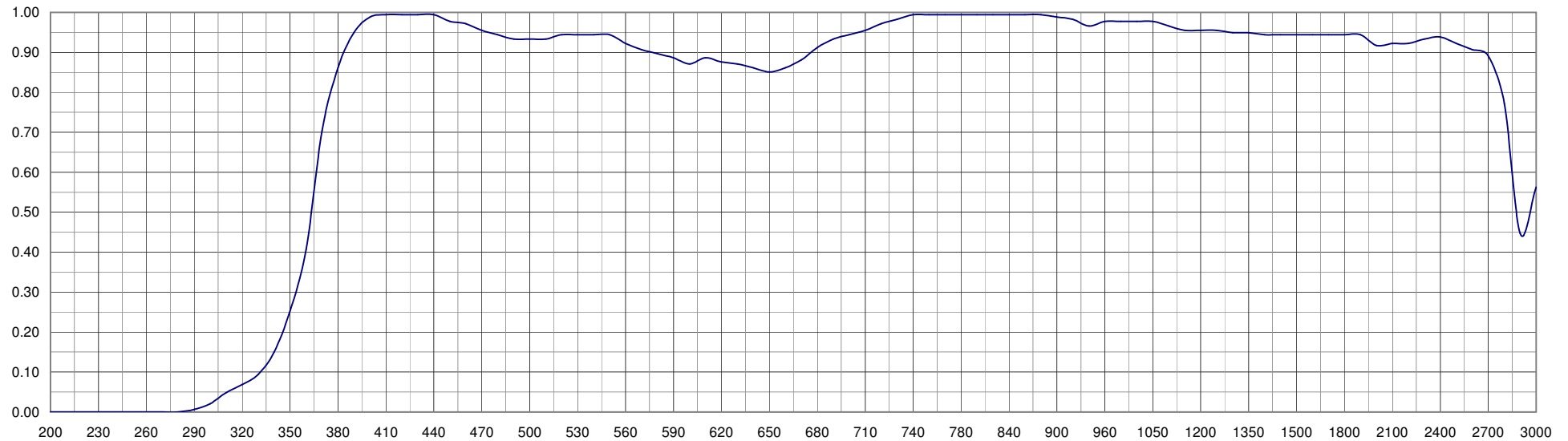
Chimic		Termic		Mechanic			Other	
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color
B	6	530	83	2.5	0.76	3.75		blue

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BC17 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS LB40



Catalogue Thickness 2.5 mm

Reflection Factor 0.924

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.013	0.064	0.098	0.305	0.624	0.776	0.851	0.866	0.866
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.014	0.069	0.106	0.331	0.675	0.840	0.921	0.937	0.937
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.846	0.804	0.750	0.688	0.646	0.610	0.585	0.579	0.589	0.610	0.613	0.603	0.562	0.513	0.460	0.429	0.417	0.412	0.400	0.385	0.355	0.331	0.343	0.363
Ti	0.916	0.870	0.812	0.745	0.699	0.660	0.634	0.627	0.637	0.660	0.664	0.652	0.609	0.555	0.498	0.464	0.451	0.446	0.433	0.416	0.384	0.358	0.371	0.393
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.444	0.553	0.665	0.772	0.837	0.891	0.923	0.933	0.950	0.955	0.955	0.955	0.950	0.944	0.939	0.939	0.933	0.923	0.923	0.917	0.902	0.902	0.866	0.851
Ti	0.481	0.598	0.719	0.835	0.906	0.965	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.999	0.999	0.993	0.976	0.976	0.937	0.921
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.832	0.827	0.822	0.818	0.813	0.813	0.813	0.813	0.804	0.813	0.827	0.837	0.841	0.841	0.856	0.866	0.856	0.841	0.763	0.531	0.299	0.335		
Ti	0.900	0.895	0.890	0.885	0.880	0.880	0.880	0.880	0.870	0.880	0.895	0.906	0.911	0.911	0.927	0.937	0.927	0.911	0.826	0.575	0.323	0.363		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.4970							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.410	0.400	55.500	2.0
B	0.310	0.325	57.200	2.0

Properties

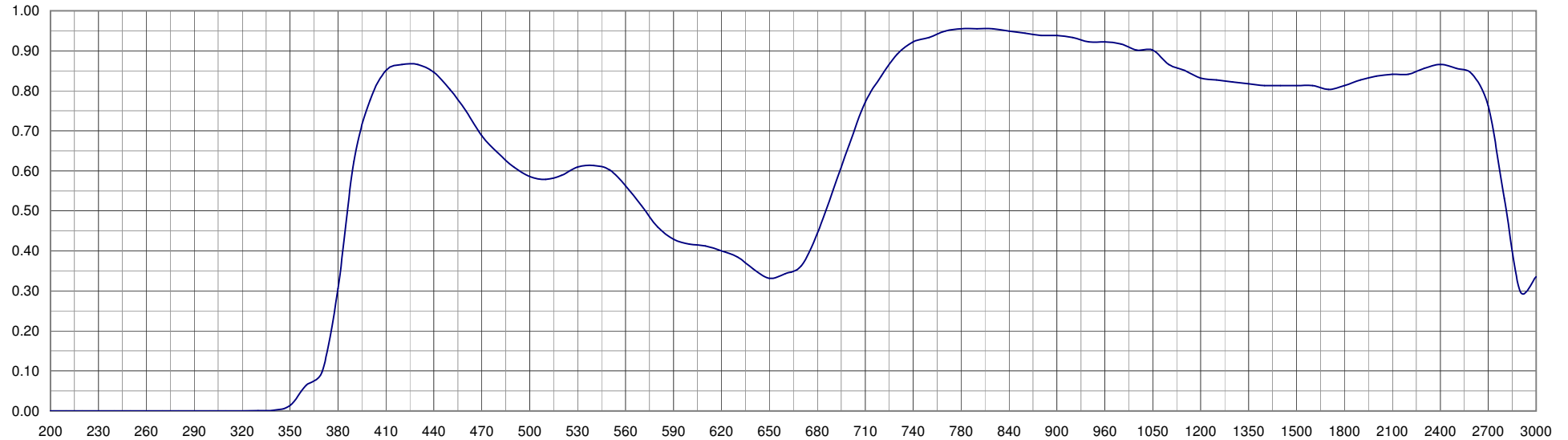
Chimic		Termic		Mechanic			Other	
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color
B	6	530	83	2.5	0.76	3.75		blue

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BC18 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS LB80



Catalogue Thickness 3.5 mm

Reflection Factor 0.916

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.025	0.133	0.324	0.525	0.668	0.724	0.754	0.773	0.785	0.785
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.027	0.146	0.353	0.573	0.730	0.791	0.824	0.844	0.858	0.858
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.785	0.785	0.785	0.785	0.785	0.785	0.785	0.785	0.773	0.754	0.724	0.696	0.668	0.617	0.569	0.504	0.465	0.412	0.365	0.324	0.275	0.234	0.200	0.170
Ti	0.858	0.858	0.858	0.858	0.858	0.858	0.858	0.858	0.844	0.824	0.791	0.760	0.730	0.673	0.621	0.550	0.508	0.450	0.399	0.353	0.301	0.256	0.218	0.185
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.145	0.123	0.105	0.089	0.076	0.065	0.051	0.040	0.034	0.023	0.015	0.012	0.009	0.007	0.006	0.005	0.004	0.003	0.003	0.003	0.003	0.003	0.003	0.004
Ti	0.158	0.134	0.114	0.097	0.083	0.071	0.055	0.043	0.037	0.025	0.017	0.013	0.010	0.007	0.006	0.005	0.004	0.004	0.003	0.003	0.003	0.003	0.003	0.004
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.004	0.005	0.007	0.008	0.012	0.018	0.040	0.076	0.105	0.114	0.114	0.114	0.114	0.123	0.123	0.133	0.133	0.133	0.133	0.133	0.060	0.018	0.018	
Ti	0.005	0.006	0.007	0.009	0.013	0.019	0.043	0.083	0.114	0.124	0.124	0.124	0.124	0.134	0.134	0.146	0.146	0.146	0.146	0.146	0.065	0.019	0.019	

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5410		1.5360	1.5310		1.5290		1.5260			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.404	0.417	65.600	2.0
B	0.308	0.346	68.200	2.0

Properties

Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	1	520	99	2.63	1.13	2.9	0.1	cyan	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

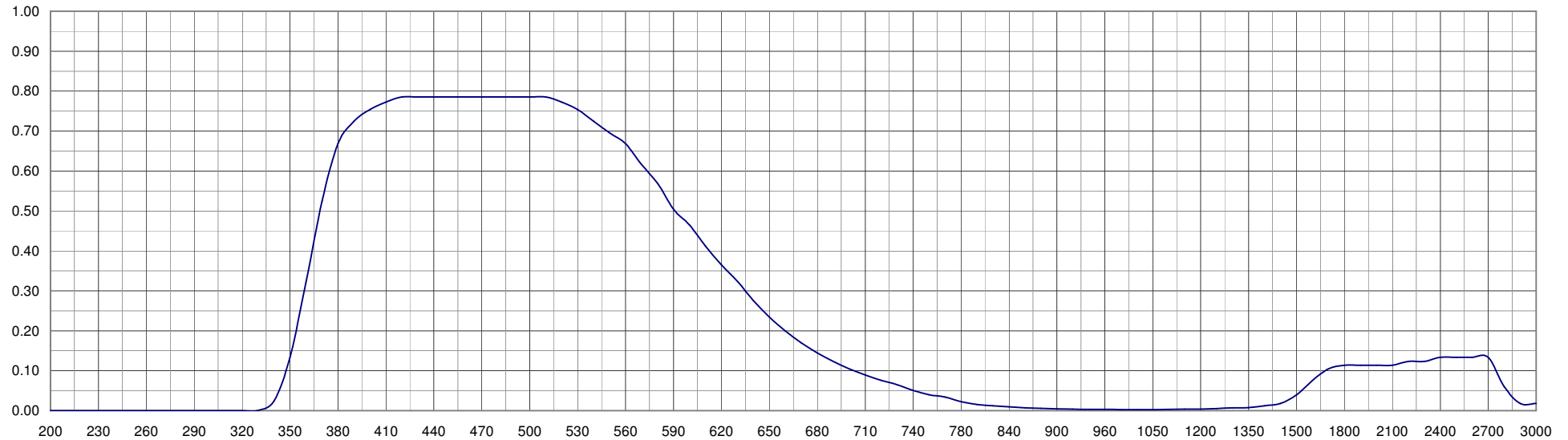
GOST BGC5

CLOSE TO

SCHOTT GLASS KG5

&

HOYA GLASS HA30/HA50



Catalogue Thickness 2.5 mm

Reflection Factor 0.919

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.133	0.376	0.610	0.754	0.827	0.861	0.896	0.917	0.928	0.939	0.944
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.145	0.409	0.663	0.820	0.900	0.937	0.975	0.998	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.944	0.950	0.950	0.950	0.944	0.933	0.907	0.870	0.827	0.775	0.715	0.635	0.562	0.473	0.398	0.345	0.299	0.237	0.200	0.158	0.133	0.106	0.089	0.075
Ti	1.000	1.000	1.000	1.000	1.000	1.000	0.986	0.946	0.900	0.843	0.778	0.690	0.612	0.515	0.433	0.375	0.325	0.258	0.217	0.172	0.145	0.115	0.097	0.082
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.063	0.053	0.047	0.042	0.038	0.033	0.032	0.030	0.030	0.028	0.028	0.030	0.032	0.038	0.040	0.050	0.056	0.067	0.079	0.094	0.106	0.150	0.200	0.237
Ti	0.069	0.058	0.051	0.046	0.041	0.036	0.034	0.032	0.032	0.031	0.031	0.032	0.034	0.041	0.043	0.055	0.061	0.073	0.086	0.103	0.115	0.163	0.217	0.258
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.299	0.355	0.422	0.473	0.531	0.575	0.631	0.708	0.772	0.841	0.891	0.923	0.944	0.961	0.966	0.966	0.950	0.917	0.794	0.631	0.531	0.531		
Ti	0.325	0.386	0.459	0.515	0.578	0.626	0.686	0.770	0.840	0.915	0.970	1.000	1.000	1.000	1.000	1.000	1.000	0.998	0.864	0.686	0.578			

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5250		1.5200	1.5160		1.5140					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.344	0.414	53.600	2.0
B	0.260	0.323	58.800	2.0

Properties

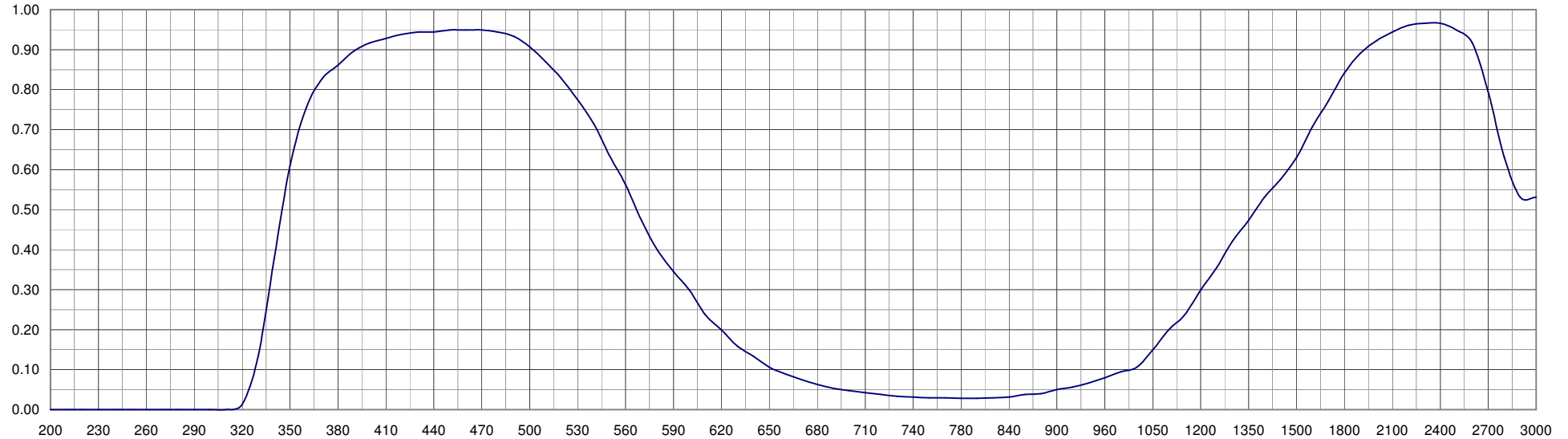
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	2	460	103	2.57	1.04	2.5	0.1	blue-green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BGC7 CLOSE TO SCHOTT GLASS BG14 & HOYA GLASS C5000



Catalogue Thickness 1.5 mm

Reflection Factor 0.919

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.065	0.226	0.407	0.556	0.654	0.723	0.769	0.804	0.836	0.862	0.877
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.071	0.247	0.444	0.605	0.712	0.787	0.837	0.876	0.910	0.938	0.955
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.889	0.905	0.911	0.911	0.908	0.892	0.868	0.827	0.769	0.710	0.621	0.537	0.452	0.367	0.299	0.234	0.178	0.145	0.110	0.080	0.059	0.046	0.034	0.028
Ti	0.968	0.985	0.992	0.992	0.988	0.971	0.945	0.900	0.837	0.773	0.676	0.585	0.492	0.400	0.325	0.255	0.194	0.157	0.119	0.087	0.064	0.050	0.037	0.030
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.022	0.017	0.014	0.012	0.010	0.009	0.009	0.008	0.008	0.007	0.007	0.008	0.009	0.010	0.012	0.014	0.018	0.022	0.028	0.035	0.043	0.065	0.099	0.135
Ti	0.024	0.018	0.016	0.014	0.011	0.010	0.010	0.009	0.009	0.008	0.008	0.008	0.010	0.011	0.013	0.016	0.019	0.024	0.030	0.038	0.047	0.071	0.108	0.147
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.178	0.219	0.279	0.331	0.380	0.452	0.501	0.575	0.684	0.769	0.827	0.865	0.892	0.920	0.940	0.943	0.933	0.908	0.874	0.733	0.661	0.661		
Ti	0.194	0.238	0.303	0.360	0.414	0.492	0.546	0.626	0.745	0.837	0.900	0.942	0.971	1.000	1.000	1.000	1.000	0.988	0.951	0.798	0.719			

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5190							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.253	0.397	30.900	2.0
B	0.199	0.287	36.700	2.0

Properties

Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	2	450	103	2.59	1.04	2.5	0.1	blue-green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

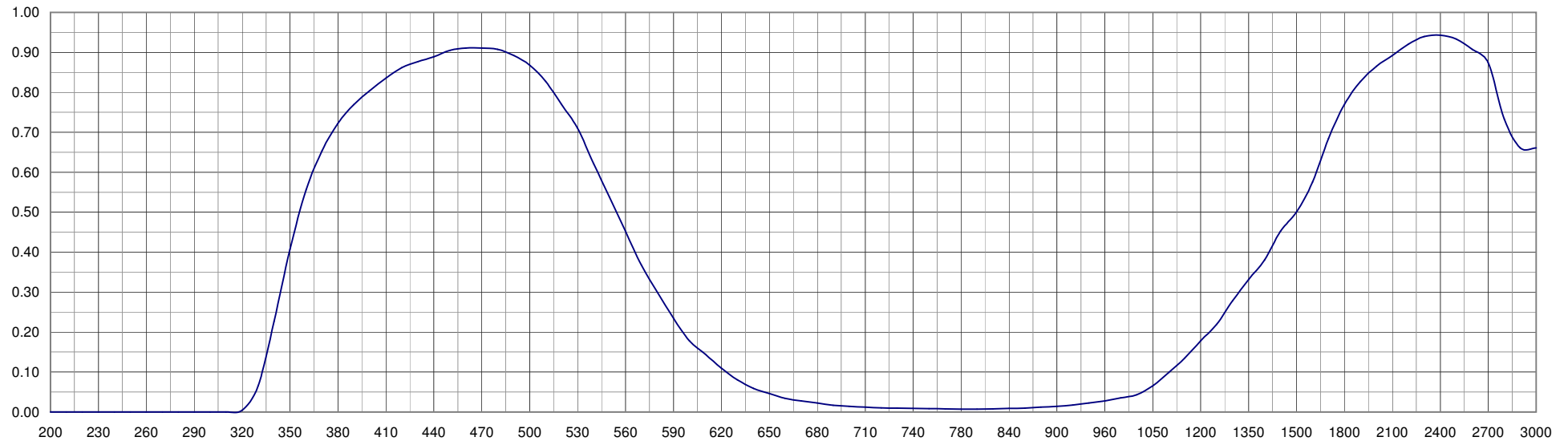
Spectral Transmittance Graphic

GOST BGC8

CLOSE TO

SCHOTT GLASS BG28

HOYA GLASS C5000



Catalogue Thickness 1.0 mm

Reflection Factor 0.917

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.036	0.110	0.209	0.302	0.389	0.457	0.525	0.575	0.631	0.668
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.040	0.120	0.228	0.329	0.424	0.498	0.572	0.627	0.688	0.729
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.708	0.731	0.755	0.767	0.776	0.767	0.745	0.708	0.646	0.575	0.501	0.407	0.324	0.245	0.191	0.141	0.100	0.071	0.050	0.035	0.022	0.016	0.011	0.008
Ti	0.772	0.797	0.823	0.836	0.846	0.836	0.812	0.772	0.704	0.627	0.546	0.444	0.353	0.268	0.208	0.154	0.109	0.077	0.055	0.038	0.024	0.017	0.012	0.009
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.006	0.004	0.004	0.003	0.003	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.003	0.004	0.005	0.006	0.008	0.011	0.020	0.038	0.060
Ti	0.006	0.005	0.004	0.003	0.003	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.002	0.002	0.002	0.003	0.004	0.005	0.007	0.009	0.012	0.022	0.041	0.066
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.089	0.120	0.162	0.204	0.251	0.302	0.355	0.457	0.562	0.661	0.724	0.794	0.861	0.899	0.923	0.933	0.938	0.933	0.918	0.861	0.794	0.776		
Ti	0.097	0.131	0.177	0.223	0.274	0.329	0.387	0.498	0.613	0.720	0.790	0.866	0.939	0.981	1.000	1.000	1.000	1.000	1.000	1.000	0.939	0.866	0.846	

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5240							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.173	0.364	13.300	2.0
B	0.154	0.253	17.200	2.0

Properties

Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	2	440	103	2.61	1.03	2.5	0.2	blue-green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

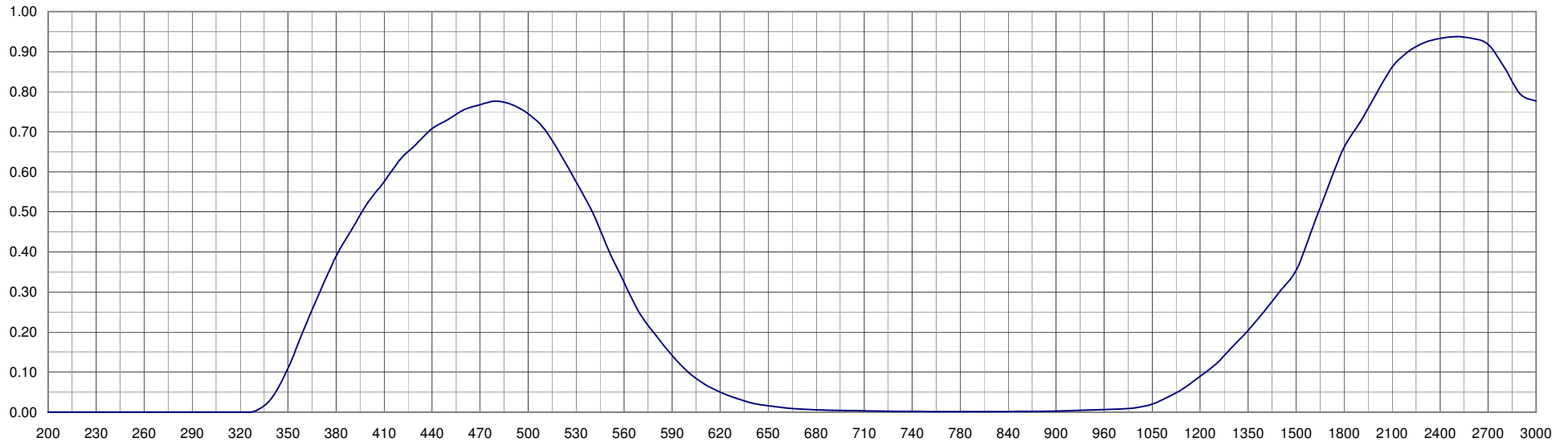
GOST BGC9

CLOSE TO

SCHOTT GLASS BG28

&

HOYA GLASS C5000



Catalogue Thickness 3.0 mm

Reflection Factor 0.916

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.083	0.234	0.468	0.684	0.847	0.920	0.940	0.966	0.973	0.973	0.973	0.979
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.091	0.256	0.511	0.747	0.925	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.979	0.979	0.979	0.979	0.979	0.973	0.966	0.959	0.953	0.946	0.933	0.914	0.902	0.877	0.859	0.830	0.802	0.774	0.748	0.713	0.684	0.652	0.625	0.592
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.998	0.984	0.958	0.938	0.906	0.875	0.846	0.817	0.778	0.747	0.711	0.683	0.646
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.556	0.522	0.501	0.468	0.443	0.419	0.391	0.375	0.355	0.320	0.288	0.269	0.234	0.219	0.204	0.204	0.191	0.178	0.178	0.178	0.178	0.178	0.178	0.191
Ti	0.607	0.570	0.547	0.511	0.483	0.457	0.427	0.409	0.387	0.349	0.315	0.294	0.256	0.239	0.223	0.223	0.208	0.194	0.194	0.194	0.194	0.194	0.194	0.208
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.197	0.204	0.219	0.234	0.269	0.288	0.331	0.437	0.501	0.501	0.501	0.501	0.501	0.519	0.537	0.556	0.575	0.575	0.501	0.309	0.178	0.166		
Ti	0.215	0.223	0.239	0.256	0.294	0.315	0.362	0.477	0.547	0.547	0.547	0.547	0.547	0.566	0.586	0.607	0.628	0.628	0.547	0.337	0.194	0.181		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5390		1.5350	1.5300		1.5280		1.5250			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
V									

Color Specifications

	x	y	T	Thick
A	0.431	0.411	82.200	2.0
B	0.333	0.350	83.500	2.0

Properties

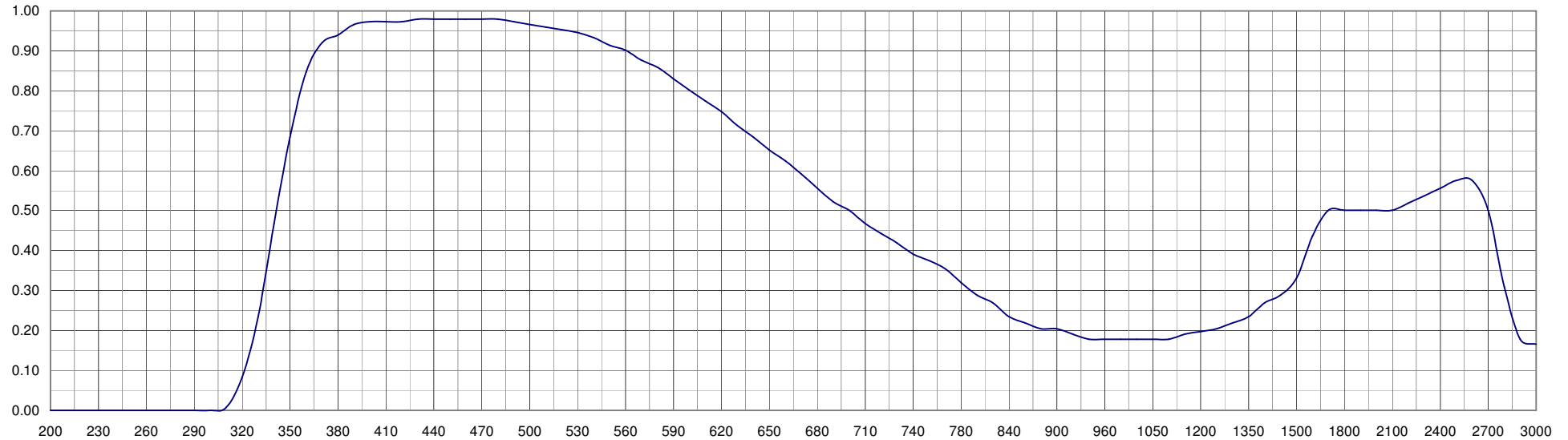
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
B	1	520	99	2.64	1.14	2.9	0.05	blue-green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BGC15 CLOSE TO SCHOTT GLASS BG40/KG1 & HOYA GLASS NONE



Catalogue Thickness 3.0 mm

Reflection Factor 0.919

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.068	0.191	0.367	0.498	0.552	0.630	0.675	0.698	0.708	0.718
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.074	0.207	0.400	0.542	0.601	0.685	0.734	0.760	0.771	0.781
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.733	0.748	0.764	0.780	0.796	0.802	0.807	0.802	0.796	0.791	0.780	0.764	0.743	0.723	0.698	0.661	0.638	0.600	0.564	0.512	0.471	0.428	0.385	0.343
Ti	0.798	0.815	0.832	0.849	0.867	0.873	0.879	0.873	0.867	0.861	0.849	0.832	0.809	0.787	0.760	0.719	0.695	0.653	0.614	0.557	0.513	0.465	0.420	0.373
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.309	0.269	0.234	0.204	0.178	0.166	0.145	0.126	0.110	0.083	0.068	0.051	0.039	0.032	0.028	0.024	0.021	0.018	0.016	0.016	0.015	0.014	0.014	0.016
Ti	0.336	0.293	0.255	0.222	0.194	0.181	0.157	0.137	0.119	0.091	0.074	0.056	0.042	0.034	0.030	0.026	0.023	0.020	0.017	0.017	0.016	0.015	0.015	0.017
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.021	0.028	0.036	0.051	0.072	0.095	0.126	0.178	0.191	0.204	0.219	0.234	0.251	0.269	0.288	0.331	0.355	0.355	0.269	0.126	0.063	0.102		
Ti	0.023	0.030	0.040	0.056	0.079	0.104	0.137	0.194	0.207	0.222	0.238	0.255	0.273	0.293	0.314	0.360	0.386	0.386	0.293	0.137	0.069	0.111		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5280		1.5220	1.5190		1.5160		1.5140			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.423	0.418	65.200	2.0
B	0.328	0.356	66.800	2.0

Properties

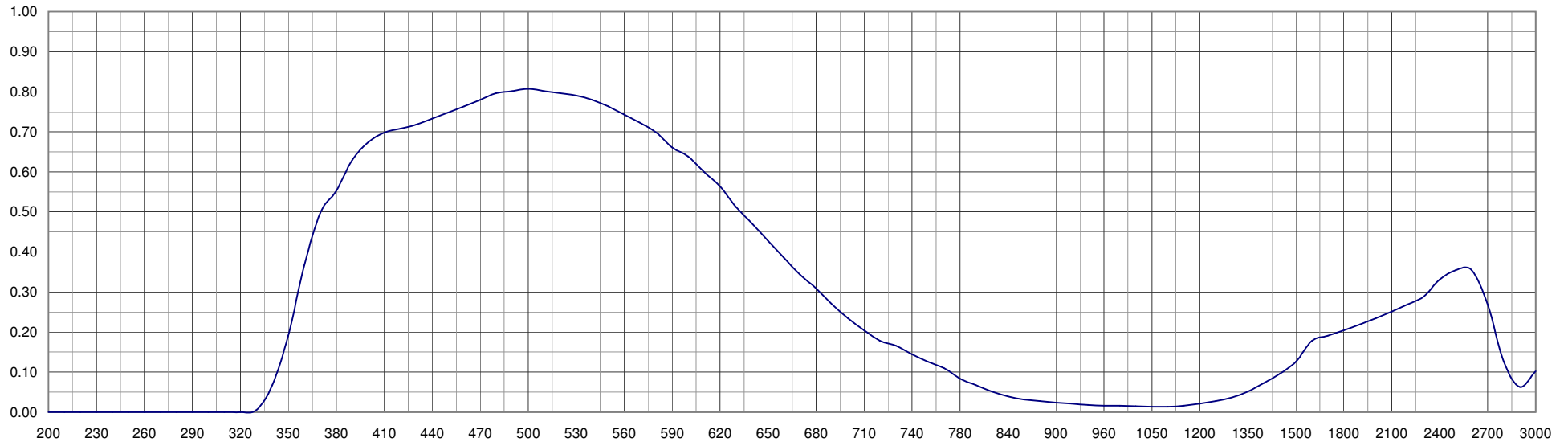
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
A	1	560	67	2.6	1.16	3.1	0.1	cyan	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BGC16 CLOSE TO SCHOTT GLASS BG26 & HOYA GLASS CAW500



Catalogue Thickness 3.0 mm

Reflection Factor 0.919

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.039	0.234	0.515	0.723	0.836	0.883	0.895	0.927	0.933	0.933	0.933	0.933
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.042	0.255	0.561	0.787	0.910	0.961	0.975	1.000	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.933	0.933	0.933	0.940	0.946	0.940	0.933	0.927	0.908	0.883	0.853	0.818	0.774	0.728	0.684	0.634	0.587	0.541	0.498	0.458	0.422	0.391	0.362	0.336
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.988	0.961	0.929	0.891	0.843	0.792	0.745	0.690	0.640	0.589	0.542	0.499	0.459	0.425	0.394	0.366
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.313	0.294	0.277	0.269	0.251	0.251	0.251	0.251	0.234	0.234	0.234	0.251	0.269	0.288	0.299	0.309	0.331	0.355	0.380	0.407	0.437	0.501	0.556	0.604
Ti	0.341	0.321	0.301	0.293	0.273	0.273	0.273	0.273	0.255	0.255	0.255	0.273	0.293	0.314	0.325	0.336	0.360	0.386	0.414	0.444	0.475	0.546	0.605	0.657
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.647	0.693	0.738	0.780	0.818	0.841	0.871	0.895	0.914	0.927	0.927	0.920	0.908	0.895	0.883	0.871	0.847	0.780	0.774	0.501	0.166	0.145		
Ti	0.705	0.755	0.803	0.849	0.891	0.916	0.948	0.975	0.995	1.000	1.000	1.000	0.988	0.975	0.961	0.948	0.922	0.849	0.843	0.546	0.181	0.157		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5280		1.5230	1.5190		1.5170		1.5150			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
V									

Color Specifications

	x	y	T	Thick
A	0.412	0.413	78.800	2.0
B	0.312	0.345	81.900	2.0

Properties

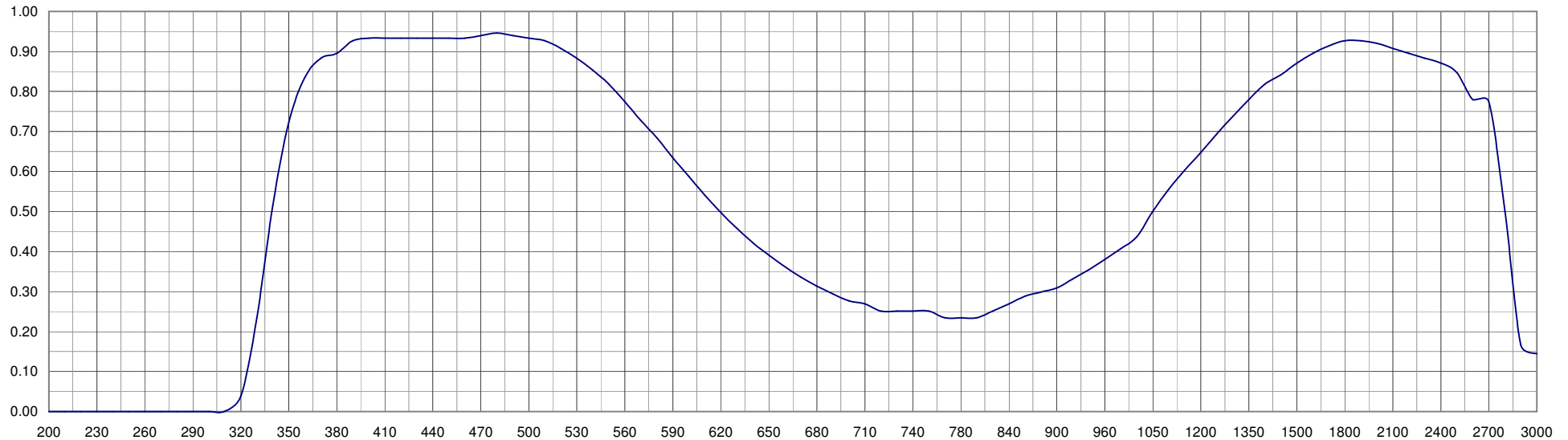
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
B	1	520	101	2.5	1.13	2.6	0.1	cyan	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BGC17 CLOSE TO SCHOTT GLASS BG26 & HOYA GLASS NONE



Catalogue Thickness 1.5 mm

Reflection Factor 0.924

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.005	0.014	0.036	0.089	0.184	0.309	0.468	0.617	0.740	0.833	0.892	0.927	0.946	0.956
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.005	0.015	0.039	0.096	0.199	0.335	0.506	0.667	0.802	0.901	0.966	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.950	0.943	0.940	0.917	0.883	0.830	0.766	0.684	0.602	0.501	0.437	0.331	0.243	0.166	0.122	0.075	0.035	0.012	0.006	0.006	0.005	0.003	0.002	0.002
Ti	1.000	1.000	1.000	0.993	0.956	0.898	0.830	0.740	0.652	0.543	0.473	0.358	0.263	0.180	0.132	0.081	0.038	0.013	0.007	0.006	0.006	0.003	0.002	0.002
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.002	0.003	0.011	0.065	0.251	0.575	0.791	0.920	0.969	0.993	0.993	0.993	0.990	0.990	0.986	0.983	0.979	0.976	0.973	0.969	0.963	0.946	0.930	0.908
Ti	0.003	0.003	0.012	0.071	0.272	0.623	0.856	0.996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.983
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.877	0.827	0.785	0.708	0.596	0.501	0.331	0.260	0.288	0.288	0.279	0.309	0.355	0.422	0.501	0.596	0.661	0.596	0.269	0.075	0.011	0.001		
Ti	0.949	0.895	0.850	0.766	0.645	0.543	0.358	0.281	0.312	0.312	0.302	0.335	0.384	0.456	0.543	0.645	0.715	0.645	0.291	0.081	0.012	0.001		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5040		1.5000	1.4970		1.4950		1.4920			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.179	0.322	18.900	2.0
B	0.159	0.214	24.500	2.0

Properties

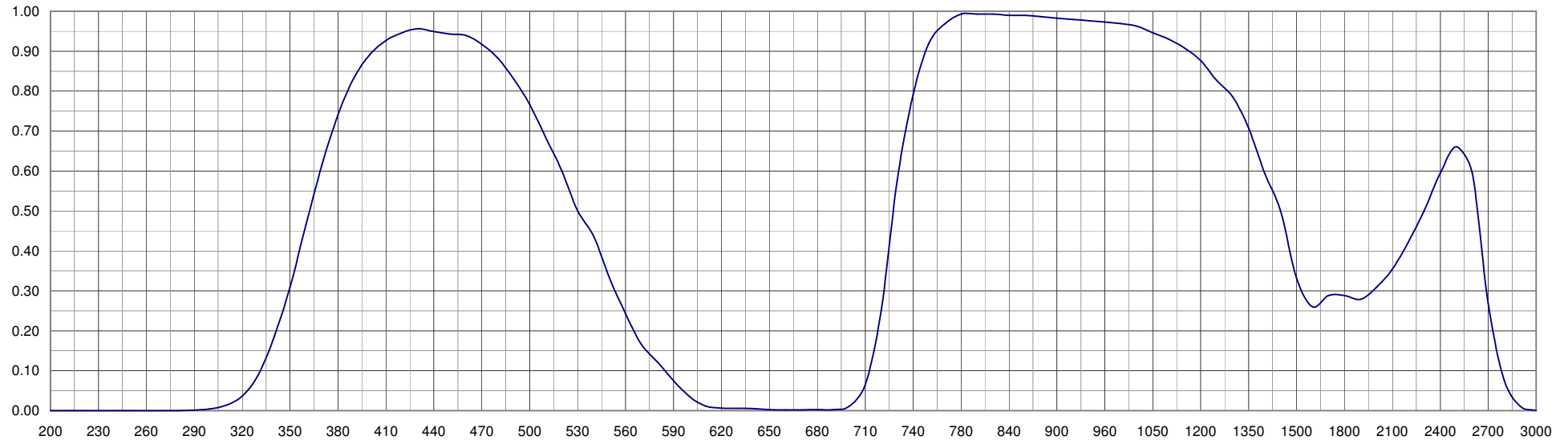
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	5	420	94	2.27	0.68	3.65	0.2	blue-green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BGC20 CLOSE TO SCHOTT GLASS BG36/FG3 & HOYA GLASS C500



Catalogue Thickness 2.5 mm

Reflection Factor 0.912

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.266	0.585	0.804	0.912	0.961	0.977	0.983	0.989	0.994	0.994
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.292	0.642	0.881	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	
T	0.994	0.994	0.994	0.994	0.994	0.989	0.983	0.972	0.955	0.917	0.876	0.813	0.724	0.627	0.510	0.387	0.299	0.200	0.141	0.079	0.045	0.028	0.013	0.006	
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.960	0.891	0.794	0.688	0.559	0.424	0.327	0.219	0.155	0.087	0.049	0.031	0.014	0.006	
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150	
T	0.003	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Ti	0.003	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000			
T	0.000	0.001	0.002	0.005	0.012	0.033	0.063	0.150	0.282	0.447	0.596	0.631	0.631	0.631	0.631	0.631	0.596	0.501	0.398	0.133	0.001	0.000			
Ti	0.000	0.001	0.002	0.005	0.013	0.037	0.069	0.164	0.309	0.490	0.653	0.692	0.692	0.692	0.692	0.692	0.653	0.549	0.436	0.146	0.001	0.000			

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5340		1.5480	1.5450		1.5420					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.321	0.432	56.200	2.0
B	0.250	0.337	62.600	2.0

Properties

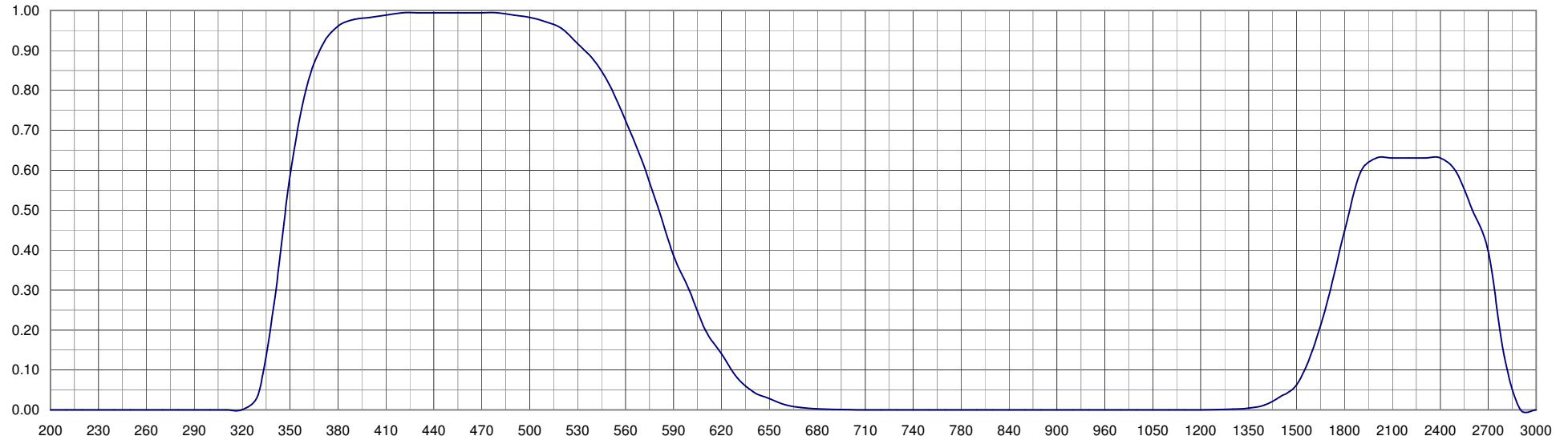
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
E	6	380	100	2.86	0.3	3.4	0.1	blue-green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BGC21 CLOSE TO SCHOTT GLASS BG39 & HOYA GLASS CM500



Catalogue Thickness 1.0 mm

Reflection Factor 0.908

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.079	0.324	0.617	0.805	0.899	0.944	0.962	0.975	0.979	0.982
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.087	0.356	0.679	0.887	0.990	1.000	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	
T	0.984	0.984	0.984	0.984	0.984	0.982	0.975	0.959	0.938	0.895	0.839	0.766	0.661	0.550	0.427	0.316	0.214	0.138	0.081	0.046	0.022	0.010	0.004	0.002	
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.986	0.924	0.843	0.727	0.605	0.470	0.348	0.235	0.152	0.090	0.050	0.025	0.011	0.004	0.002	
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150	
T	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Ti	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000			
T	0.000	0.000	0.001	0.003	0.009	0.020	0.041	0.120	0.240	0.363	0.479	0.575	0.631	0.676	0.692	0.708	0.708	0.692	0.617	0.380	0.071	0.013			
Ti	0.000	0.000	0.001	0.003	0.010	0.022	0.045	0.132	0.264	0.400	0.527	0.634	0.695	0.744	0.762	0.780	0.780	0.762	0.679	0.419	0.078	0.014			

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5720		1.5660	1.5620							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.214	0.410	33.600	2.0
B	0.180	0.293	41.000	2.0

Properties

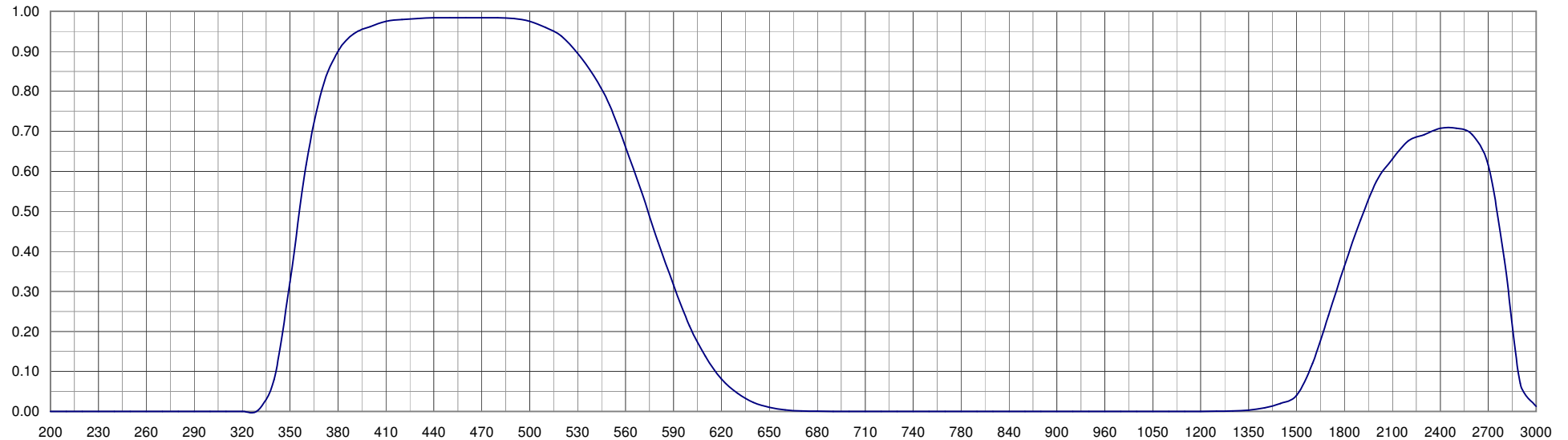
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
E	6	400	98	2.93	0.28	3.2	0.2	blue-green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BGC22 CLOSE TO SCHOTT GLASS BG39 & HOYA GLASS CM500



Catalogue Thickness 2.5 mm

Refraction Factor 0.914

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.100	0.376	0.661	0.837	0.917	0.955	0.977	0.977	0.983	0.983	0.989	0.989
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.109	0.411	0.723	0.916	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.989	0.989	0.994	0.994	0.994	0.994	0.994	0.989	0.983	0.972	0.955	0.928	0.896	0.851	0.804	0.733	0.668	0.579	0.501	0.422	0.345	0.282	0.211	0.168
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.981	0.932	0.880	0.802	0.732	0.634	0.549	0.462	0.377	0.309	0.231	0.184
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.126	0.089	0.067	0.047	0.035	0.025	0.018	0.013	0.010	0.006	0.004	0.003	0.002	0.002	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.009	0.016	0.027
Ti	0.138	0.098	0.073	0.052	0.039	0.027	0.019	0.015	0.011	0.006	0.004	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.005	0.010	0.017	0.029
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.042	0.067	0.089	0.126	0.178	0.266	0.335	0.422	0.531	0.596	0.653	0.680	0.688	0.676	0.657	0.620	0.562	0.501	0.422	0.282	0.075	0.001		
Ti	0.046	0.073	0.098	0.138	0.195	0.291	0.367	0.462	0.581	0.652	0.715	0.744	0.753	0.740	0.719	0.679	0.616	0.549	0.462	0.309	0.082	0.001		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5480		1.5430	1.5400		1.5380		1.5350			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
V									

Color Specifications

	x	y	T	Thick
A	0.373	0.427	59.100	3.0
B	0.279	0.347	65.000	3.0

Properties

Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
E	5	380	108	2.84	0.33	3.2	0.1	cyan	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

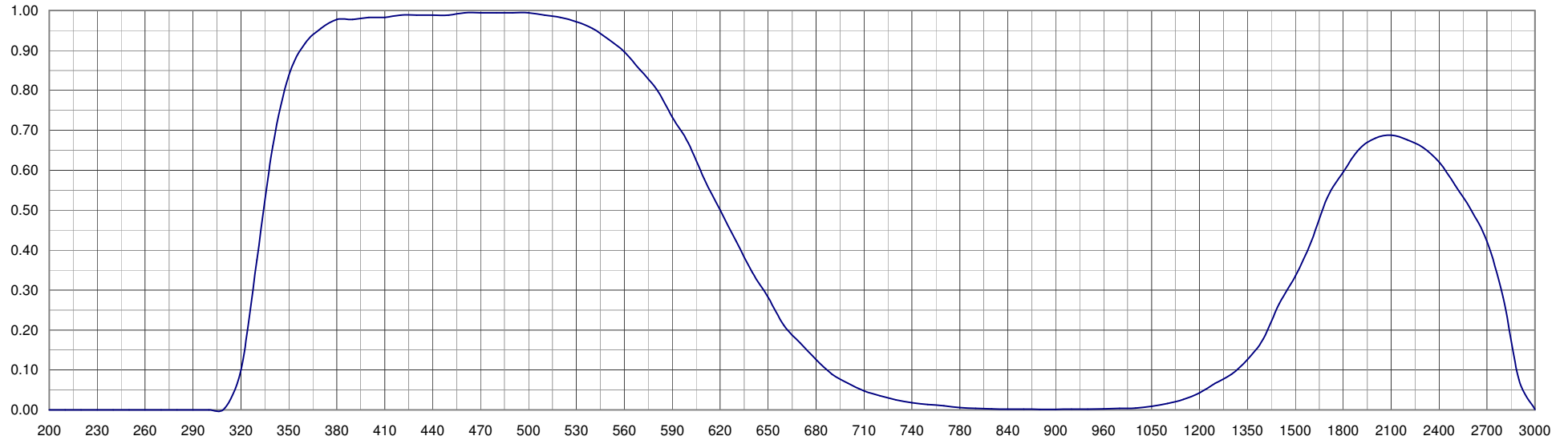
GOST BGC23

CLOSE TO

SCHOTT GLASS BG38

&

HOYA GLASS CM500/CAW500



Catalogue Thickness 3.5 mm

Reflection Factor 0.918

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.040	0.145	0.324	0.538	0.719	0.838	0.893	0.930	0.953	0.968	0.968	0.953	0.930	0.923	0.915	0.908
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.043	0.157	0.352	0.585	0.783	0.912	0.973	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.989
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.915	0.915	0.908	0.915	0.930	0.930	0.930	0.930	0.923	0.915	0.923	0.923	0.915	0.908	0.901	0.879	0.858	0.831	0.798	0.760	0.724	0.685	0.647	0.607
Ti	0.997	0.997	0.989	0.997	1.000	1.000	1.000	1.000	1.000	0.997	1.000	1.000	0.997	0.989	0.981	0.957	0.934	0.905	0.869	0.828	0.789	0.746	0.705	0.661
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.560	0.516	0.469	0.426	0.393	0.337	0.311	0.275	0.234	0.170	0.133	0.097	0.065	0.043	0.029	0.019	0.013	0.009	0.005	0.004	0.002	0.001	0.001	0.000
Ti	0.610	0.562	0.511	0.463	0.428	0.367	0.338	0.300	0.255	0.185	0.145	0.105	0.070	0.047	0.031	0.021	0.014	0.009	0.006	0.004	0.003	0.001	0.001	0.001
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.004	0.005	0.005	0.005	0.004	0.003	0.006	0.005	0.009	0.010	0.012	0.005	0.002		
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.004	0.005	0.005	0.005	0.004	0.003	0.007	0.006	0.010	0.011	0.013	0.006	0.002		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5270		1.5230	1.5200		1.5180		1.5150			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.437	0.408	80.000	2.0
B	0.338	0.348	80.600	2.0

Properties

Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	2	620	55	2.55	0.78	2.7		cyan	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

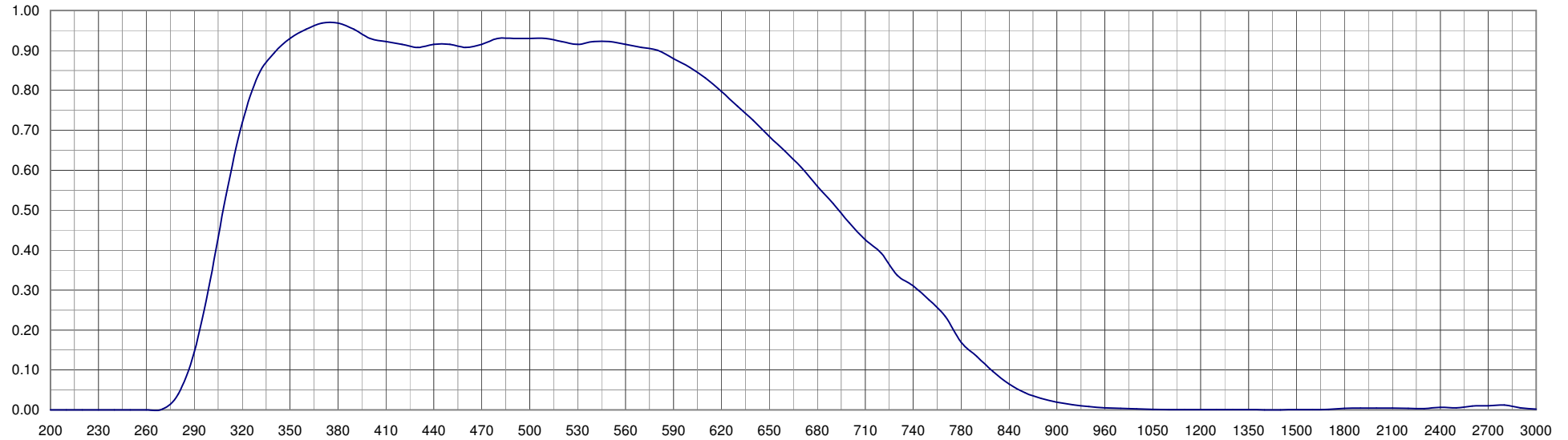
GOST BGC24

CLOSE TO

SCHOTT GLASS KG1

&

HOYA GLASS HA30/HA50



Catalogue Thickness 3.5 mm

Reflection Factor 0.919

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.009	0.082	0.190	0.440	0.578	0.754	0.831	0.893	0.908	0.923	0.901	0.872	0.851	0.838	0.851
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.010	0.089	0.207	0.478	0.629	0.821	0.904	0.972	0.988	1.000	0.980	0.949	0.926	0.911	0.926
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.858	0.858	0.844	0.865	0.872	0.872	0.879	0.865	0.858	0.858	0.858	0.865	0.858	0.838	0.824	0.792	0.760	0.719	0.679	0.622	0.569	0.516	0.473	0.409
Ti	0.934	0.934	0.919	0.941	0.949	0.949	0.956	0.941	0.934	0.934	0.934	0.941	0.934	0.911	0.897	0.861	0.827	0.782	0.739	0.676	0.619	0.562	0.514	0.445
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.351	0.299	0.254	0.216	0.184	0.150	0.123	0.097	0.076	0.043	0.023	0.012	0.006	0.003	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.382	0.325	0.276	0.235	0.200	0.164	0.134	0.105	0.083	0.047	0.025	0.013	0.007	0.003	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5170							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.432	0.414	79.300	2.0
B	0.335	0.354	80.400	2.0

Properties

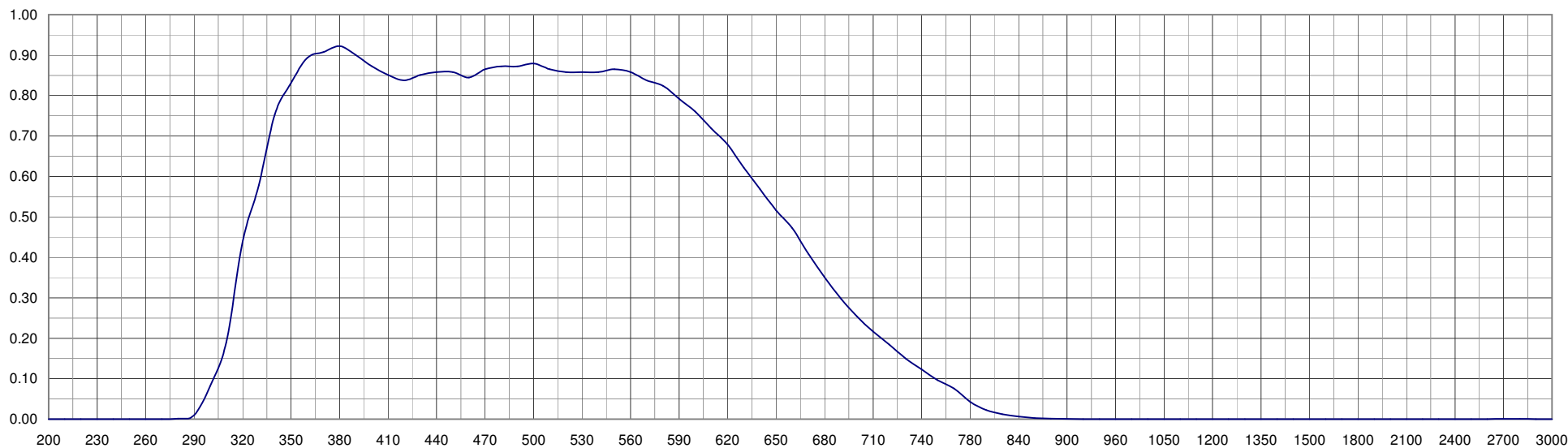
Chimic		Termic		Mechanic			Other	
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color
C	2	620	55	2.54	0.76	2.7		cyan

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BGC25 CLOSE TO SCHOTT GLASS KG3 & HOYA GLASS HA30/HA50



Catalogue Thickness 3.5 mm

Reflection Factor 0.914

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.055	0.208	0.447	0.627	0.724	0.779	0.818	0.844	0.851	0.858	0.858	0.851	0.851	0.858	0.858
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.060	0.227	0.488	0.685	0.792	0.852	0.894	0.923	0.931	0.938	0.938	0.931	0.931	0.938	0.938
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.858	0.851	0.844	0.865	0.879	0.879	0.879	0.879	0.879	0.879	0.879	0.893	0.901	0.901	0.908	0.901	0.901	0.901	0.893	0.879	0.851	0.838	0.824	0.804
Ti	0.938	0.931	0.923	0.946	0.961	0.961	0.961	0.961	0.961	0.961	0.961	0.977	0.985	0.985	0.993	0.985	0.985	0.985	0.985	0.977	0.961	0.931	0.916	0.880
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.779	0.742	0.707	0.663	0.622	0.578	0.529	0.488	0.429	0.337	0.234	0.157	0.097	0.055	0.027	0.015	0.008	0.004	0.002	0.001	0.001	0.000	0.001	0.001
Ti	0.852	0.812	0.773	0.725	0.680	0.632	0.579	0.534	0.469	0.368	0.256	0.171	0.106	0.060	0.029	0.017	0.009	0.004	0.002	0.001	0.001	0.000	0.001	0.001
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.001	0.001	0.001	0.002	0.003	0.003	0.007	0.010	0.015	0.015	0.013	0.007	0.005	0.005	0.003	0.003	0.003	0.003	0.003	0.005	0.006	0.003	0.001	
Ti	0.001	0.001	0.001	0.002	0.003	0.003	0.008	0.011	0.017	0.017	0.014	0.008	0.005	0.005	0.003	0.003	0.003	0.003	0.003	0.006	0.007	0.003	0.001	

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5360							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.447	0.409	86.900	2.0
B	0.348	0.358	87.000	2.0

Properties

Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
E	2	480	92	2.84	0.36	1.9	0.05	cyan	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

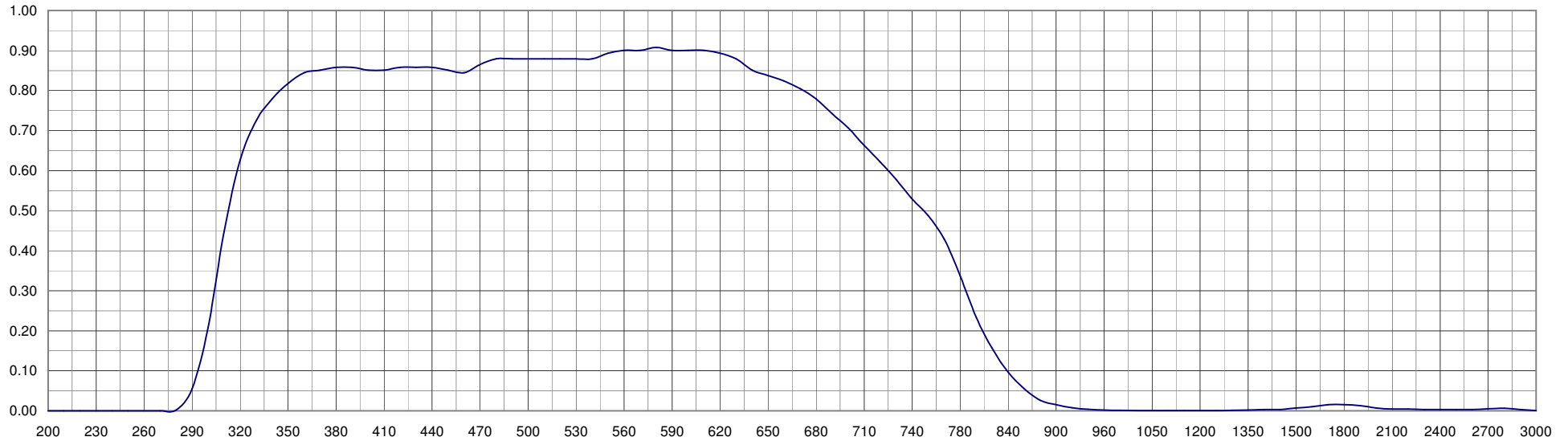
GOST BGC26

CLOSE TO

SCHOTT GLASS KG2

&

HOYA GLASS HA30/HA50



Catalogue Thickness 3.5 mm

Reflection Factor 0.922

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.133	0.250	0.469	0.612	0.798	0.851	0.915	0.945	0.968	0.968	0.976	0.961	0.938	0.923	0.915	0.923
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.145	0.271	0.509	0.663	0.866	0.923	0.993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.993	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.923	0.930	0.923	0.930	0.930	0.930	0.938	0.930	0.923	0.923	0.930	0.930	0.930	0.923	0.915	0.893	0.879	0.851	0.818	0.779	0.742	0.701	0.658	0.612
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.993	0.969	0.953	0.923	0.887	0.845	0.805	0.761	0.713	0.663
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.569	0.533	0.500	0.426	0.359	0.306	0.262	0.267	0.195	0.134	0.092	0.058	0.037	0.022	0.014	0.008	0.005	0.003	0.002	0.002	0.001	0.001	0.000	0.000
Ti	0.617	0.579	0.542	0.462	0.390	0.332	0.285	0.289	0.211	0.146	0.100	0.063	0.040	0.024	0.015	0.009	0.005	0.004	0.003	0.002	0.001	0.001	0.000	0.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.004	0.008	0.007	0.006	0.006	0.006	0.008	0.009	0.014	0.022	0.034	0.039	0.045	0.052		
Ti	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.004	0.008	0.008	0.007	0.006	0.006	0.008	0.010	0.015	0.024	0.037	0.043	0.049	0.057		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5050							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.441	0.411	87.400	2.0
B	0.343	0.353	87.900	2.0

Properties

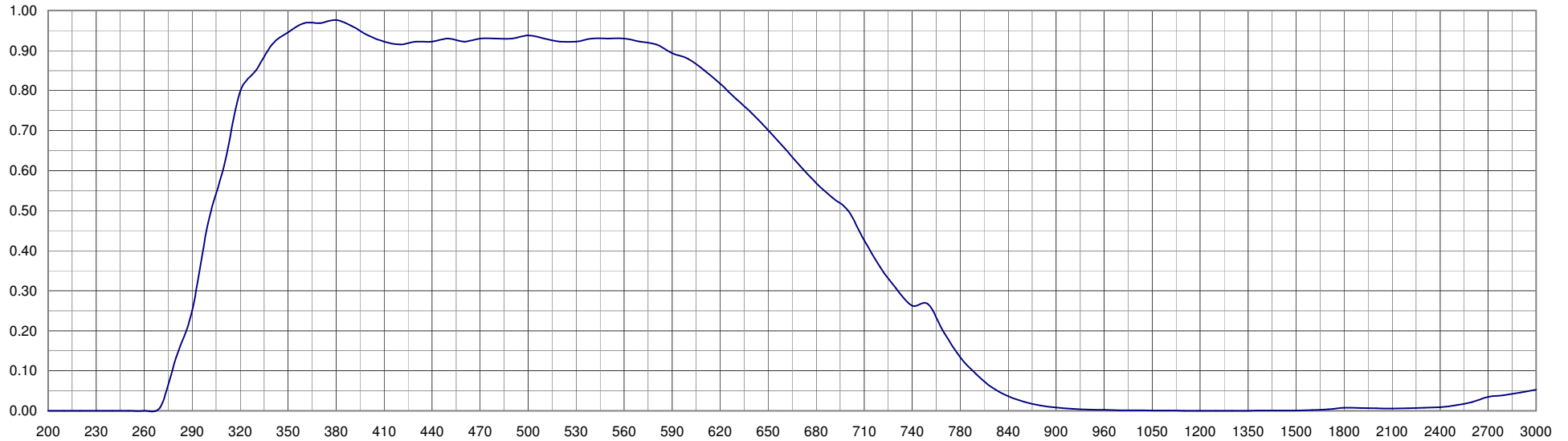
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	1	570	59	2.44	0.66	2.2		cyan	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BGC27 CLOSE TO SCHOTT GLASS KG1 & HOYA GLASS HA30/HA50



Catalogue Thickness 1.0 mm

Refraction Factor 0.914

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.010	0.013	0.128	0.484	0.670	0.832	0.912	0.951	0.968	0.976	0.979	0.994	0.994	0.994
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.011	0.014	0.140	0.530	0.733	0.910	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.985	0.977	0.953	0.940	0.915	0.881	0.834	0.759	0.667	0.594	0.495	0.430	0.366	0.269	0.184	0.141	0.100
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.964	0.912	0.830	0.729	0.650	0.541	0.470	0.401	0.294	0.201	0.154	0.109
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.060	0.033	0.022	0.015	0.007	0.005	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.066	0.036	0.024	0.017	0.007	0.005	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.000	0.007	0.000	0.008	0.012	0.026	0.052	0.144	0.282	0.433	0.561	0.651	0.717	0.748	0.756	0.768	0.767	0.713	0.671	0.424	0.138	0.070		
Ti	0.000	0.007	0.000	0.009	0.013	0.029	0.057	0.158	0.309	0.474	0.613	0.712	0.784	0.818	0.827	0.840	0.839	0.780	0.734	0.464	0.151	0.076		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5370							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A				
B				

Properties

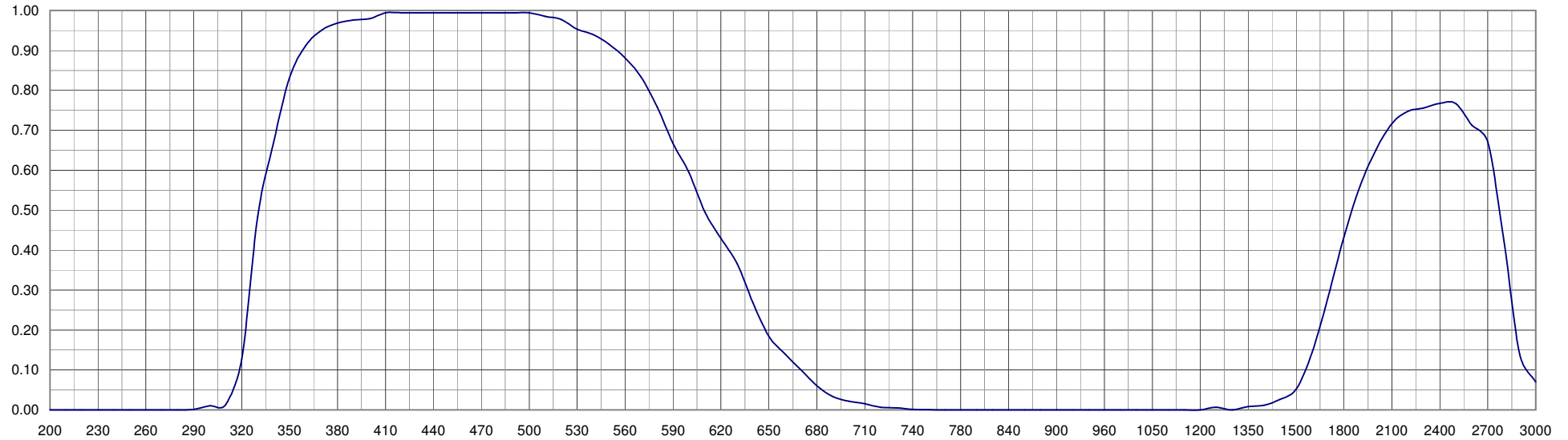
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
								blue-green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST BGC29 CLOSE TO SCHOTT GLASS S8612 & HOYA GLASS CM500/CAW500



Catalogue Thickness 1.5 mm

Reflection Factor 0.917

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.006
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.007
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.024	0.063	0.117	0.197	0.269	0.367	0.452	0.537	0.596	0.617	0.596	0.537	0.468	0.394	0.309	0.243	0.178	0.135	0.095	0.072	0.057	0.046	0.039	0.034
Ti	0.026	0.069	0.128	0.215	0.294	0.401	0.493	0.586	0.650	0.672	0.650	0.586	0.510	0.429	0.337	0.265	0.194	0.147	0.104	0.079	0.062	0.050	0.042	0.037
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.032	0.028	0.026	0.025	0.025	0.025	0.026	0.026	0.028	0.031	0.033	0.036	0.040	0.046	0.053	0.059	0.070	0.083	0.099	0.117	0.135	0.191	0.234	0.288
Ti	0.034	0.030	0.028	0.027	0.027	0.027	0.028	0.028	0.030	0.033	0.036	0.040	0.044	0.050	0.058	0.064	0.076	0.091	0.108	0.128	0.147	0.208	0.256	0.315
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.355	0.407	0.484	0.556	0.596	0.638	0.661	0.708	0.733	0.759	0.785	0.813	0.841	0.841	0.841	0.841	0.813	0.733	0.596	0.452	0.320	0.260		
Ti	0.387	0.444	0.528	0.606	0.650	0.696	0.721	0.772	0.799	0.827	0.856	0.887	0.918	0.918	0.918	0.918	0.887	0.799	0.650	0.493	0.349	0.284		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5260							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.332	0.595	23.100	2.0
B	0.292	0.593	25.800	2.0

Properties

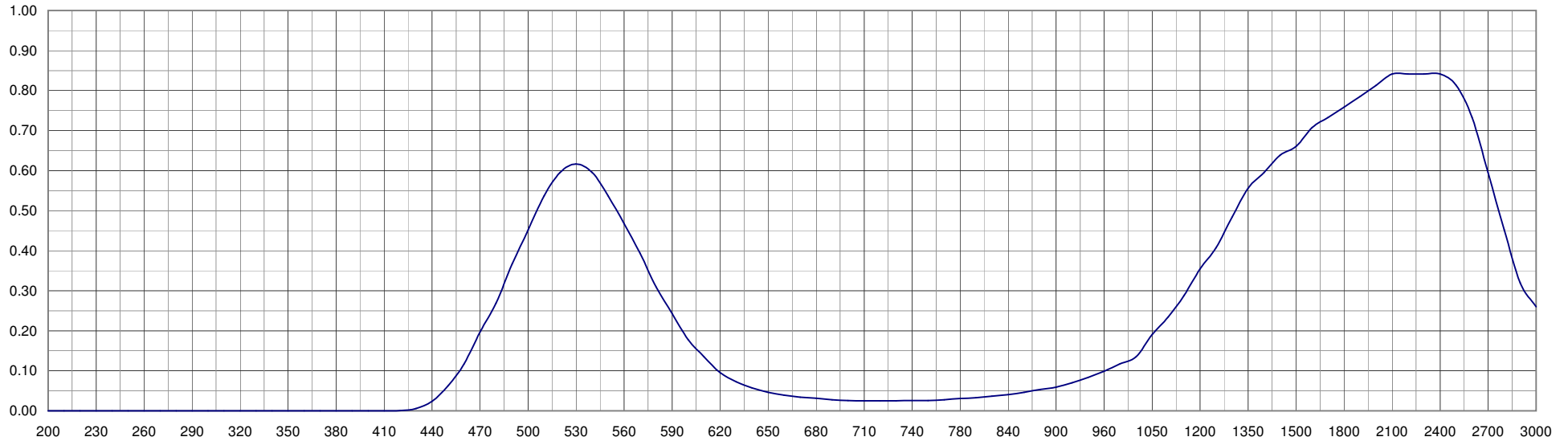
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	1	520	103	2.52	1.12	2.5	0.2	green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST GC1 CLOSE TO SCHOTT GLASS BG40/KG1 & HOYA GLASS G530/G533



Catalogue Thickness 1.5 mm

Reflection Factor 0.917

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.002	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.044	0.199	0.394	0.536	0.632	0.700	0.739	0.716	0.633	0.527	0.435
Ti	0.002	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.002	0.001	0.048	0.217	0.429	0.584	0.689	0.763	0.806	0.781	0.691	0.575	0.474
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.377	0.357	0.373	0.404	0.446	0.505	0.564	0.606	0.619	0.598	0.544	0.468	0.381	0.295	0.217	0.154	0.105	0.070	0.046	0.031	0.022	0.016	0.012	0.010
Ti	0.411	0.389	0.406	0.441	0.487	0.551	0.615	0.661	0.675	0.652	0.593	0.510	0.415	0.321	0.237	0.168	0.114	0.076	0.050	0.034	0.024	0.017	0.013	0.010
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.008	0.006	0.006	0.005	0.005	0.004	0.005	0.004	0.004	0.004	0.015	0.014	0.012	0.011	0.011	0.011	0.013	0.015	0.019	0.022	0.027	0.044	0.067	0.097
Ti	0.009	0.007	0.006	0.006	0.005	0.005	0.005	0.005	0.005	0.005	0.016	0.015	0.013	0.012	0.012	0.012	0.014	0.017	0.020	0.024	0.030	0.048	0.073	0.106
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.134	0.176	0.223	0.273	0.322	0.372	0.419	0.508	0.587	0.655	0.713	0.757	0.794	0.818	0.841	0.861	0.872	0.904	0.882	0.571	0.547	0.557		
Ti	0.146	0.192	0.243	0.297	0.351	0.406	0.457	0.554	0.640	0.714	0.777	0.826	0.866	0.892	0.916	0.939	0.950	0.985	0.962	0.623	0.597	0.608		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5250							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.255	0.499	21.500	2.0
B	0.210	0.394	24.000	2.0

Properties

Chimic		Termic		Mechanic			Other	
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color
B	2	520	99	2.52	1.09	2.6	0.2	green

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

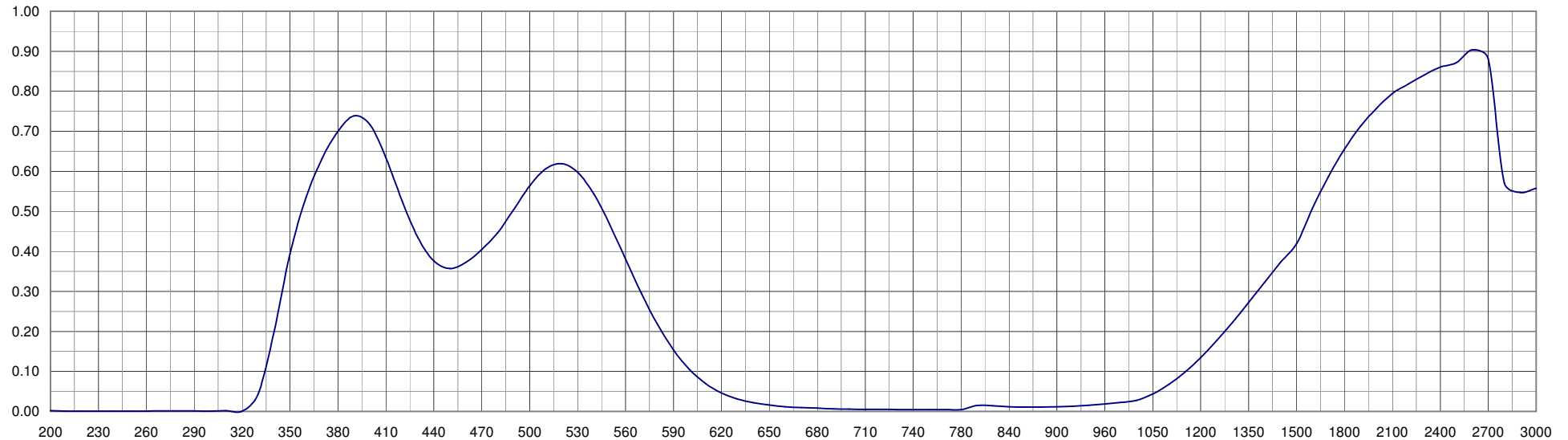
GOST GC3

CLOSE TO

SCHOTT GLASS VG9

&

HOYA GLASS NONE



Catalogue Thickness 2.5 mm

Reflection Factor 0.914

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.024	0.075	0.133	0.237	0.332	0.447	0.546	0.646	0.716	0.772	0.794	0.724	0.376	0.133
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.026	0.082	0.146	0.259	0.364	0.489	0.598	0.706	0.783	0.844	0.869	0.792	0.411	0.146
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.211	0.251	0.237	0.126	0.032	0.027	0.200	0.688	0.861	0.422	0.100	0.178	0.832	0.871	0.704	0.398	0.224	0.089	0.015	0.003	0.008	0.009	0.003	0.000
Ti	0.231	0.275	0.259	0.138	0.035	0.029	0.218	0.752	0.942	0.461	0.109	0.195	0.910	0.953	0.770	0.435	0.245	0.097	0.016	0.003	0.009	0.010	0.003	0.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.299	0.724	0.881	0.912	0.917	0.917	0.912	0.891	0.866	0.712	0.550	0.457	0.365	0.299	0.259	0.224	0.335	0.579	0.708	0.613	0.316	0.021	0.002	0.001
Ti	0.327	0.792	0.964	0.998	1.000	1.000	0.998	0.975	0.947	0.779	0.601	0.500	0.399	0.327	0.283	0.245	0.366	0.633	0.774	0.671	0.346	0.023	0.002	0.001
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.211	0.665	0.741	0.454	0.168	0.084	0.060	0.141	0.422	0.653	0.668	0.422	0.178	0.106	0.100	0.237	0.316	0.266	0.133	0.028	0.003	0.000		
Ti	0.231	0.727	0.811	0.497	0.184	0.092	0.065	0.155	0.461	0.714	0.731	0.461	0.195	0.116	0.109	0.259	0.346	0.291	0.146	0.031	0.003	0.000		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5370							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.392	0.500	45.100	2.0
B	0.333	0.447	47.100	2.0

Properties

Chimic		Termic		Mechanic			Other	
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color
D	5	360	72	2.85	0.89	3.4		holmium

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

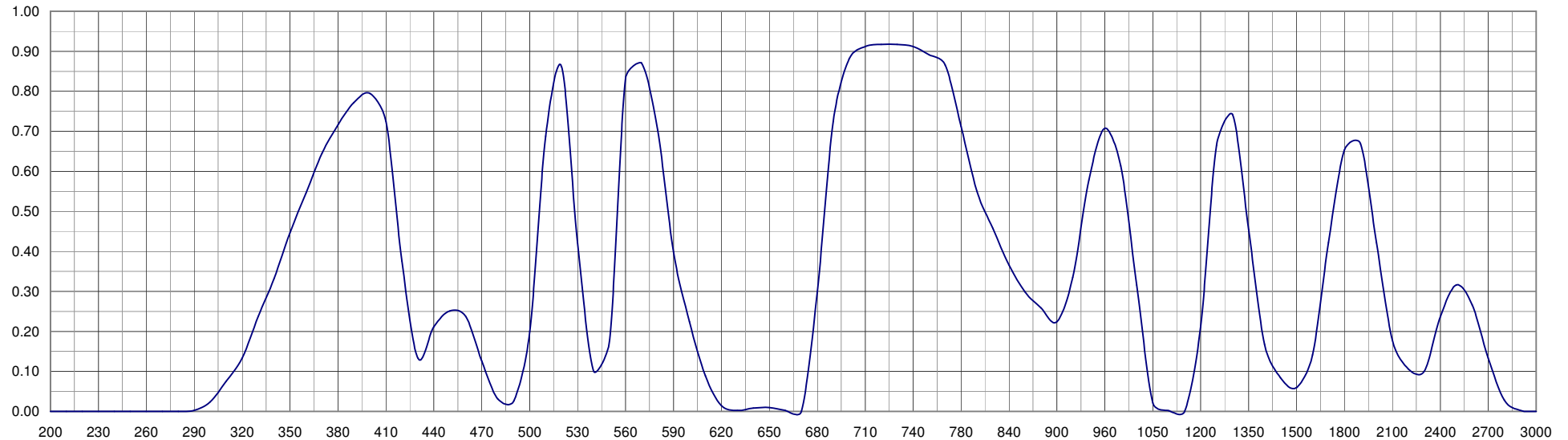
GOST GC7

CLOSE TO

SCHOTT GLASS BG20

&

HOYA GLASS HY1



Catalogue Thickness 1.5 mm

Reflection Factor 0.915

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.005	0.016	0.048	0.110	0.204
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.005	0.017	0.052	0.120	0.223
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.331	0.468	0.596	0.720	0.802	0.868	0.911	0.933	0.946	0.950	0.946	0.933	0.917	0.883	0.847	0.799	0.748	0.689	0.638	0.575	0.519	0.468	0.422	0.380
Ti	0.362	0.511	0.651	0.787	0.876	0.948	0.995	1.000	1.000	1.000	1.000	1.000	1.000	0.965	0.926	0.873	0.817	0.752	0.697	0.629	0.567	0.511	0.461	0.415
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.343	0.320	0.288	0.269	0.251	0.226	0.211	0.191	0.178	0.145	0.130	0.117	0.110	0.110	0.114	0.126	0.145	0.166	0.197	0.219	0.251	0.320	0.380	0.437
Ti	0.375	0.350	0.315	0.294	0.274	0.247	0.231	0.208	0.194	0.158	0.142	0.128	0.120	0.120	0.124	0.138	0.158	0.181	0.216	0.239	0.274	0.350	0.415	0.477
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.484	0.556	0.617	0.684	0.756	0.816	0.871	0.902	0.908	0.898	0.874	0.833	0.783	0.720	0.661	0.596	0.484	0.343	0.160	0.011	0.000	0.000		
Ti	0.529	0.607	0.674	0.747	0.826	0.891	0.952	0.985	0.992	0.982	0.955	0.910	0.855	0.787	0.722	0.651	0.529	0.375	0.175	0.012	0.000	0.000		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n					1.5370	1.5330		1.5310		1.5280			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.425	0.468	70.500	2.0
B	0.350	0.442	73.000	2.0

Properties

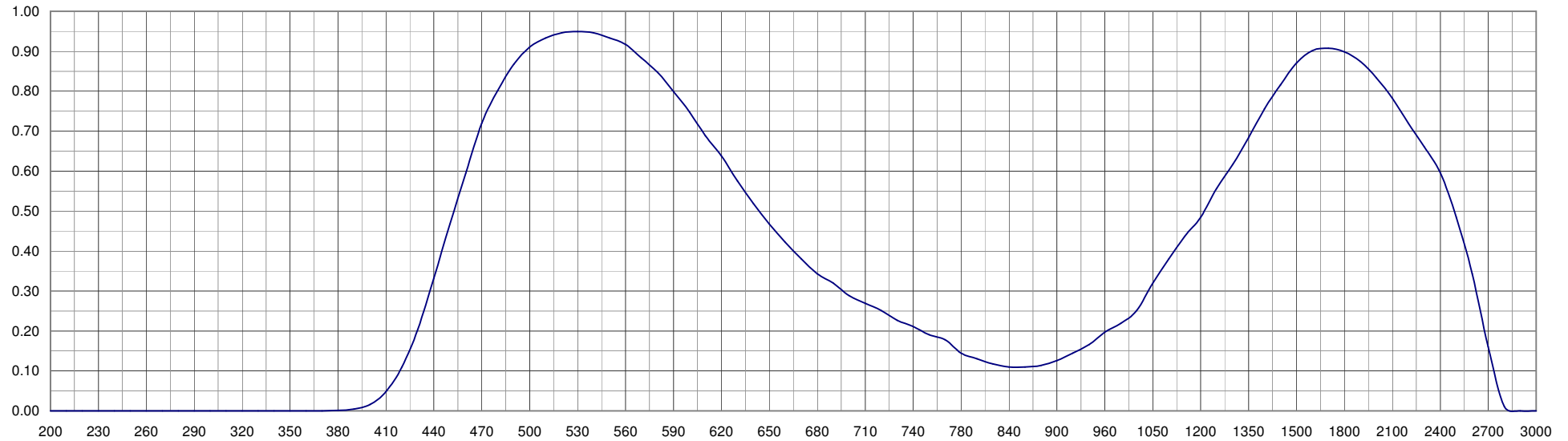
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
D	6	370	99	2.83	0.33	3.25	0.1	green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST GC8 CLOSE TO SCHOTT GLASS BG28 & HOYA GLASS NONE



Catalogue Thickness 1.5 mm

Reflection Factor 0.914

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.004
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.004
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.008	0.016	0.029	0.051	0.080	0.135	0.211	0.320	0.437	0.537	0.617	0.638	0.617	0.566	0.468	0.367	0.279	0.184	0.117	0.078	0.063	0.053	0.040	0.043
Ti	0.009	0.017	0.031	0.056	0.088	0.148	0.231	0.350	0.477	0.587	0.674	0.698	0.674	0.619	0.512	0.402	0.305	0.201	0.129	0.085	0.069	0.058	0.044	0.047
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.048	0.039	0.045	0.055	0.070	0.089	0.110	0.130	0.155	0.184	0.197	0.211	0.226	0.251	0.288	0.331	0.394	0.468	0.556	0.638	0.703	0.813	0.889	0.936
Ti	0.052	0.043	0.049	0.060	0.077	0.097	0.120	0.143	0.169	0.201	0.216	0.231	0.248	0.275	0.315	0.362	0.430	0.512	0.608	0.698	0.769	0.889	0.973	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.953	0.973	0.983	0.986	0.986	0.983	0.976	0.966	0.953	0.933	0.905	0.877	0.847	0.813	0.777	0.743	0.708	0.661	0.596	0.468	0.150	0.013		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.990	0.959	0.927	0.889	0.850	0.813	0.774	0.723	0.652	0.512	0.164	0.014		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5370							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.397	0.584	26.500	2.0
B	0.370	0.604	28.000	2.0

Properties

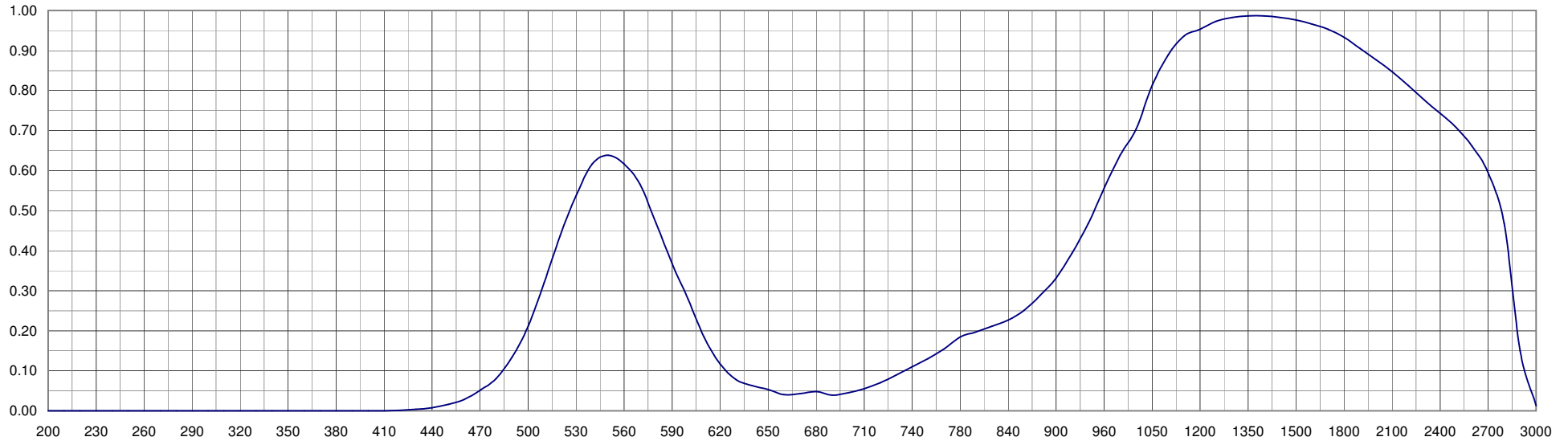
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
E	5	380	100	2.83	0.34	3.25	0.2	green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST GC10 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS G545



Catalogue Thickness 1.0 mm

Reflection Factor 0.916

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.001	0.004	0.014	0.028	0.054	0.100	0.151	0.191	0.219	0.240	0.251	0.240	0.224	0.191	0.158	0.120	0.091	0.066	0.045	0.034	0.031	0.022	0.018	0.020
Ti	0.002	0.005	0.015	0.031	0.059	0.109	0.165	0.208	0.239	0.262	0.274	0.262	0.244	0.208	0.173	0.131	0.100	0.072	0.049	0.037	0.034	0.024	0.019	0.022
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.020	0.020	0.020	0.020	0.020	0.022	0.022	0.022	0.025	0.025	0.025	0.028	0.028	0.028	0.033	0.036	0.042	0.048	0.055	0.063	0.076	0.105	0.132	0.166
Ti	0.022	0.022	0.022	0.022	0.022	0.024	0.024	0.024	0.027	0.027	0.027	0.031	0.031	0.031	0.036	0.040	0.046	0.052	0.060	0.069	0.083	0.114	0.144	0.181
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.200	0.251	0.282	0.316	0.355	0.427	0.501	0.562	0.562	0.631	0.631	0.631	0.661	0.661	0.676	0.692	0.708	0.708	0.708	0.692	0.661	0.631		
Ti	0.218	0.274	0.308	0.345	0.387	0.466	0.547	0.614	0.614	0.689	0.689	0.689	0.721	0.721	0.738	0.755	0.773	0.773	0.773	0.755	0.721	0.689		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5290							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.305	0.664	2.700	2.0
B	0.285	0.675	3.000	2.0

Properties

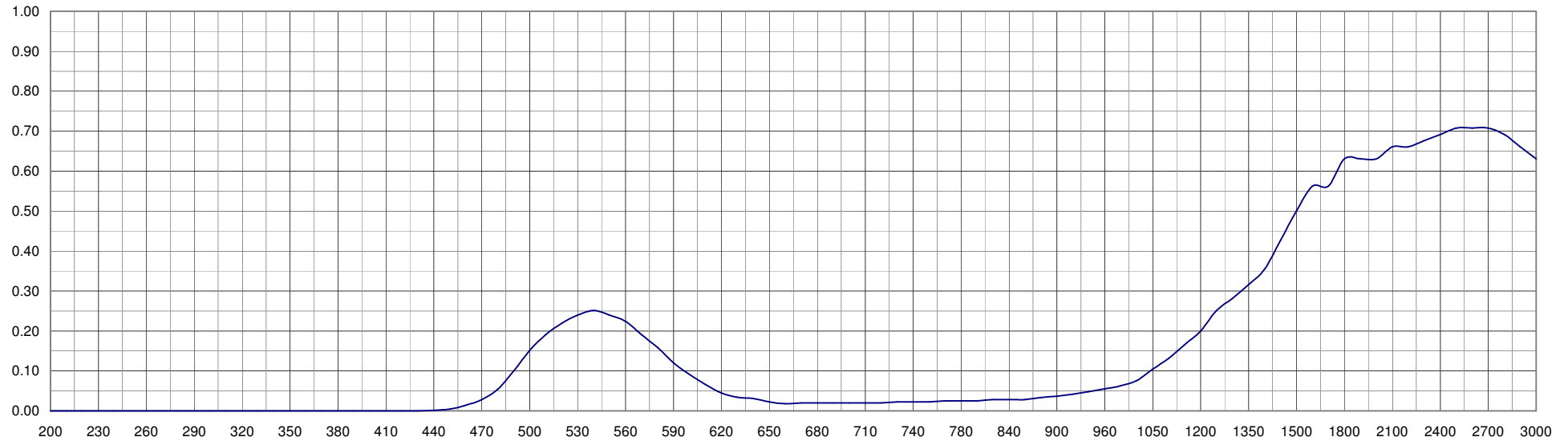
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	1	520	100	2.53	1.11	2.65	0.2	yellow-green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST YGC12 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS G545



Catalogue Thickness 1.0 mm

Reflection Factor 0.916

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.000	0.000	0.001	0.003	0.005	0.009	0.014	0.025	0.032	0.038	0.040	0.037	0.034	0.028	0.028	0.025	0.018	0.013	0.007	0.005	0.004	0.004	0.004	0.005
Ti	0.000	0.000	0.001	0.003	0.005	0.010	0.015	0.027	0.035	0.041	0.043	0.041	0.037	0.031	0.031	0.027	0.019	0.014	0.008	0.005	0.004	0.004	0.004	0.005
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.007	0.008	0.010	0.011	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.014	0.014	0.016	0.016	0.018	0.022	0.025	0.028	0.035	0.050	0.071	0.089
Ti	0.008	0.009	0.011	0.012	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.015	0.015	0.017	0.017	0.019	0.024	0.027	0.031	0.039	0.055	0.077	0.097
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.126	0.158	0.178	0.224	0.251	0.282	0.316	0.355	0.380	0.398	0.398	0.398	0.398	0.398	0.427	0.447	0.490	0.501	0.490	0.398	0.316	0.282		
Ti	0.137	0.173	0.194	0.244	0.274	0.308	0.345	0.387	0.415	0.435	0.435	0.435	0.435	0.435	0.466	0.488	0.535	0.547	0.535	0.435	0.345	0.308		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n								1.5290					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.413	0.555	2.300	1.0
B	0.372	0.575	2.400	1.0

Properties

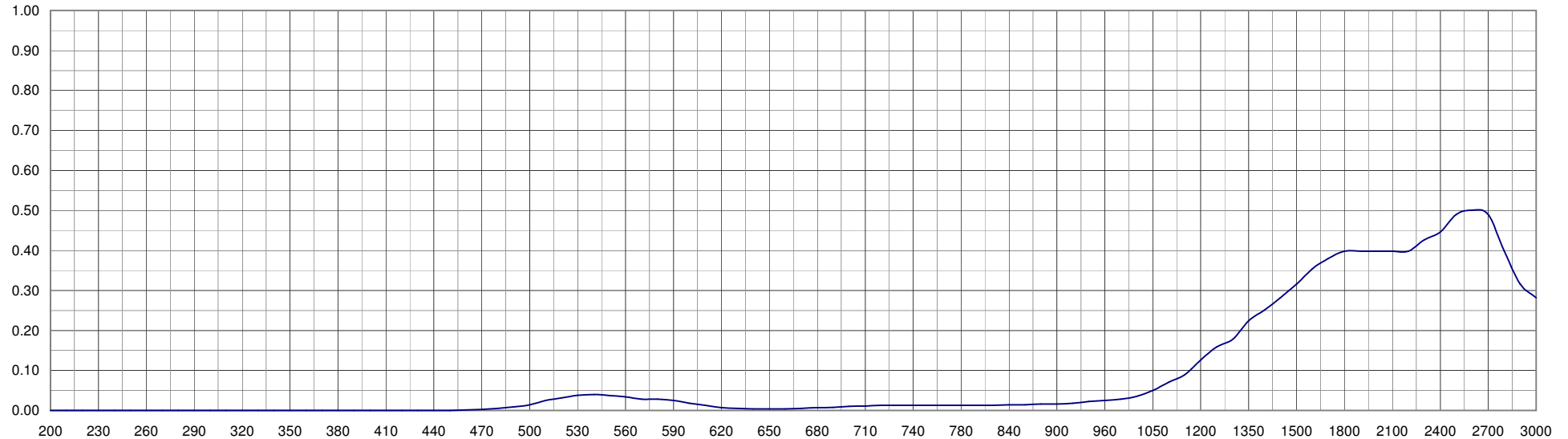
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	1	520	93	2.53	1.1	2.65	0.3	yellow-green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST YGC17 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS NONE



Catalogue Thickness 5.0 mm

Reflection Factor 0.914

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.001	0.003	0.010	0.032	0.071	0.141	0.224	0.339	0.427	0.484	0.513	0.513	0.490	0.422	0.305	0.178	0.100	0.050	0.022	0.013
Ti	0.000	0.000	0.000	0.000	0.001	0.003	0.011	0.035	0.077	0.155	0.245	0.371	0.467	0.530	0.561	0.561	0.536	0.461	0.334	0.195	0.109	0.055	0.025	0.014
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.007	0.006	0.006	0.009	0.020	0.045	0.100	0.200	0.359	0.513	0.692	0.822	0.841	0.832	0.794	0.716	0.624	0.507	0.403	0.302	0.200	0.141	0.100	0.071
Ti	0.008	0.007	0.007	0.010	0.022	0.049	0.109	0.218	0.393	0.561	0.757	0.900	0.921	0.910	0.869	0.784	0.683	0.555	0.441	0.330	0.218	0.155	0.109	0.077
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.056	0.050	0.050	0.050	0.056	0.071	0.089	0.112	0.141	0.251	0.412	0.556	0.692	0.822	0.871	0.912	0.955	0.966	0.977	0.977	0.977	0.989	0.989	0.989
Ti	0.062	0.055	0.055	0.055	0.062	0.077	0.098	0.123	0.155	0.275	0.451	0.608	0.757	0.900	0.953	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.989	0.989	0.989	0.977	0.966	0.955	0.933	0.891	0.832	0.759	0.661	0.550	0.442	0.327	0.224	0.158	0.100	0.045	0.018	0.000	0.000	0.000		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.975	0.910	0.830	0.723	0.601	0.483	0.358	0.245	0.173	0.109	0.049	0.019	0.000	0.000	0.000		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5390		1.5370		1.5340			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.485	0.475	69.700	2.0
B	0.430	0.480	68.300	2.0

Properties

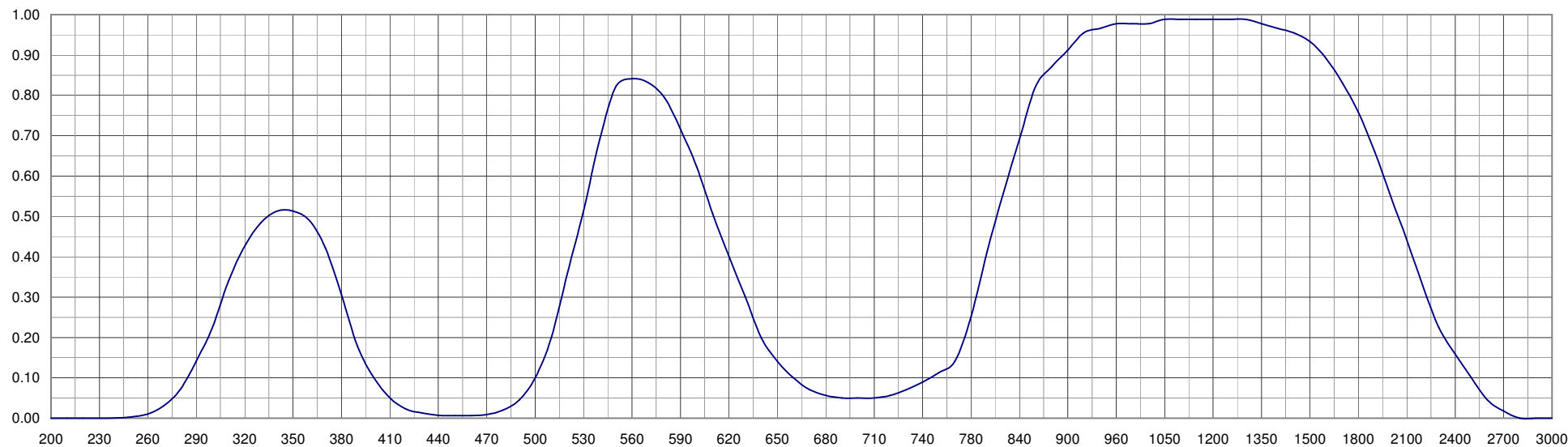
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
E	1	390	108	2.84	0.35	3.2	0.1	yellow-green	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST YGC18 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS G550



Catalogue Thickness 2.5 mm

Reflection Factor 0.914

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.094	0.251	0.178	0.047	0.004	0.000	0.000	0.000	0.001	0.014	0.106	0.251	0.376	0.493
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.103	0.275	0.195	0.052	0.004	0.000	0.000	0.000	0.001	0.015	0.116	0.275	0.411	0.539
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.624	0.741	0.813	0.876	0.923	0.950	0.961	0.972	0.977	0.983	0.989	0.989	0.989	0.989	0.983	0.983	0.977	0.972	0.972	0.966	0.966	0.961	0.961	0.961
Ti	0.682	0.811	0.889	0.958	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.966	0.972	0.972	0.977	0.977	0.983	0.983	0.983	0.989	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.989	0.983	0.972	0.961	0.928	0.876	0.729	0.447	0.422		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.958	0.797	0.489	0.461		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n					1.5340	1.5380		1.5360		1.5330			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.457	0.423	90.100	2.0
B	0.365	0.383	90.000	2.0

Properties

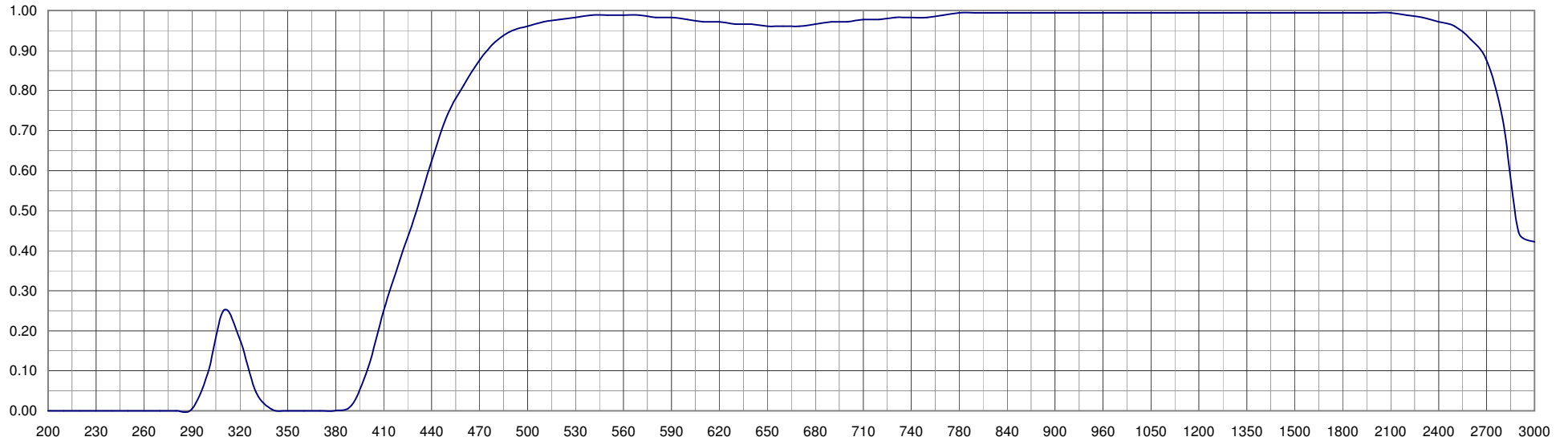
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
A	5	520	104	2.78	0.78	2.8	0.05	yellow	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST YC3 CLOSE TO SCHOTT GLASS GG19 & HOYA GLASS Y44



Catalogue Thickness 2.5 mm

Reflection Factor 0.889

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.032	0.150	0.335	0.540	0.672	0.767
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.036	0.168	0.377	0.607	0.756	0.863
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.827	0.866	0.896	0.917	0.928	0.939	0.950	0.950	0.955	0.961	0.966	0.972	0.972	0.972	0.972	0.977	0.977	0.983	0.983	0.983	0.983	0.983	0.983	0.983
Ti	0.930	0.974	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.983	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.989	0.977	0.966	0.944	0.907	0.846	0.729	0.546	0.376		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.952	0.819	0.614	0.423		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.6570		1.6460	1.6390		1.6350		1.6300			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.453	0.412	87.400	2.0
B	0.356	0.362	87.200	2.0

Properties

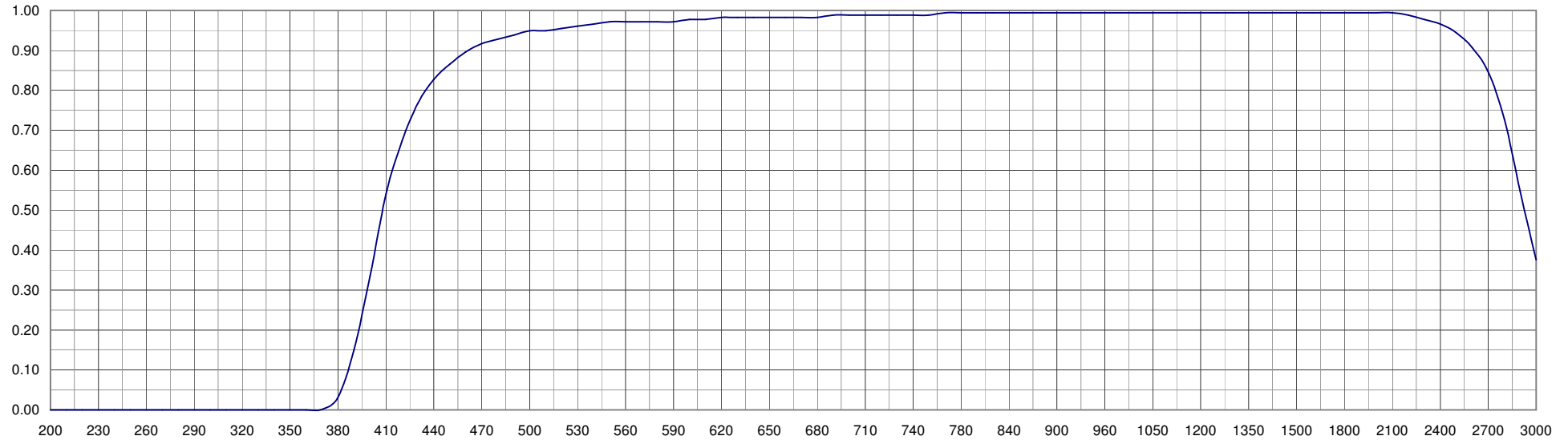
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
A	3	500	105	3.69	0.63	2.7	0.05	yellow	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST YC4 CLOSE TO SCHOTT GLASS GG400 & HOYA GLASS Y44



Catalogue Thickness 2.5 mm

Reflection Factor 0.917

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.001	0.001	0.005	0.211	0.757	0.915	0.954	0.970	0.978	0.984	0.987	0.989	0.992	0.995	0.997	0.997	0.998	0.998	0.998	0.999	0.998	0.998	0.999	0.999
Ti	0.001	0.001	0.005	0.230	0.826	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.999	0.998	0.998	0.997	0.996	0.996	0.995	0.995	0.994	0.994	0.989	0.988	0.988	0.989	0.987	0.986	0.985	0.983	0.983	0.982	0.981	0.981	0.981	0.982
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.982	0.983	0.984	0.985	0.984	0.988	0.989	0.992	0.993	0.991	0.989	0.984	0.978	0.963	0.958	0.953	0.942	0.927	0.871	0.345	0.324	0.304		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.949	0.376	0.353	0.332		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5250							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.488	0.452	87.200	5.0
B	0.420	0.459	85.700	5.0

Properties

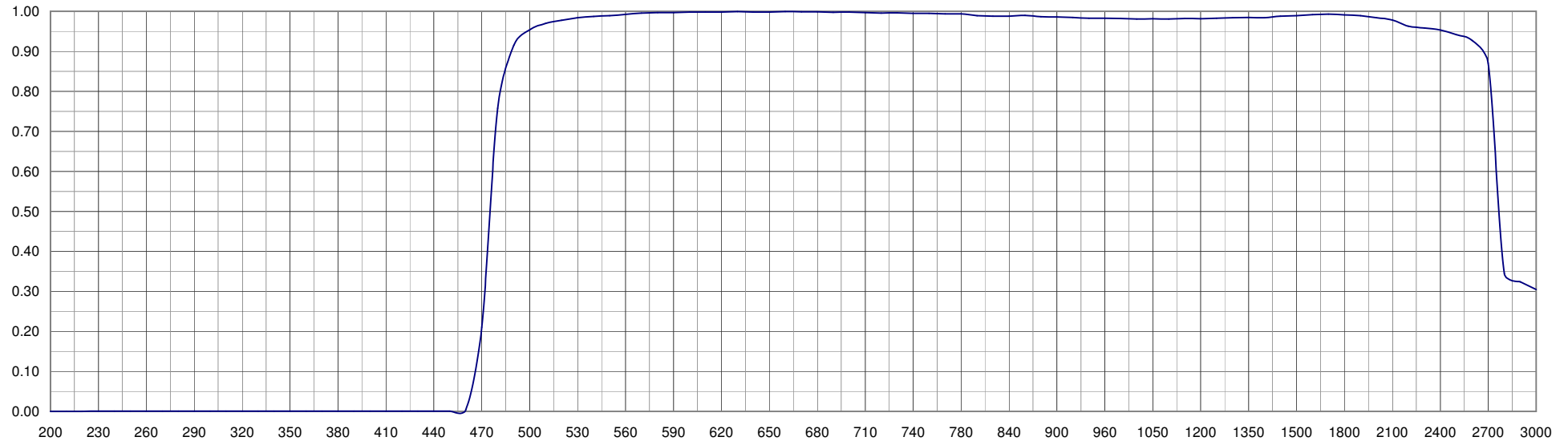
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
B	2	540	102	2.64	0.9	3.1	0.05	yellow	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST YC16 CLOSE TO SCHOTT GLASS GG475 & HOYA GLASS Y48



Catalogue Thickness 4.0 mm

Reflection Factor 0.914

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.005	0.052	0.145	0.265	0.377	0.441	0.377	0.169	0.058	0.016	0.006	0.004	0.006	0.013	0.030	0.044	0.033	0.019	0.010
Ti	0.000	0.000	0.000	0.000	0.000	0.006	0.057	0.158	0.290	0.412	0.482	0.412	0.185	0.063	0.017	0.006	0.005	0.007	0.014	0.033	0.048	0.036	0.021	0.011
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.005	0.005	0.008	0.016	0.033	0.076	0.158	0.291	0.461	0.603	0.731	0.817	0.879	0.920	0.938	0.938	0.938	0.904	0.895	0.904	0.955	0.982	0.991	0.991
Ti	0.005	0.006	0.008	0.017	0.036	0.083	0.173	0.318	0.505	0.659	0.800	0.893	0.961	1.000	1.000	1.000	1.000	0.988	0.979	0.988	1.000	1.000	1.000	1.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.982	0.982	0.973	0.946	0.912	0.895	0.863	0.832	0.904	0.929	0.938
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.998	0.979	0.944	0.910	0.988	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.946	0.946	0.955	0.955	0.955	0.946	0.938	0.920	0.887	0.839	0.802	0.738	0.705	0.655	0.592	0.619	0.421	0.302	0.174	0.052	0.004	0.000		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.970	0.918	0.877	0.807	0.771	0.716	0.647	0.678	0.460	0.330	0.190	0.057	0.004	0.000		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n					1.5400	1.5370		1.5350		1.5330			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.532	0.454	74.800	3.0
B	0.489	0.483	70.200	3.0

Properties

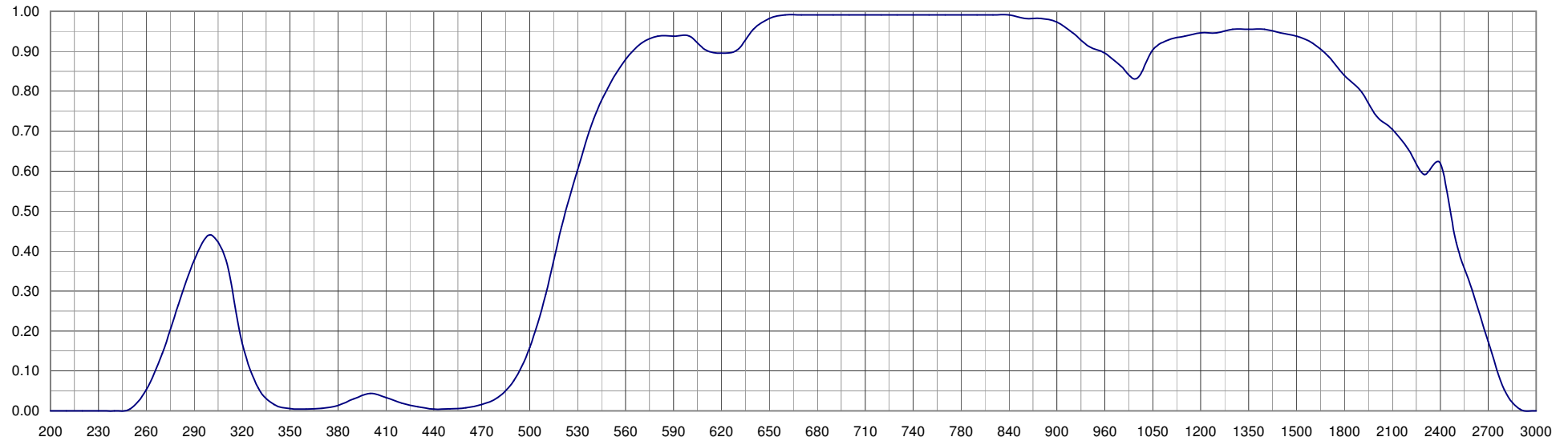
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
E	2	490	104	2.82	0.38	1.75	0.1	yellow	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST YC20 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS Y50/Y52



Catalogue Thickness 2.5 mm

Refraction Factor 0.900

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.035	0.111	0.208	0.328	0.447	0.559
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.039	0.123	0.231	0.364	0.496	0.621
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.642	0.734	0.776	0.839	0.861	0.900	0.912	0.944	0.955	0.961	0.955	0.951	0.944	0.951	0.950	0.951	0.961	0.970	0.966	0.966	0.966	0.966	0.966	0.966
Ti	0.713	0.815	0.862	0.931	0.956	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.975	0.972	0.975	0.979	0.977	0.977	0.977
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5940							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A				
B				

Properties

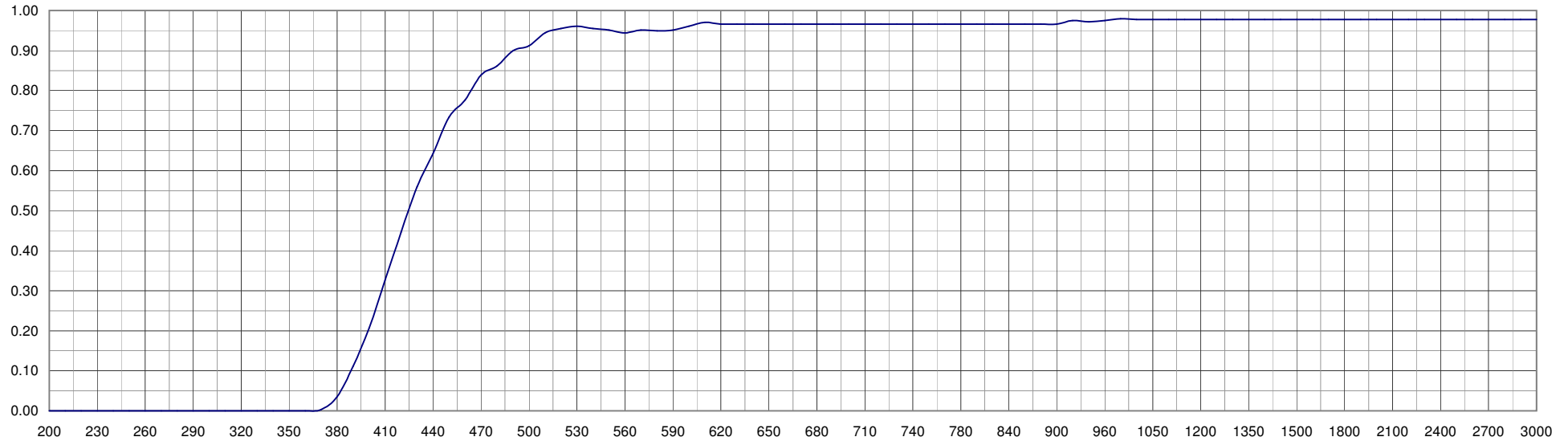
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
								yellow	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST PTC1 CLOSE TO SCHOTT GLASS GG435 & HOYA GLASS Y44



Catalogue Thickness 2.5 mm

Reflection Factor 0.917

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.003	0.004	0.008	0.015	0.025	0.042	0.063	0.094	0.126	0.168	0.224	0.266	0.316	0.376	0.422	0.473	0.501	0.531	0.562	0.596	0.613	0.631	0.649	0.661
Ti	0.003	0.005	0.009	0.016	0.027	0.046	0.069	0.103	0.137	0.183	0.244	0.290	0.345	0.410	0.460	0.516	0.546	0.579	0.613	0.649	0.668	0.688	0.708	0.720
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.668	0.676	0.684	0.692	0.700	0.700	0.708	0.712	0.716	0.720	0.720	0.720	0.712	0.708	0.708	0.708	0.708	0.708	0.708	0.708	0.708	0.708	0.708	0.716
Ti	0.729	0.737	0.746	0.754	0.763	0.763	0.772	0.776	0.781	0.785	0.785	0.785	0.776	0.772	0.772	0.772	0.772	0.772	0.772	0.772	0.772	0.772	0.772	0.781
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.724	0.733	0.741	0.754	0.767	0.785	0.804	0.818	0.832	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.832	0.818	0.772	0.668	0.501	0.422		
Ti	0.790	0.799	0.808	0.822	0.837	0.856	0.876	0.891	0.907	0.917	0.917	0.917	0.917	0.917	0.917	0.917	0.907	0.891	0.842	0.729	0.546	0.460		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5250		1.5220		1.5200			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.561	0.423	44.800	2.0
B	0.518	0.446	4.650	2.0

Properties

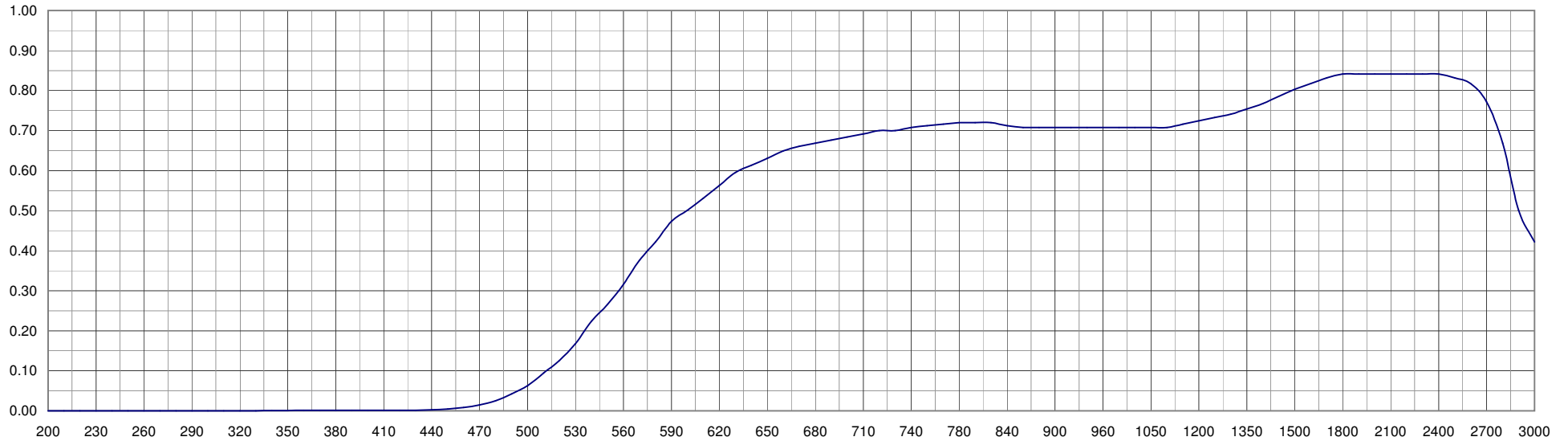
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	1	520	104	2.55	1.23	2.25	0.1	orange	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST OC5 CLOSE TO SCHOTT GLASS OG590 & HOYA GLASS O58



Catalogue Thickness 2.5 mm

Reflection Factor 0.917

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.025	0.063	0.094	0.119	0.141	0.158	0.178	0.188	0.188	0.188	0.178	0.178	0.188
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.027	0.069	0.103	0.130	0.154	0.173	0.194	0.205	0.205	0.205	0.194	0.194	0.205
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.211	0.251	0.316	0.355	0.398	0.473	0.531	0.589	0.649	0.700	0.750	0.794	0.818	0.841	0.866	0.881	0.881	0.891	0.896	0.896	0.902	0.902	0.902	0.896
Ti	0.230	0.274	0.345	0.387	0.434	0.516	0.579	0.642	0.708	0.763	0.818	0.866	0.891	0.917	0.944	0.961	0.961	0.972	0.977	0.977	0.983	0.983	0.983	0.977
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.896	0.896	0.891	0.891	0.886	0.886	0.881	0.881	0.876	0.866	0.856	0.851	0.846	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.846
Ti	0.977	0.977	0.972	0.972	0.966	0.966	0.961	0.961	0.955	0.944	0.933	0.928	0.923	0.917	0.917	0.917	0.917	0.917	0.917	0.917	0.917	0.917	0.917	0.923
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.846	0.851	0.851	0.856	0.861	0.871	0.881	0.896	0.902	0.896	0.891	0.891	0.891	0.891	0.891	0.881	0.866	0.841	0.794	0.668	0.501	0.422		
Ti	0.923	0.928	0.928	0.933	0.939	0.950	0.961	0.977	0.983	0.977	0.972	0.972	0.972	0.972	0.972	0.961	0.944	0.917	0.866	0.729	0.546	0.460		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n					1.5290	1.5250		1.5230		1.5200			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.495	0.431	76.100	2.0
B	0.418	0.418	74.300	2.0

Properties

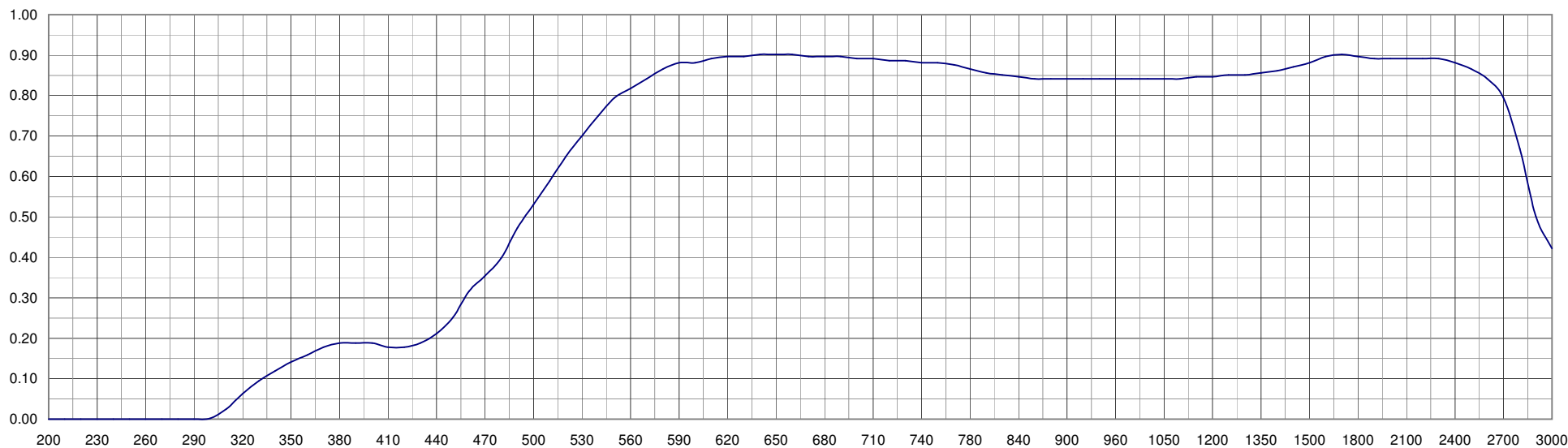
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	1	520	104	2.55	1.22	2.2	0.05	orange	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST OC6 CLOSE TO SCHOTT GLASS OG515 & HOYA GLASS NONE



Catalogue Thickness 2.5 mm

Reflection Factor 0.913

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.158	0.226	0.355	0.531	0.638	0.708	0.772	0.741	0.729	0.794	0.846	0.923	0.955	0.841	0.606	0.688
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.174	0.248	0.389	0.582	0.699	0.776	0.846	0.812	0.798	0.870	0.927	1.000	1.000	0.922	0.664	0.754
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.794	0.822	0.891	0.902	0.907	0.912	0.917	0.923	0.928	0.933	0.939	0.939	0.944	0.955	0.961	0.966	0.972	0.977	0.977	0.983	0.983	0.983	0.989	0.989
Ti	0.870	0.901	0.976	0.988	0.993	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.989	0.989	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.989	0.983	0.983	0.983	0.983	0.983	0.983	0.977	0.977	0.972	0.972	0.966	0.961	0.950	0.933	0.917	0.891	0.846	0.818	0.688	0.596	0.501		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.976	0.927	0.896	0.754	0.653	0.549		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5430							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.457	0.412	88.200	2.0
B	0.361	0.364	87.600	2.0

Properties

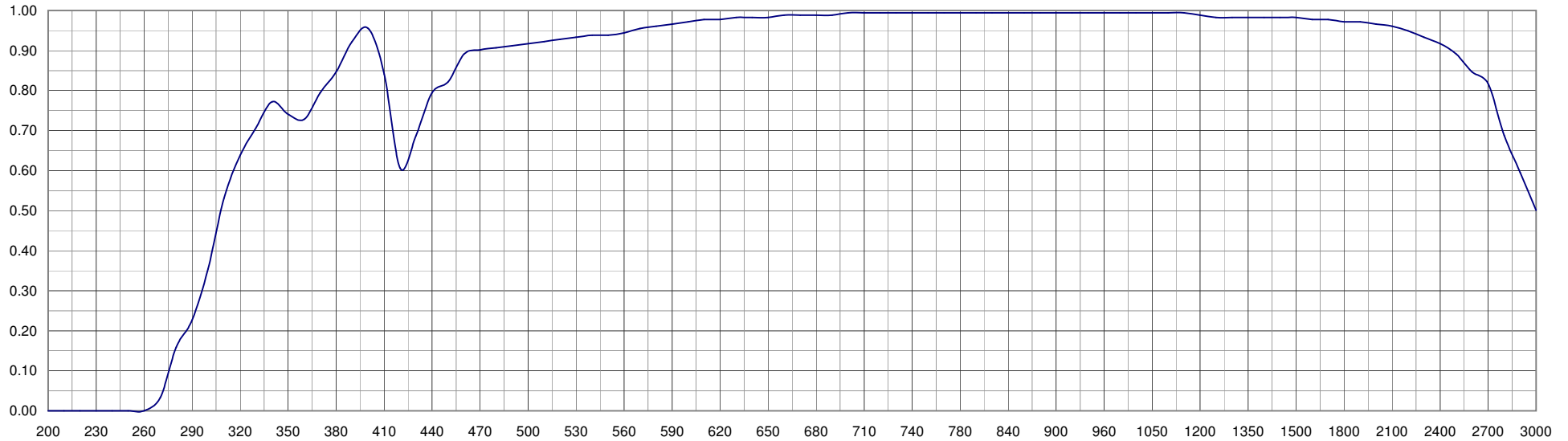
Chimic		Termic		Mechanic			Other	
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color
A	4	560	63	2.48	0.95	2.8		amber

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST OC19 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS LA20



Catalogue Thickness 2.5 mm

Reflection Factor 0.913

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.033	0.107	0.203	0.422	0.562	0.624	0.668	0.589	0.537	0.603	0.712	0.841	0.902	0.668	0.341	0.473
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.037	0.117	0.222	0.462	0.616	0.683	0.732	0.645	0.588	0.660	0.780	0.922	0.988	0.732	0.373	0.518
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.603	0.661	0.759	0.794	0.804	0.813	0.818	0.822	0.832	0.841	0.846	0.856	0.876	0.891	0.907	0.928	0.939	0.950	0.955	0.961	0.966	0.972	0.977	0.977
Ti	0.660	0.724	0.831	0.870	0.880	0.890	0.896	0.901	0.911	0.922	0.927	0.938	0.960	0.976	0.993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.977	0.977	0.983	0.983	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.977	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.955	0.944	0.944	0.933	0.923	0.902	0.871	0.841	0.794	0.716	0.668	0.473	0.355	0.251	
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.988	0.954	0.922	0.870	0.785	0.732	0.518	0.389	0.275	

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5220		1.5470	1.5430		1.5400		1.5380			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A				
B				

Properties

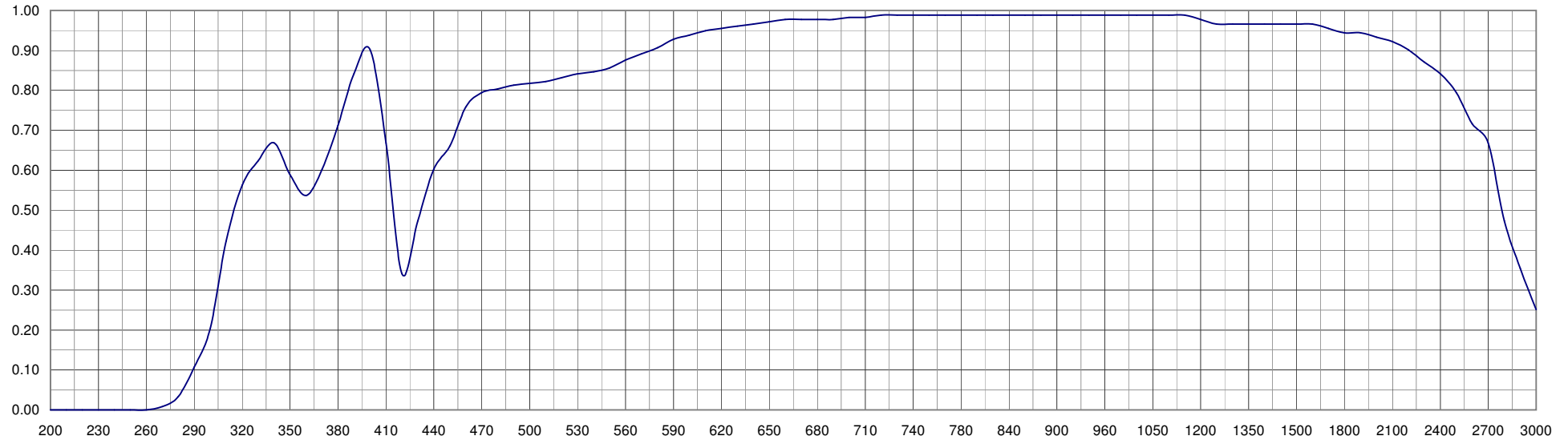
Chimic		Termic		Mechanic			Other	
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color
A	4	560	68	2.58	0.93	2.9		amber

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST OC20 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS LA20



Catalogue Thickness 2.5 mm

Reflection Factor 0.917

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.306	0.716	0.898	0.955	0.973	0.982	0.984	0.985	0.986
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.334	0.781	0.979	1.000	1.000	1.000	1.000	1.000	1.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.986	0.986	0.984	0.983	0.982	0.981	0.979	0.978	0.976	0.973	0.968	0.967	0.968	0.965	0.974	0.972	0.967	0.964	0.962	0.961	0.960	0.959	0.958	0.959
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.960	0.963	0.965	0.967	0.969	0.973	0.976	0.982	0.986	0.986	0.986	0.983	0.982	0.973	0.970	0.968	0.964	0.949	0.899	0.476	0.459	0.439		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.980	0.519	0.500	0.479		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n								1.5250					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.681	0.319	24.600	5.0
B	0.678	0.322	17.700	5.0

Properties

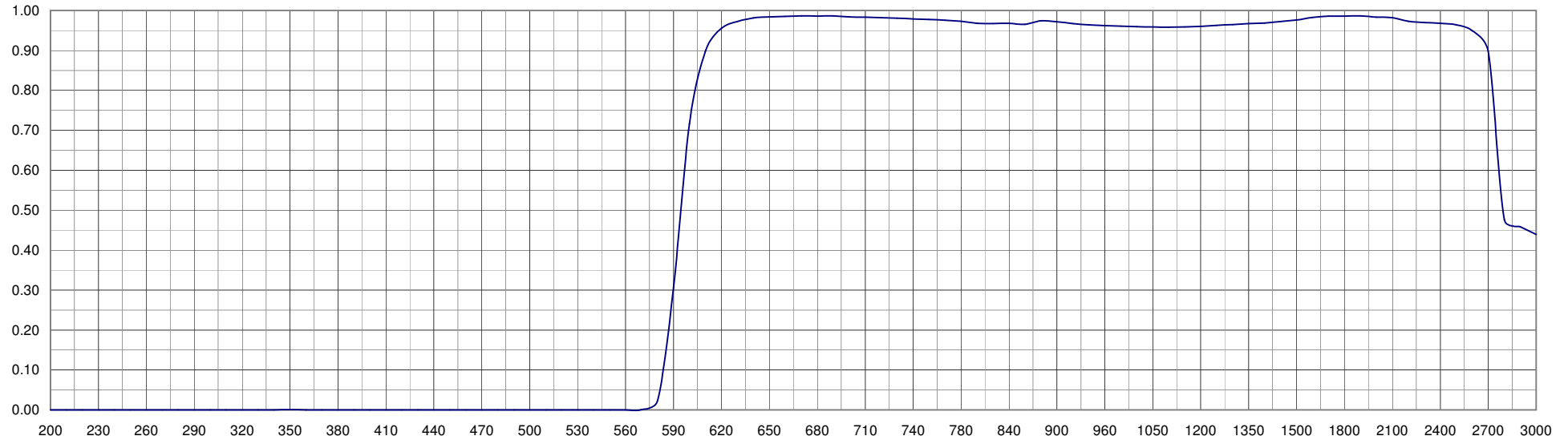
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	2	540	108	2.64	0.9	3.2	0.05	red	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST RC10 CLOSE TO SCHOTT GLASS RG610 & HOYA GLASS R60



Catalogue Thickness 2.5 mm

Reflection Factor 0.914

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.033	0.133	0.282	0.447	0.537	0.741	0.237	0.266	0.966	0.977	0.983	0.972	0.989	0.972	0.785
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.037	0.146	0.308	0.488	0.587	0.811	0.259	0.291	1.000	1.000	1.000	1.000	1.000	1.000	0.859
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.923	0.928	0.861	0.808	0.808	0.950	0.866	0.657	0.649	0.365	0.785	0.950	0.933	0.055	0.065	0.387	0.676	0.966	0.950	0.983	0.989	0.989	0.944	
Ti	1.000	1.000	0.942	0.884	0.884	1.000	0.947	0.718	0.710	0.399	0.859	1.000	1.000	0.060	0.071	0.042	0.423	0.739	1.000	1.000	1.000	1.000	1.000	
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.866	0.912	0.977	0.983	0.950	0.661	0.141	0.224	0.596	0.776	0.178	0.481	0.950	0.822	0.465	0.841	0.961	0.989	0.989	0.994	0.989	0.989	0.994	
Ti	0.947	0.997	1.000	1.000	1.000	0.722	0.154	0.245	0.651	0.849	0.194	0.526	1.000	0.899	0.509	0.920	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.983	0.977	0.983	0.977	0.961	0.950	0.928	0.917	0.955	0.961	0.939	0.966	0.972	0.961	0.891	0.720	0.750	0.841	0.813	0.422	0.282	0.299		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.975	0.788	0.820	0.920	0.889	0.461	0.308	0.326		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5460		1.5410	1.5360				1.5310			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.431	0.375	57.100	2.0
B	0.431	0.375	57.100	2.0

Properties

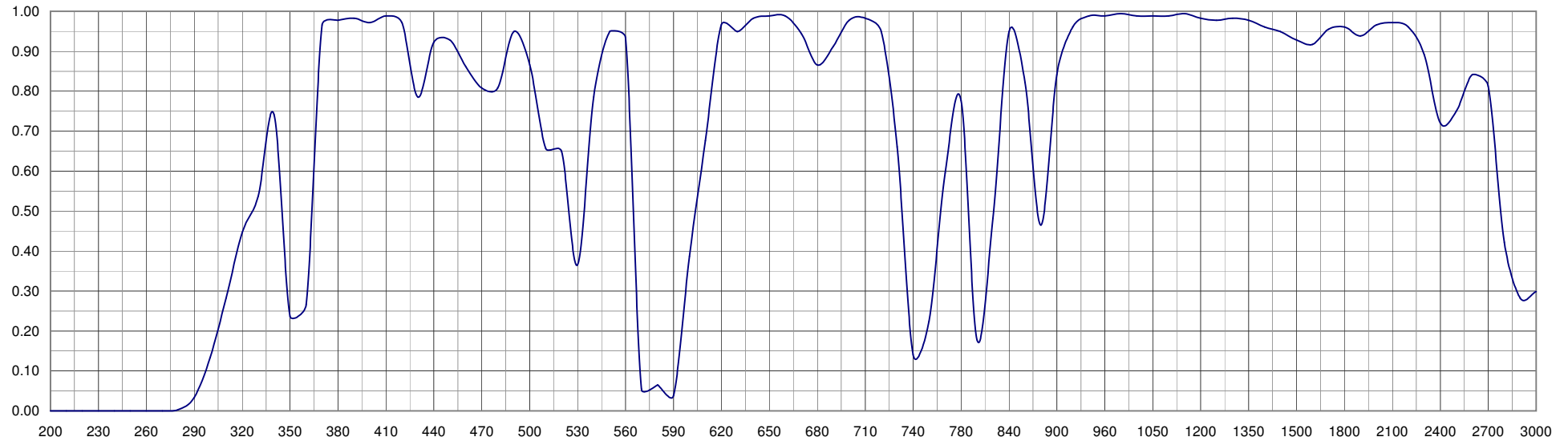
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
A	1	510	98	2.72	1.04	2.6		didymium	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST PC7 CLOSE TO SCHOTT GLASS BG36 & HOYA GLASS V10



Catalogue Thickness 2.5 mm

Reflection Factor 0.915

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	
T	0.015	0.047	0.150	0.473	0.642	0.729	0.818	0.886	0.944	0.966	0.983	0.989	0.994	0.994	0.994	0.994	0.989	0.983	0.977	0.961	0.939	0.902	0.832	0.750	
Ti	0.016	0.052	0.164	0.517	0.702	0.797	0.894	0.969	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.986	0.909	0.820	
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	
T	0.613	0.447	0.282	0.150	0.089	0.056	0.030	0.014	0.006	0.004	0.003	0.003	0.002	0.001	0.000	0.000	0.001	0.001	0.001	0.001	0.002	0.006	0.021	0.075	0.266
Ti	0.670	0.488	0.308	0.164	0.097	0.061	0.033	0.015	0.007	0.004	0.004	0.004	0.002	0.001	0.000	0.000	0.001	0.001	0.001	0.001	0.002	0.006	0.023	0.082	0.291
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150	
T	0.501	0.704	0.827	0.886	0.917	0.933	0.933	0.928	0.923	0.912	0.896	0.876	0.851	0.827	0.799	0.772	0.750	0.733	0.716	0.708	0.700	0.700	0.696	0.676	
Ti	0.548	0.770	0.904	0.969	0.996	1.000	1.000	1.000	1.000	0.997	0.980	0.958	0.930	0.904	0.873	0.844	0.820	0.801	0.783	0.774	0.765	0.765	0.761	0.739	
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000			
T	0.653	0.631	0.596	0.531	0.501	0.473	0.473	0.473	0.501	0.531	0.531	0.531	0.501	0.473	0.447	0.422	0.398	0.299	0.158	0.038	0.003	0.000			
Ti	0.714	0.690	0.651	0.580	0.548	0.517	0.517	0.517	0.548	0.580	0.580	0.580	0.548	0.517	0.488	0.461	0.435	0.326	0.173	0.041	0.003	0.000			

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5350							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.225	0.054	0.730	3.0
B	0.174	0.027	0.920	3.0

Properties

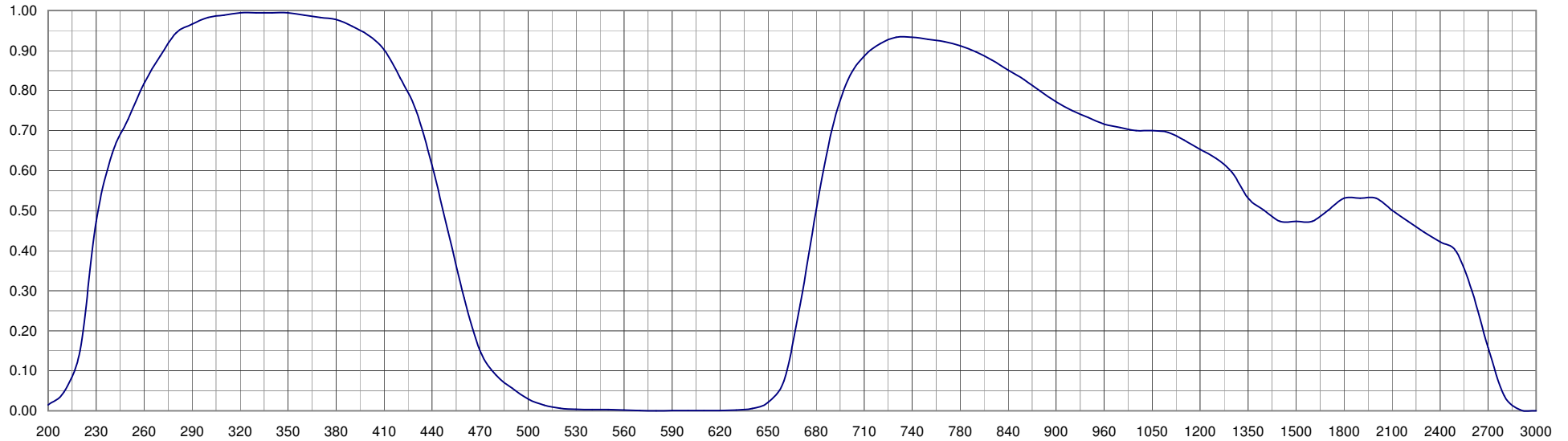
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
D	1	470	104	2.83	0.4	1.8	0.2	pink	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST PC11 CLOSE TO SCHOTT GLASS BG24 & HOYA GLASS R66



Catalogue Thickness 2.5 mm

Reflection Factor 0.900

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.084	0.251	0.447	0.582	0.657	0.649	0.531	0.316	0.112	0.038
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.093	0.279	0.496	0.647	0.730	0.721	0.590	0.351	0.125	0.042
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.009	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.002	0.004	0.005	0.007	0.008	0.011
Ti	0.010	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.002	0.004	0.006	0.007	0.009	0.012
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.015	0.020	0.025	0.032	0.042	0.053	0.063	0.079	0.100	0.158	0.237	0.316	0.422	0.501	0.606	0.688	0.759	0.818	0.861	0.896	0.917	0.977	0.989	
Ti	0.017	0.022	0.028	0.035	0.047	0.059	0.070	0.088	0.111	0.176	0.263	0.351	0.468	0.557	0.673	0.764	0.843	0.908	0.956	0.996	1.000	1.000	1.000	
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.989	0.994	0.994	0.994	0.994	0.994	0.989	0.989	0.983	0.983	0.977	0.977	0.972	0.966	0.955	0.944	0.928	0.907	0.881	0.813	0.676	0.575		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.979	0.903	0.751	0.639		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5940							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.402	0.127	0.220	2.0
B	0.246	0.046	0.160	2.0

Properties

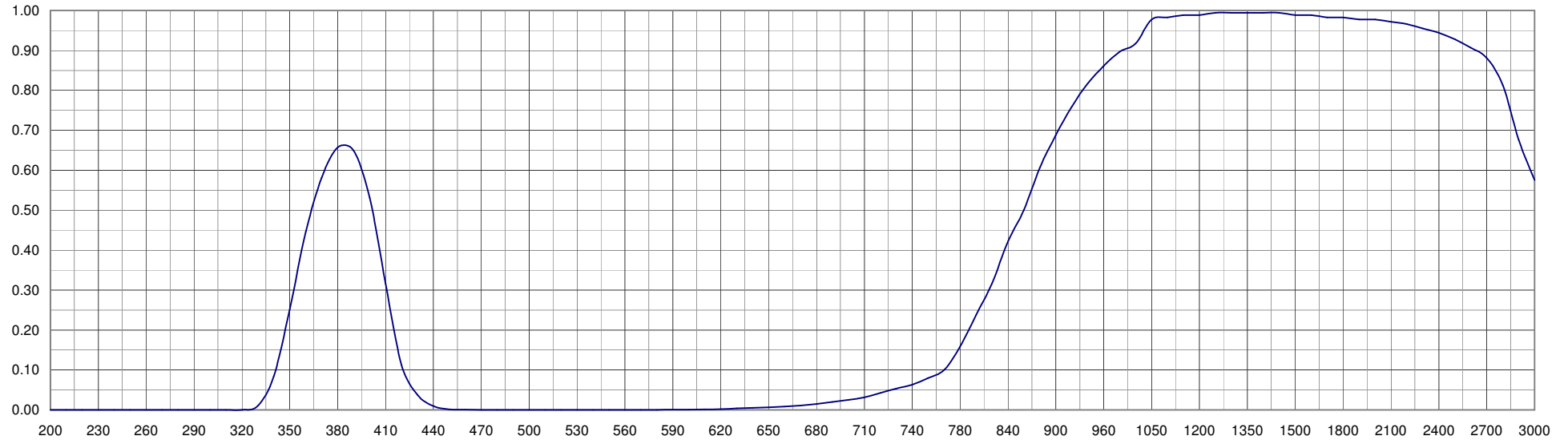
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	4	460	112	3.26	0.7	3.2	0.2	pink	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST PC13 CLOSE TO SCHOTT GLASS BG1 & HOYA GLASS RM90



Catalogue Thickness 1.0 mm

Reflection Factor 0.928

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.021	0.013	0.017	0.018	0.020	0.000	0.000	0.005	0.025	0.098	0.245	0.427	0.575	0.692	0.804	0.889	0.942	0.962	0.977	0.984	0.989	0.989	0.986	0.982
Ti	0.023	0.014	0.019	0.019	0.021	0.000	0.000	0.005	0.027	0.105	0.265	0.460	0.620	0.745	0.866	0.958	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.977	0.968	0.953	0.938	0.923	0.910	0.899	0.891	0.885	0.881	0.877	0.865	0.855	0.851	0.855	0.865	0.869	0.875	0.887	0.902	0.916	0.931	0.944	0.957
Ti	1.000	1.000	1.000	1.000	0.994	0.980	0.969	0.960	0.954	0.949	0.945	0.932	0.921	0.917	0.921	0.932	0.936	0.943	0.956	0.972	0.987	1.000	1.000	1.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.971	0.982	0.991	0.993	0.995	0.998	0.998	0.998	0.998	0.998	0.995	0.995	0.993	0.993	0.991	0.991	0.989	0.986	0.986	0.984	0.982	0.979	0.979	0.977
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.975	0.973	0.971	0.971	0.971	0.973	0.973	0.975	0.975	0.975	0.975	0.975	0.973	0.968	0.962	0.953	0.942	0.925	0.904	0.759	0.468	0.209		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.996	0.974	0.817	0.504	0.225		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.4790							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.439	0.386	62.600	3.0
B	0.331	0.319	62.700	3.0

Properties

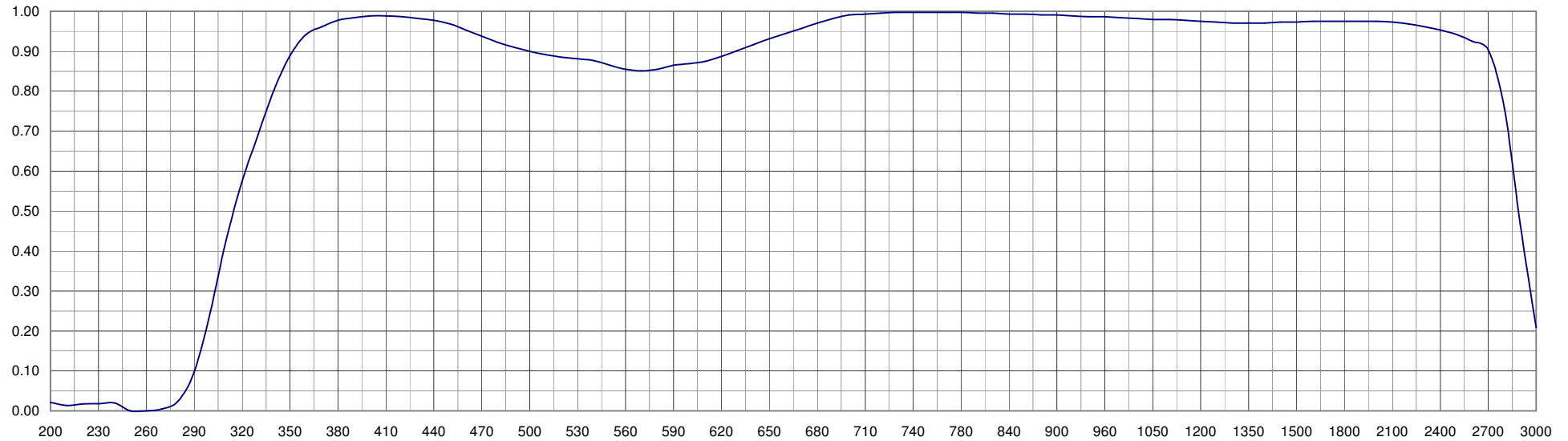
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	5	410	76	2.27	0.7	4.2	0.1	pink	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST PC14 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS NONE



Catalogue Thickness 2.5 mm

Reflection Factor 0.915

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.000	0.000
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.000	0.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.005	0.018	0.044	0.093	0.170	0.270	0.350	0.443	0.534	0.614	0.685	0.743	0.841	0.895	0.924
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.005	0.020	0.049	0.102	0.186	0.295	0.383	0.484	0.583	0.671	0.749	0.812	0.919	0.978	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.946	0.957	0.966	0.973	0.978	0.981	0.984	0.989	0.991	0.990	0.986	0.979	0.972	0.955	0.940	0.930	0.923	0.934	0.907	0.630	0.595	0.547		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.991	0.688	0.650	0.597		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n								1.5330					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A				
B				

Properties

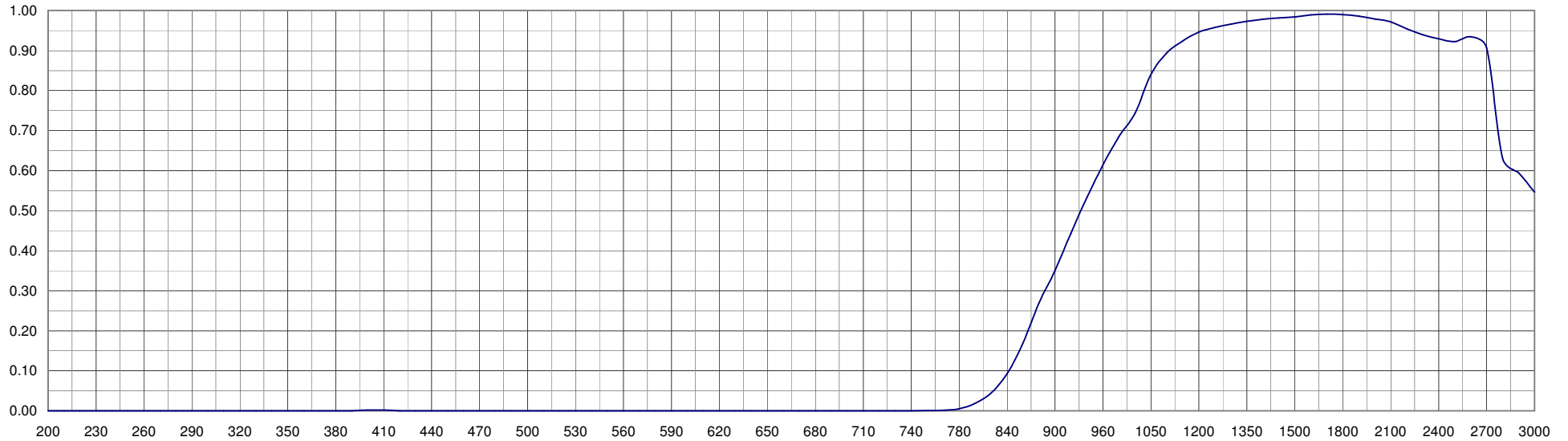
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	2	465	100	2.73	0.86	3.1	0.3	infra-red	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST IRC5 CLOSE TO SCHOTT GLASS RG850 & HOYA GLASS RM90/RM100



Catalogue Thickness 2.0 mm

Reflection Factor 0.918

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.158	0.398	0.631	0.828	0.904	0.916	0.904	0.875	0.836	0.794	0.738
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.173	0.434	0.688	0.902	0.985	0.998	0.985	0.954	0.911	0.866	0.804
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.695	0.689	0.692	0.708	0.714	0.721	0.724	0.724	0.721	0.718	0.714	0.724	0.738	0.731	0.718	0.708	0.698	0.695	0.695	0.692	0.689	0.705	0.724	0.773
Ti	0.757	0.750	0.754	0.772	0.779	0.786	0.789	0.789	0.786	0.782	0.779	0.789	0.804	0.797	0.782	0.772	0.761	0.757	0.757	0.754	0.750	0.768	0.789	0.842
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.805	0.843	0.871	0.891	0.904	0.912	0.912	0.912	0.904	0.883	0.871	0.847	0.839	0.832	0.828	0.820	0.813	0.809	0.802	0.794	0.794	0.794	0.794	0.805
Ti	0.878	0.919	0.949	0.971	0.985	0.994	0.994	0.994	0.985	0.962	0.949	0.923	0.915	0.906	0.902	0.894	0.886	0.882	0.874	0.866	0.866	0.866	0.866	0.878
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.805	0.805	0.817	0.824	0.832	0.836	0.836	0.836	0.839	0.843	0.855	0.859	0.859	0.855	0.843	0.832	0.805	0.776	0.738	0.667	0.603	0.550		
Ti	0.878	0.878	0.890	0.898	0.906	0.911	0.911	0.911	0.915	0.919	0.932	0.936	0.936	0.932	0.919	0.906	0.878	0.846	0.804	0.727	0.657	0.599		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5230							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.444	0.409	63.500	2.0
B	0.346	0.353	63.700	2.0

Properties

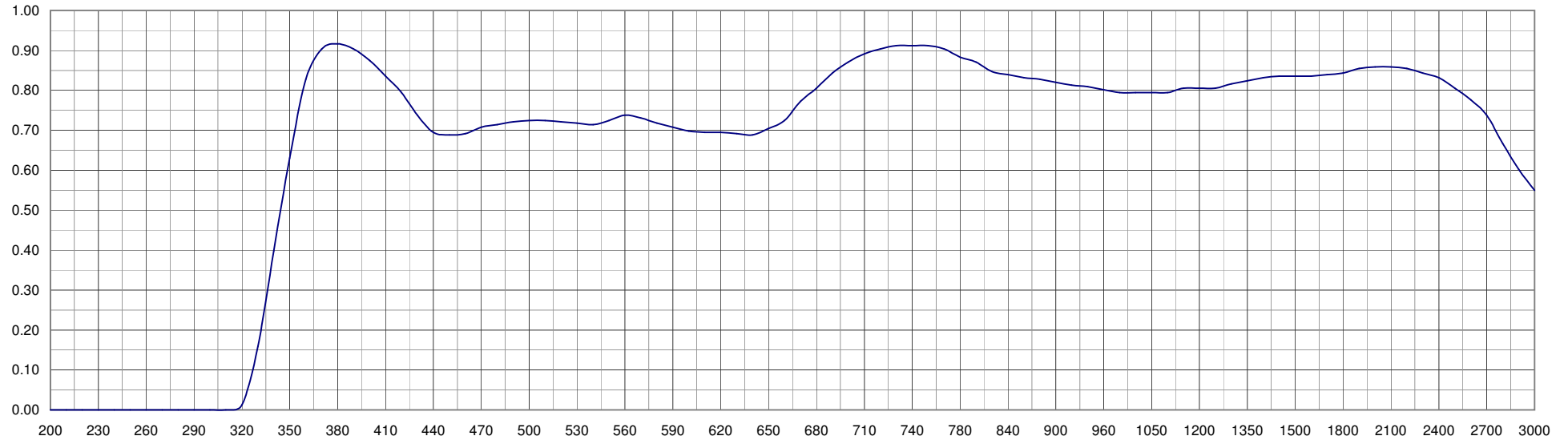
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
B	1	520	102	2.52	1.16	2.5	0.1	neutral-gray	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST NC1 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS ND70



Catalogue Thickness 2.0 mm

Reflection Factor 0.917

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.040	0.263	0.468	0.661	0.701	0.714	0.692	0.628	0.525	0.331
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.043	0.287	0.510	0.720	0.765	0.779	0.754	0.685	0.572	0.361
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	
T	0.263	0.263	0.275	0.302	0.331	0.347	0.347	0.347	0.347	0.331	0.331	0.363	0.380	0.380	0.347	0.316	0.316	0.316	0.316	0.302	0.302	0.316	0.363	0.427	
Ti	0.287	0.287	0.300	0.329	0.361	0.378	0.378	0.378	0.378	0.361	0.361	0.396	0.415	0.415	0.378	0.345	0.345	0.345	0.345	0.329	0.329	0.345	0.396	0.465	
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150	
T	0.550	0.631	0.692	0.724	0.735	0.741	0.752	0.759	0.776	0.741	0.692	0.661	0.646	0.631	0.622	0.617	0.603	0.583	0.575	0.575	0.568	0.550	0.550		
Ti	0.599	0.688	0.754	0.790	0.801	0.808	0.820	0.827	0.846	0.808	0.754	0.720	0.704	0.688	0.679	0.672	0.657	0.636	0.627	0.627	0.619	0.599	0.599		
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000			
T	0.540	0.575	0.597	0.617	0.631	0.637	0.643	0.655	0.661	0.661	0.661	0.661	0.661	0.670	0.682	0.692	0.682	0.646	0.501	0.501	0.417	0.363			
Ti	0.588	0.627	0.651	0.672	0.688	0.694	0.701	0.714	0.720	0.720	0.720	0.720	0.720	0.730	0.744	0.754	0.744	0.704	0.546	0.546	0.455	0.396			

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5250							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.446	0.416	29.900	2.0
B	0.349	0.363	30.000	2.0

Properties

Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
B	1	520	100	2.52	1.16	2.1	0.2	neutral-gray	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

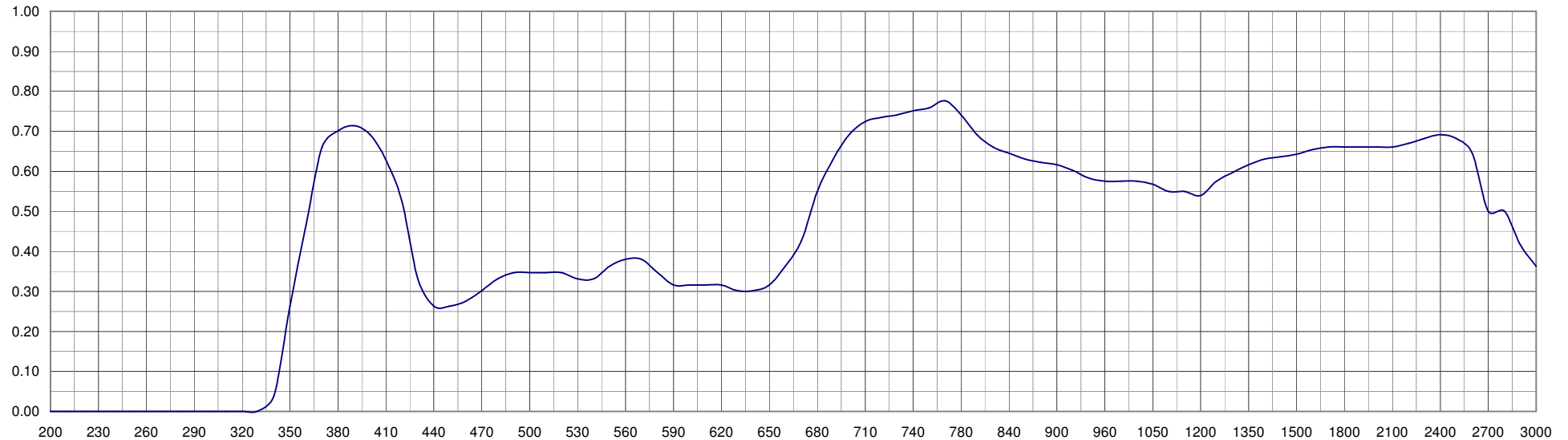
GOST NC2

CLOSE TO

SCHOTT GLASS NG5

&

HOYA GLASS ND40



Catalogue Thickness 2.0 mm

Reflection Factor 0.916

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.151	0.288	0.398	0.437	0.398	0.331	0.174	0.100
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.165	0.315	0.434	0.476	0.434	0.361	0.190	0.109
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.083	0.079	0.083	0.095	0.110	0.115	0.120	0.120	0.120	0.120	0.126	0.132	0.138	0.158	0.158	0.145	0.120	0.110	0.105	0.091	0.091	0.110	0.151	0.229
Ti	0.091	0.087	0.091	0.104	0.120	0.125	0.131	0.131	0.131	0.131	0.137	0.144	0.151	0.173	0.173	0.158	0.131	0.120	0.114	0.100	0.100	0.120	0.165	0.250
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.331	0.437	0.515	0.575	0.611	0.631	0.634	0.640	0.640	0.614	0.542	0.501	0.468	0.457	0.437	0.417	0.398	0.380	0.380	0.363	0.363	0.363	0.363	0.363
Ti	0.361	0.476	0.562	0.628	0.667	0.689	0.692	0.698	0.698	0.670	0.591	0.547	0.510	0.499	0.476	0.455	0.434	0.415	0.415	0.396	0.396	0.396	0.396	0.396
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.363	0.380	0.398	0.417	0.437	0.437	0.457	0.457	0.457	0.479	0.479	0.479	0.479	0.501	0.501	0.501	0.479	0.457	0.437	0.380	0.316	0.275		
Ti	0.396	0.415	0.434	0.455	0.476	0.476	0.499	0.499	0.499	0.522	0.522	0.522	0.522	0.547	0.547	0.547	0.522	0.499	0.476	0.415	0.345	0.301		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5280							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.452	0.420	11.400	2.0
B	0.356	0.372	11.640	2.0

Properties

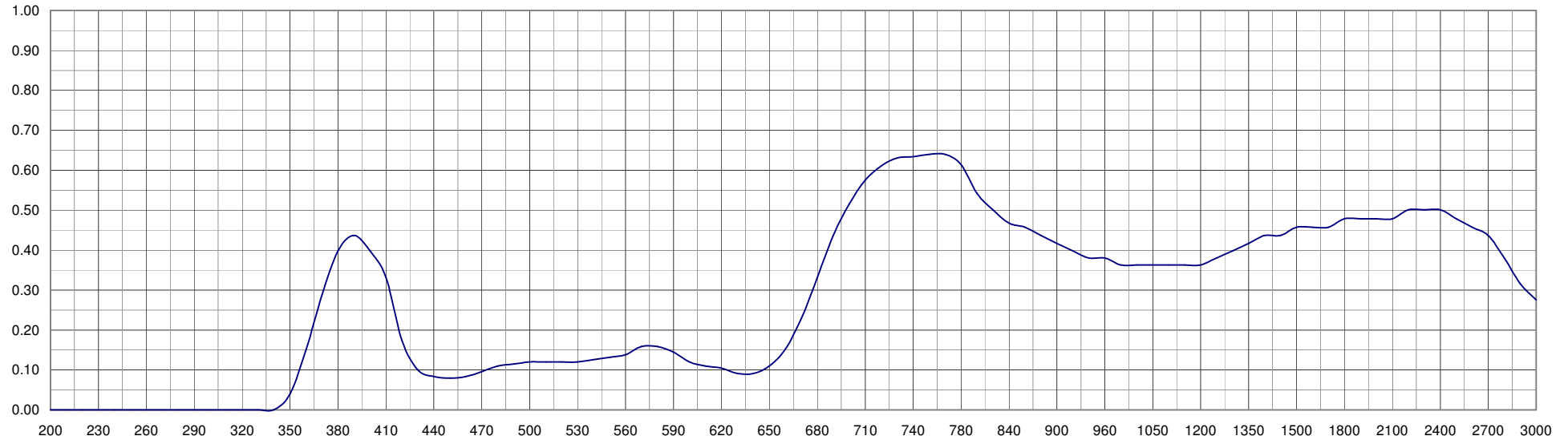
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
B	1	520	100	2.52	1.14	2.6	0.2	neutral-gray	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST NC3 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS ND13



Catalogue Thickness 2.0 mm

Reflection Factor 0.923

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.071	0.199	0.334	0.412	0.374	0.519	0.567	0.559	0.561	0.572
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.077	0.216	0.362	0.446	0.405	0.562	0.614	0.606	0.608	0.620	
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	
T	0.566	0.585	0.602	0.601	0.595	0.589	0.584	0.583	0.584	0.588	0.591	0.591	0.588	0.580	0.570	0.563	0.561	0.562	0.563	0.560	0.555	0.551	0.549	0.554	
Ti	0.613	0.633	0.652	0.651	0.644	0.638	0.632	0.631	0.632	0.636	0.640	0.640	0.636	0.628	0.617	0.610	0.608	0.609	0.610	0.607	0.602	0.596	0.595	0.599	
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150	
T	0.562	0.572	0.577	0.577	0.571	0.563	0.553	0.541	0.528	0.502	0.474	0.451	0.427	0.410	0.390	0.371	0.354	0.339	0.325	0.314	0.304	0.287	0.280	0.282	
Ti	0.609	0.619	0.625	0.624	0.619	0.610	0.599	0.586	0.572	0.544	0.513	0.488	0.463	0.444	0.422	0.401	0.383	0.367	0.352	0.340	0.329	0.311	0.303	0.306	
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000			
T	0.293	0.311	0.338	0.371	0.403	0.438	0.466	0.496	0.504	0.512	0.530	0.551	0.573	0.583	0.604	0.610	0.613	0.616	0.544	0.046	0.048	0.073			
Ti	0.317	0.337	0.366	0.402	0.437	0.474	0.505	0.537	0.545	0.554	0.575	0.597	0.621	0.631	0.654	0.660	0.664	0.667	0.589	0.050	0.052	0.080			

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.4990							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.443	0.412	44.500	2.0
B	0.346	0.356	44.700	2.0

Properties

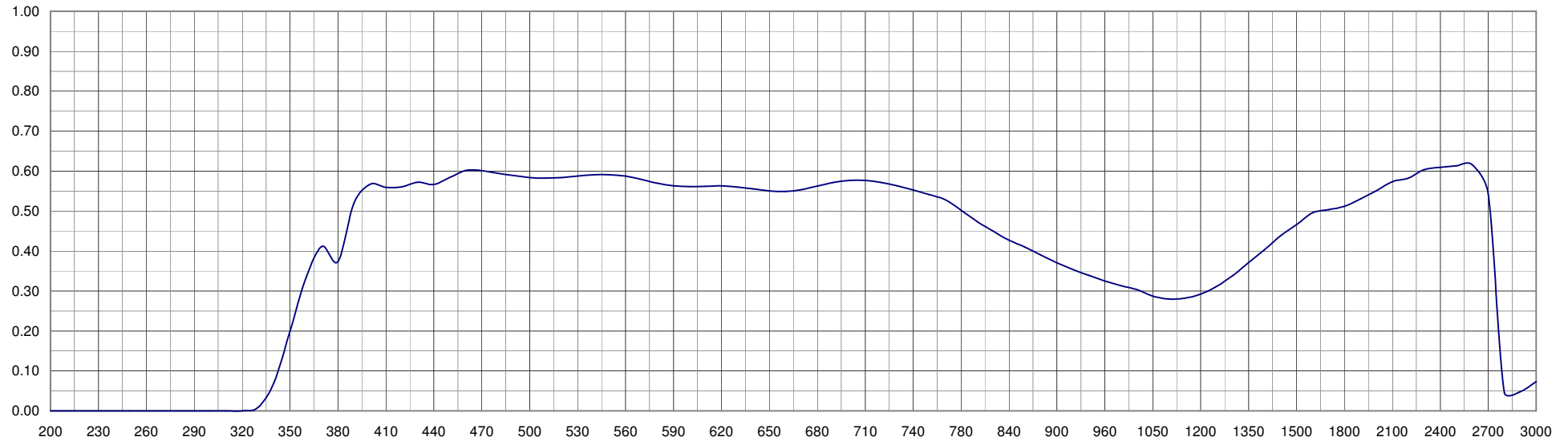
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
A	5	490	73	2.42	0.93	3.35	0.1	neutral-gray	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST NC7 CLOSE TO SCHOTT GLASS NG11 & HOYA GLASS NONE



Catalogue Thickness 2.0 mm

Reflection Factor 0.923

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.022	0.072	0.138	0.186	0.251	0.313	0.389	0.413	0.437	0.437
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.024	0.078	0.150	0.202	0.272	0.339	0.421	0.447	0.473	0.473
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	
T	0.437	0.437	0.437	0.437	0.437	0.437	0.443	0.447	0.453	0.457	0.457	0.457	0.457	0.457	0.443	0.437	0.443	0.447	0.437	0.427	0.417	0.398	0.380	0.363	
Ti	0.473	0.473	0.473	0.473	0.473	0.473	0.479	0.484	0.491	0.495	0.495	0.495	0.495	0.495	0.479	0.473	0.479	0.484	0.473	0.462	0.452	0.431	0.412	0.393	
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150	
T	0.347	0.331	0.309	0.288	0.275	0.263	0.251	0.224	0.191	0.166	0.138	0.115	0.100	0.087	0.076	0.066	0.059	0.049	0.052	0.049	0.045	0.040	0.036	0.040	
Ti	0.376	0.359	0.335	0.312	0.298	0.285	0.272	0.243	0.206	0.180	0.150	0.124	0.108	0.094	0.082	0.072	0.064	0.053	0.057	0.053	0.048	0.044	0.039	0.043	
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000			
T	0.044	0.051	0.060	0.081	0.110	0.128	0.148	0.164	0.181	0.200	0.216	0.233	0.251	0.284	0.322	0.363	0.372	0.380	0.389	0.275	0.195	0.138			
Ti	0.047	0.056	0.065	0.088	0.119	0.138	0.160	0.177	0.196	0.216	0.234	0.253	0.272	0.308	0.349	0.393	0.402	0.412	0.421	0.298	0.211	0.150			

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5000							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A				
B				

Properties

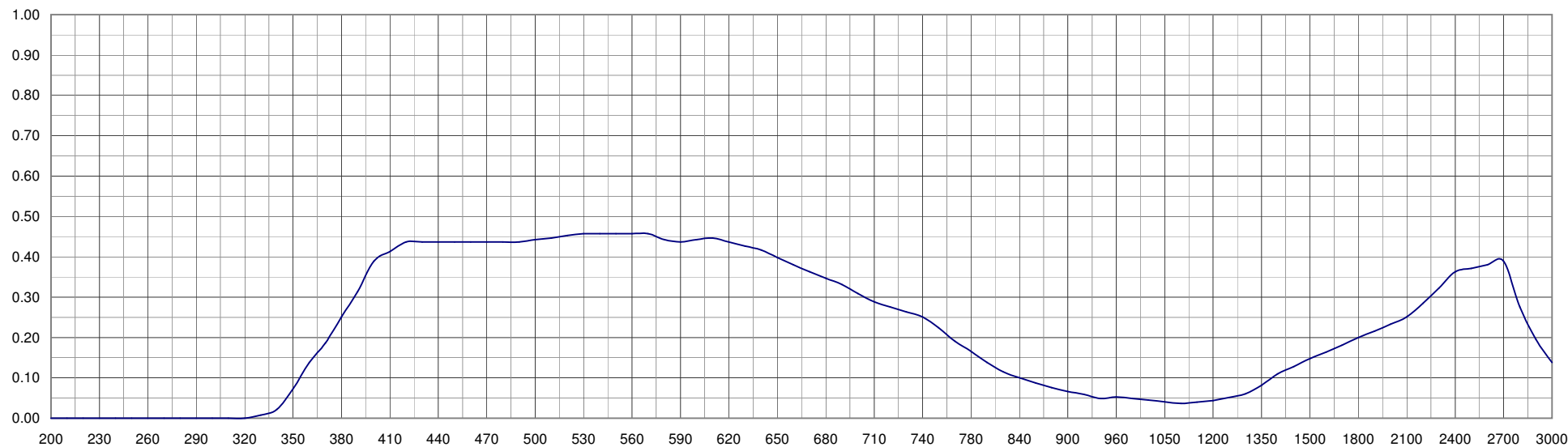
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
0	0	520	53	2.38	0.98	3.5	0.2	neutral-gray	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST NC14 CLOSE TO SCHOTT GLASS NONE & HOYA GLASS ND50



Catalogue Thickness 1.0 mm

Reflection Factor 0.918

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.010	0.028	0.010	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.007	0.036	0.062
Ti	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.011	0.031	0.011	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.008	0.040	0.068
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.126	0.172	0.209	0.254	0.275	0.297	0.315	0.331	0.339	0.363	0.375	0.389	0.407	0.411	0.398	0.400	0.389	0.390	0.380	0.363	0.372	0.380	0.398	0.437
Ti	0.137	0.187	0.228	0.277	0.300	0.324	0.343	0.360	0.369	0.396	0.409	0.424	0.444	0.448	0.434	0.436	0.424	0.425	0.414	0.396	0.405	0.414	0.434	0.476
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.473	0.516	0.543	0.575	0.603	0.634	0.661	0.670	0.695	0.741	0.759	0.774	0.794	0.808	0.813	0.819	0.832	0.837	0.851	0.849	0.861	0.862	0.875	0.879
Ti	0.516	0.562	0.592	0.627	0.656	0.691	0.720	0.730	0.757	0.808	0.826	0.843	0.865	0.880	0.886	0.892	0.906	0.912	0.927	0.925	0.938	0.940	0.953	0.958
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.881	0.886	0.891	0.900	0.910	0.912	0.916	0.922	0.924	0.929	0.938	0.948	0.962	0.967	0.969	0.959	0.941	0.915	0.891	0.860	0.793	0.631		
Ti	0.960	0.966	0.971	0.981	0.991	0.994	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.997	0.971	0.936	0.864	0.687		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5220							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A				
B				

Properties

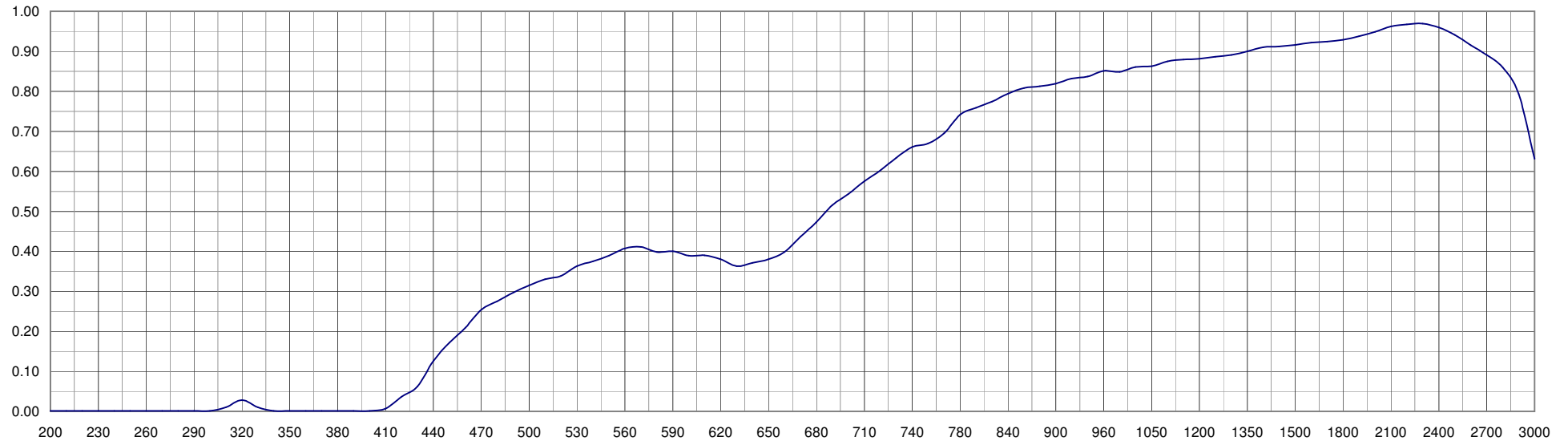
Chimic		Termic		Mechanic			Other	
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color
								brownish

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST TC1 CLOSE TO SCHOTT GLASS FG13 & HOYA GLASS LA140



Catalogue Thickness 2.0 mm

Refraction Factor 0.917

Spectral Transmittance Table

& Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.002
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.003	0.003	0.003	0.002	0.003	0.003	0.004	0.005	0.006	0.008	0.010	0.011	0.013	0.014	0.013	0.011	0.010	0.009	0.008	0.007	0.005	0.004	0.004	0.003
Ti	0.003	0.003	0.003	0.002	0.003	0.003	0.004	0.005	0.007	0.009	0.011	0.013	0.014	0.015	0.014	0.012	0.011	0.010	0.008	0.008	0.005	0.005	0.004	0.003
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.003	0.003	0.003	0.003	0.004	0.003	0.006	0.007	0.008	0.008	0.008	0.009	0.011	0.013	0.017	0.021	0.028	0.031	0.040	0.045	0.055	0.075	0.100	0.136
Ti	0.003	0.003	0.003	0.003	0.004	0.003	0.006	0.008	0.009	0.008	0.009	0.010	0.013	0.014	0.019	0.023	0.030	0.034	0.043	0.049	0.060	0.082	0.109	0.149
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.174	0.207	0.251	0.313	0.380	0.452	0.525	0.570	0.616	0.692	0.742	0.794	0.841	0.865	0.876	0.871	0.865	0.856	0.832	0.807	0.724	0.398		
Ti	0.189	0.226	0.274	0.341	0.415	0.492	0.572	0.622	0.672	0.754	0.809	0.866	0.917	0.943	0.955	0.950	0.943	0.933	0.907	0.880	0.789	0.434		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5250							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A				
B				

Properties

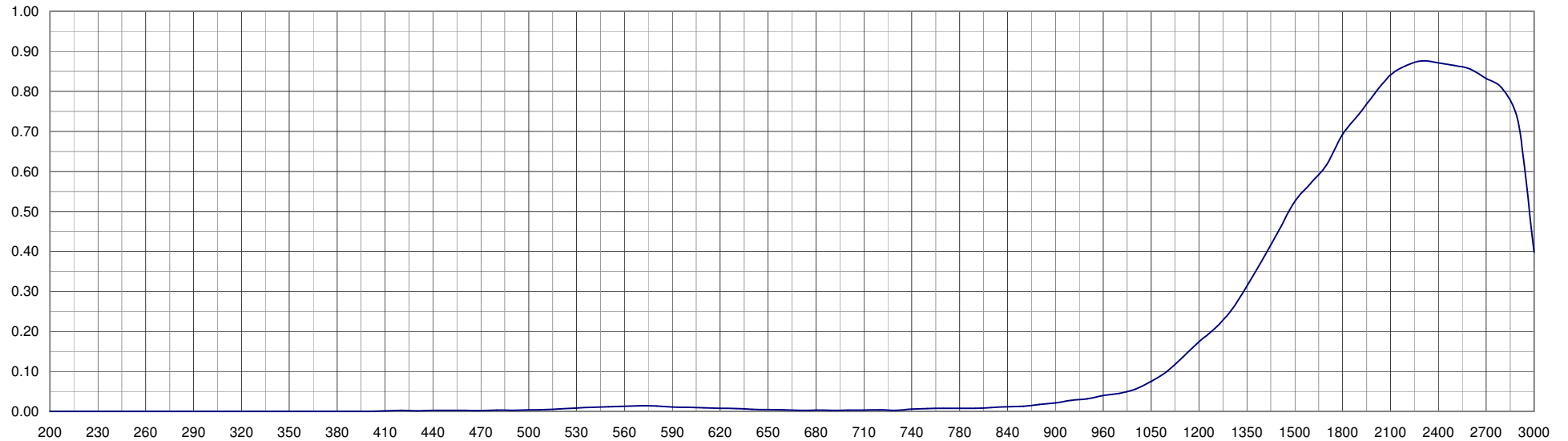
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
								dark	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST TC2 CLOSE TO SCHOTT GLASS NG3 & HOYA GLASS NONE



Catalogue Thickness 2.0 mm

Refraction Factor 0.917

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	
T	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	1.0E-12	6.3E-12	4.0E-07	5.0E-06	5.0E-06	
Ti	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	1.1E-12	6.9E-12	4.3E-07	5.5E-06	5.5E-06	
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	
T	4.0E-06	3.2E-06	3.2E-06	4.0E-06	5.0E-06	6.3E-06	1.0E-05	2.0E-05	3.2E-05	5.0E-05	7.9E-05	1.0E-04	1.3E-04	1.3E-04	1.3E-04	1.0E-04	7.9E-05	5.0E-05	3.2E-05	2.5E-05	1.6E-05	1.3E-05	1.0E-05	1.0E-05	
Ti	4.3E-06	3.4E-06	3.4E-06	4.3E-06	5.5E-06	6.9E-06	1.1E-05	2.2E-05	3.4E-05	5.5E-05	8.7E-05	1.1E-04	1.4E-04	1.4E-04	1.4E-04	1.1E-04	8.7E-05	5.5E-05	3.4E-05	2.7E-05	1.7E-05	1.4E-05	1.1E-05	1.1E-05	
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150	
T	7.9E-06	6.3E-06	6.3E-06	7.9E-06	1.0E-05	1.3E-05	2.0E-05	3.2E-05	4.0E-05	4.0E-05	5.0E-05	6.3E-05	1.0E-04	1.3E-04	2.0E-04	2.5E-04	4.0E-04	0.001	0.001	0.001	0.001	0.001	0.004	0.007	0.011
Ti	8.7E-06	6.9E-06	6.9E-06	8.7E-06	1.1E-05	1.4E-05	2.2E-05	3.4E-05	4.3E-05	4.3E-05	5.5E-05	6.9E-05	1.1E-04	1.4E-04	2.2E-04	2.7E-04	4.3E-04	0.001	0.001	0.001	0.002	0.004	0.008	0.013	
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000			
T	0.016	0.025	0.036	0.058	0.076	0.110	0.138	0.200	0.275	0.331	0.398	0.457	0.501	0.525	0.550	0.575	0.550	0.501	0.479	0.437	0.363	0.331			
Ti	0.017	0.027	0.040	0.063	0.083	0.120	0.151	0.218	0.300	0.361	0.434	0.499	0.547	0.573	0.600	0.628	0.600	0.547	0.522	0.476	0.396	0.361			

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n								1.5270					

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
V									

Color Specifications

	x	y	T	Thick
A	0.474	0.473	0.800	1.0
B	0.416	0.462	0.800	1.0

Properties

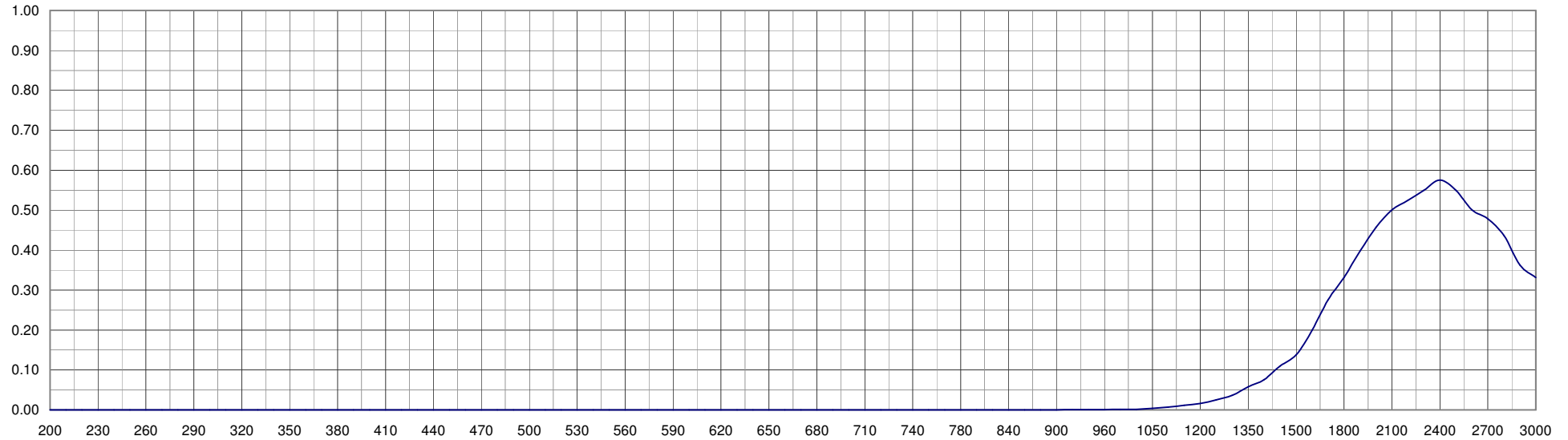
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	1	520	105	2.53	1.08	2.6	0.3	dark	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST TC3 CLOSE TO SCHOTT GLASS NG9/NG10 & HOYA GLASS NONE



Catalogue Thickness 1.0 mm

Refraction Factor 0.916

Spectral Transmittance Table

& Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.116	0.259	0.372	0.399	0.457	0.473	0.479	0.457	0.447
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.127	0.283	0.405	0.435	0.499	0.516	0.522	0.499	0.487
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.430	0.427	0.427	0.427	0.434	0.447	0.457	0.468	0.491	0.513	0.538	0.574	0.607	0.617	0.621	0.617	0.638	0.653	0.661	0.676	0.675	0.682	0.693	0.716
Ti	0.469	0.465	0.465	0.465	0.473	0.487	0.499	0.510	0.536	0.560	0.587	0.626	0.662	0.673	0.678	0.673	0.696	0.713	0.721	0.738	0.736	0.745	0.757	0.781
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.741	0.760	0.769	0.773	0.769	0.764	0.760	0.750	0.740	0.724	0.710	0.700	0.682	0.676	0.658	0.653	0.641	0.638	0.628	0.617	0.621	0.617	0.614	0.617
Ti	0.809	0.830	0.839	0.843	0.839	0.834	0.830	0.818	0.807	0.791	0.774	0.764	0.745	0.738	0.718	0.713	0.700	0.696	0.685	0.673	0.678	0.673	0.670	0.673
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.619	0.631	0.647	0.661	0.687	0.708	0.729	0.741	0.776	0.789	0.804	0.818	0.830	0.845	0.849	0.851	0.843	0.832	0.807	0.776	0.741	0.723		
Ti	0.676	0.689	0.706	0.721	0.750	0.773	0.796	0.809	0.847	0.861	0.877	0.893	0.906	0.922	0.927	0.929	0.920	0.908	0.881	0.847	0.809	0.789		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5280							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.524	0.415	25.000	2.0
B	0.449	0.404	23.300	2.0

Properties

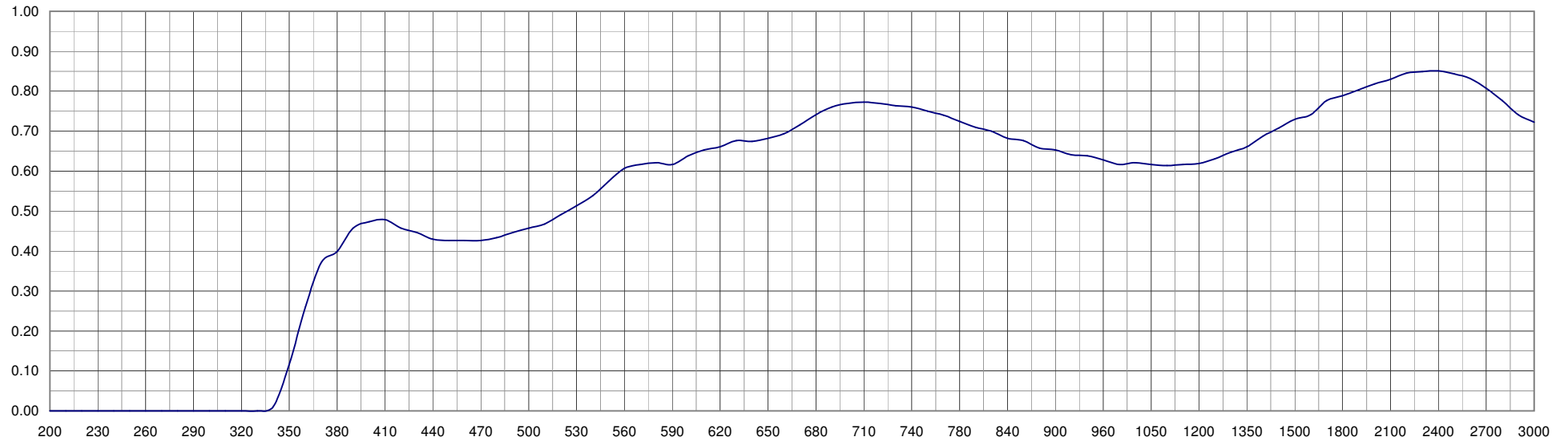
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
C	1	520	107	2.52	1.14	2.5	0.2	brownish	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST TC6 CLOSE TO SCHOTT GLASS FG13 & HOYA GLASS LA140



Catalogue Thickness 0.5 mm

Refraction Factor 0.918

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	
T	0.005	0.005	0.006	0.006	0.006	0.007	0.007	0.007	0.007	0.007	0.007	0.012	0.032	0.178	0.468	0.785	0.923	0.950	0.977	0.961	0.944	0.881	0.822	0.781	
Ti	0.005	0.006	0.006	0.006	0.007	0.007	0.007	0.008	0.008	0.008	0.008	0.013	0.034	0.194	0.509	0.855	1.000	1.000	1.000	1.000	1.000	0.959	0.895	0.850	
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	
T	0.741	0.724	0.733	0.750	0.767	0.781	0.794	0.804	0.813	0.808	0.804	0.804	0.804	0.813	0.822	0.827	0.832	0.822	0.813	0.813	0.813	0.822	0.841	0.866	
Ti	0.807	0.789	0.798	0.817	0.836	0.850	0.865	0.875	0.885	0.880	0.875	0.875	0.875	0.885	0.895	0.901	0.906	0.895	0.885	0.885	0.885	0.895	0.916	0.943	
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150	
T	0.891	0.902	0.912	0.912	0.912	0.907	0.902	0.902	0.902	0.891	0.881	0.871	0.861	0.851	0.841	0.832	0.822	0.813	0.808	0.804	0.799	0.794	0.790	0.785	0.790
Ti	0.971	0.982	0.993	0.993	0.993	0.987	0.982	0.982	0.982	0.971	0.959	0.948	0.938	0.927	0.916	0.906	0.895	0.885	0.880	0.875	0.870	0.865	0.860	0.855	0.860
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000			
T	0.794	0.808	0.822	0.832	0.841	0.851	0.861	0.861	0.861	0.861	0.858	0.855	0.851	0.858	0.864	0.871	0.884	0.897	0.912	0.881	0.851	0.822			
Ti	0.865	0.880	0.895	0.906	0.916	0.927	0.938	0.938	0.938	0.938	0.934	0.931	0.927	0.934	0.941	0.948	0.963	0.977	0.993	0.959	0.927	0.895			

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5200							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A				
B				

Properties

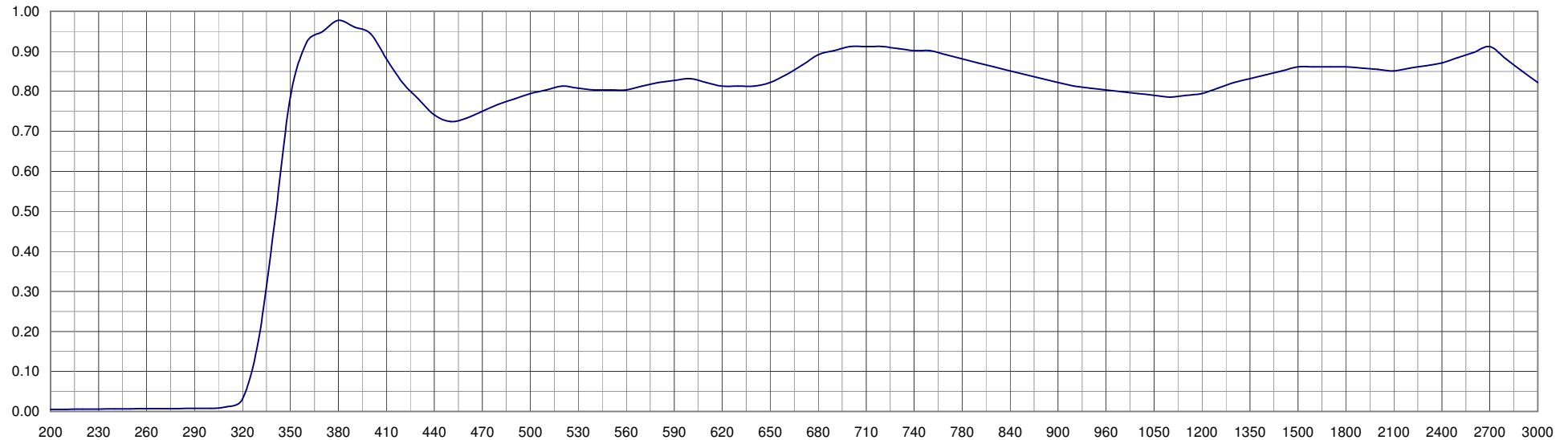
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
B	1	520	91	2.52	1.12	2.5	0.2	dark	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST TC9 CLOSE TO SCHOTT GLASS NG11 & HOYA GLASS NONE



Catalogue Thickness 1.0 mm

Refraction Factor 0.917

Spectral Transmittance Table

& Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.010	0.032	0.100	0.126	0.389	0.617	0.661	0.708	0.708	0.708	0.513	0.372	0.282
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.011	0.034	0.109	0.137	0.424	0.672	0.720	0.772	0.772	0.772	0.559	0.405	0.307
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.214	0.214	0.234	0.266	0.302	0.327	0.355	0.380	0.407	0.417	0.427	0.437	0.462	0.490	0.495	0.501	0.484	0.468	0.473	0.479	0.513	0.575	0.638	
Ti	0.233	0.233	0.256	0.290	0.329	0.357	0.387	0.415	0.444	0.455	0.465	0.465	0.476	0.504	0.534	0.540	0.546	0.528	0.510	0.516	0.522	0.559	0.627	0.696
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.708	0.750	0.794	0.794	0.794	0.785	0.776	0.759	0.741	0.759	0.676	0.646	0.617	0.596	0.575	0.562	0.550	0.543	0.537	0.531	0.525	0.562	0.603	0.569
Ti	0.772	0.818	0.866	0.866	0.866	0.856	0.846	0.827	0.808	0.827	0.737	0.704	0.672	0.649	0.627	0.613	0.599	0.592	0.586	0.579	0.572	0.613	0.657	0.620
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.537	0.562	0.589	0.610	0.631	0.653	0.676	0.671	0.667	0.661	0.656	0.652	0.646	0.665	0.685	0.708	0.736	0.766	0.794	0.719	0.652	0.589		
Ti	0.586	0.613	0.642	0.665	0.688	0.712	0.737	0.732	0.727	0.720	0.715	0.711	0.704	0.725	0.747	0.772	0.803	0.835	0.866	0.784	0.711	0.642		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n						1.5250							

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
v									

Color Specifications

	x	y	T	Thick
A	0.507	0.428	18.700	2.0
B	0.430	0.415	17.900	2.0

Properties

Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
A	1	510	105	2.51	1.14	2.5	0.2	brownish	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

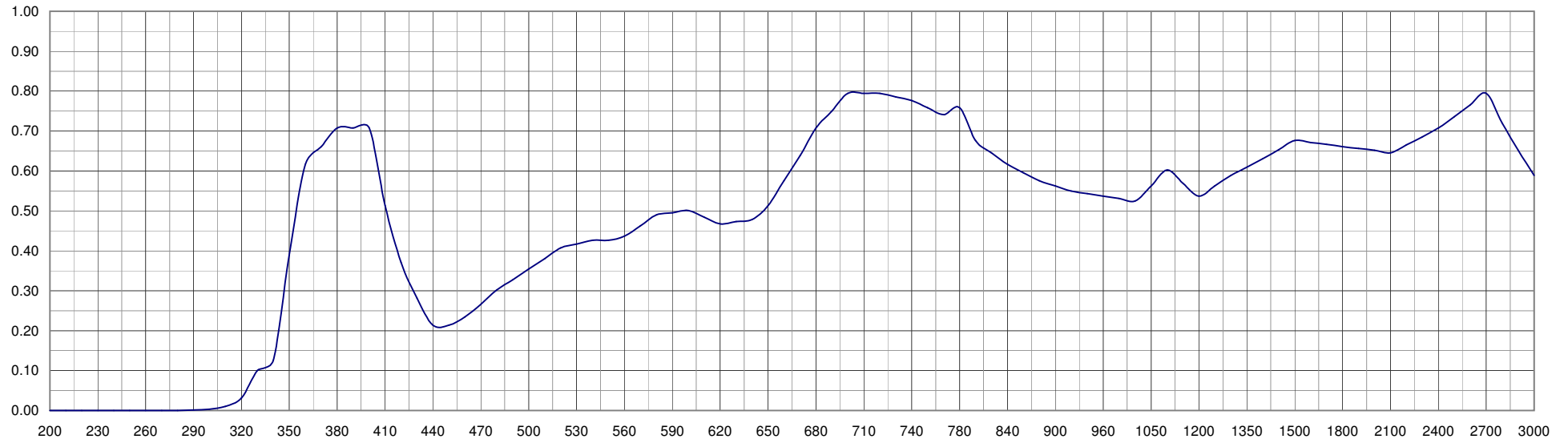
GOST TC10

CLOSE TO

SCHOTT GLASS NONE

&

HOYA GLASS NONE



Catalogue Thickness 2.5 mm

Refraction Factor 0.886

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.277	0.553	0.720	0.826	0.885	0.910	0.920	0.928
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.313	0.625	0.813	0.933	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	0.931	0.934	0.937	0.941	0.941	0.943	0.944	0.947	0.947	0.950	0.951	0.950	0.949	0.949	0.948	0.949	0.950	0.947	0.947	0.948	0.948	0.946	0.945	0.946
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	0.947	0.948	0.948	0.950	0.951	0.950	0.952	0.952	0.955	0.955	0.956	0.959	0.959	0.963	0.963	0.967	0.970	0.968	0.966	0.967	0.966	0.965	0.966	0.967
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	0.970	0.969	0.970	0.970	0.967	0.968	0.969	0.968	0.965	0.960	0.958	0.956	0.955	0.928	0.913	0.916	0.899	0.926	0.866	0.138	0.115	0.106		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.978	0.156	0.130	0.120		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.6740		1.6630	1.6540		1.6500		1.6440			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
V									

Color Specifications

	x	y	T	Thick
A				
B				

Properties

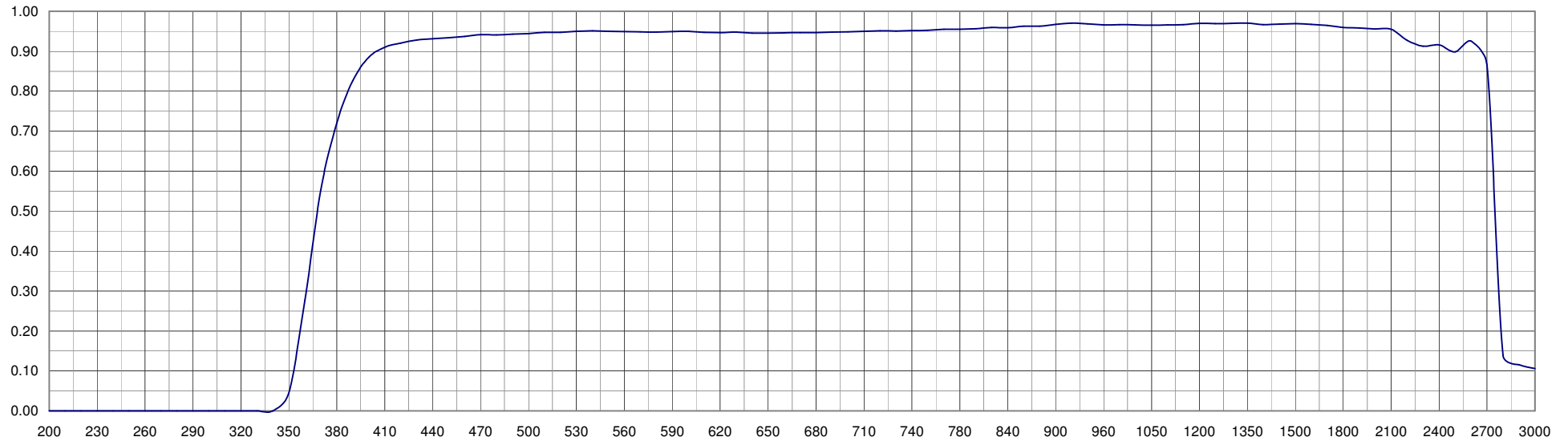
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
A	2	450	95	3.72	0.68	2.9	0.05	clear	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST WC7 CLOSE TO SCHOTT GLASS GG385 & HOYA GLASS L37/L38/L39



Catalogue Thickness 2.5 mm

Refraction Factor 0.921

Spectral Transmittance Table & Internal Transmittance Table

nm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
T	0.002	0.007	0.018	0.033	0.067	0.119	0.211	0.355	0.553	0.724	0.846	0.917	0.961	0.983	0.994	0.994	1.000	1.000	1.000	1.000	1.000	1.000	0.994	1.000
Ti	0.002	0.008	0.019	0.036	0.073	0.129	0.230	0.385	0.600	0.787	0.919	0.996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670
T	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	680	690	700	710	720	730	740	750	760	780	800	820	840	860	880	900	920	940	960	980	1000	1050	1100	1150
T	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
nm	1200	1250	1300	1350	1400	1450	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000		
T	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.997	0.994	0.989	0.983	0.972	0.955	0.933	0.907	0.772	0.188	0.100	0.150		
Ti	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.985	0.838	0.205	0.109	0.163		

Index-number

Line	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
nm	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1014.0
n			1.5180		1.5140	1.5100		1.5080		1.5060			

Abbe-number

Line	g	F'	F	e	d	D	C'	C	r
nm	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5
V									

Color Specifications

	x	y	T	Thick
A				
B				

Properties

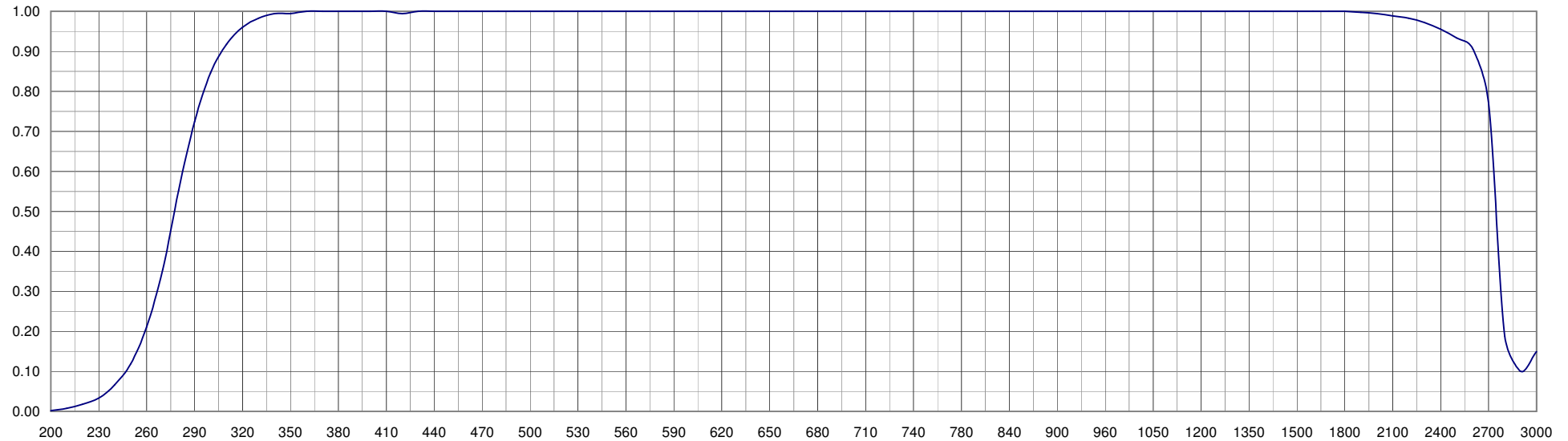
Chimic		Termic		Mechanic			Other		
FR*	SR*	Tg	CTE	SG	HG	Beta	Bubble	Visual Color	
A	1	560	81	2.47	1.1	2.9	0.05	clear	

Tolerances of Transmittance & Wavelength

T (%)		WL (nm)		T (%)		WL (nm)	
Standard Quality				Extra Standard Quality			
minor	10	minor	15	minor	5	minor	10

Spectral Transmittance Graphic

GOST WC12 CLOSE TO SCHOTT GLASS WG280 & HOYA GLASS NONE



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