

## GG475

Reflection factor	
$P_d$	0.92

Reference thickness	
d [mm]	3

Spectral values guaranteed	
$\lambda_c$ ( $\tau_i = 0.50$ ) [nm]	= 475 ± 6
$\lambda_s$ ( $\tau_{is} = 1 \cdot 10^{-5}$ ) [nm]	= 410
$\lambda_p$ ( $\tau_{ip} = 0.92$ ) [nm]	= 550

Refractive index n		
$\lambda$ [nm]	Element	n
546	Hg	1.53
587.6	He	1.52
852.1	Cs	1.52
1014	Hg	1.51

Density	
$\rho$ [g/cm <sup>3</sup> ]	2.56

Bubble content	
Bubble class	3

Chemical resistance	
FR class	0
SR class	1.0
AR class	1.0

Transformation temperature	
$T_g$ [°C]	531

Thermal expansion	
$\alpha_{-30/+70^\circ\text{C}}$ [10 <sup>-6</sup> /K]	8.2
$\alpha_{20/300^\circ\text{C}}$ [10 <sup>-6</sup> /K]	9.4
$\alpha_{20/200^\circ\text{C}}$ [10 <sup>-6</sup> /K]	

Temperature coefficient	
$T_k$ [nm/°C]	0.09

### Notes

Colloidally colored glass

Long pass filter

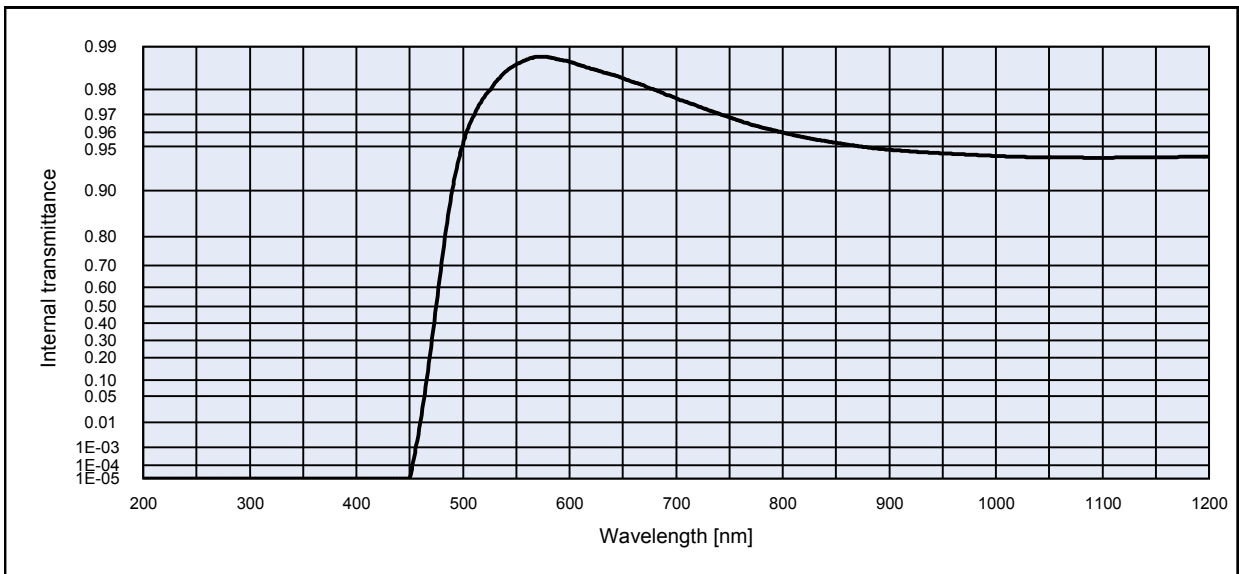
All data without tolerances are to be understood to be reference values. Guaranteed values are only those values listed in the section "Spectral values guaranteed".

### Colorimetric evaluation

Illuminant	A ( Planck T = 2856 K )		
	1	2	3
$x$	0.483	0.489	0.492
$y$	0.453	0.460	0.463
Y	91	90	89
$\lambda_d$ [nm]	580	580	580
$P_e$	0.56	0.65	0.69

Illuminant	Planck T = 3200 K		
	1	2	3
$x$	0.465	0.473	0.476
$y$	0.458	0.466	0.470
Y	91	90	89
$\lambda_d$ [nm]	578	578	578
$P_e$	0.57	0.66	0.70

Illuminant	D65 ( $T_c = 6504$ K )		
	1	2	3
$x$	0.381	0.394	0.401
$y$	0.463	0.485	0.494
Y	89	88	88
$\lambda_d$ [nm]	568	569	569
$P_e$	0.57	0.66	0.71





Internal transmittance  $\tau_i$  at reference thickness  $d$  [mm] = 3

The internal transmittance values, tabulated and graphically represented, are reference values only

$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$
200	< 1.0E-05	500	9.5E-01	800	9.6E-01	1100	9.4E-01	2200	9.3E-01	3700	1.5E-01
210	< 1.0E-05	510	9.7E-01	810	9.6E-01	1110	9.4E-01	2250	9.3E-01	3750	1.5E-01
220	< 1.0E-05	520	9.8E-01	820	9.6E-01	1120	9.4E-01	2300	9.3E-01	3800	1.6E-01
230	< 1.0E-05	530	9.8E-01	830	9.6E-01	1130	9.4E-01	2350	9.3E-01	3850	1.7E-01
240	< 1.0E-05	540	9.9E-01	840	9.5E-01	1140	9.4E-01	2400	9.3E-01	3900	1.7E-01
250	< 1.0E-05	550	9.9E-01	850	9.5E-01	1150	9.4E-01	2450	9.2E-01	3950	1.7E-01
260	< 1.0E-05	560	9.9E-01	860	9.5E-01	1160	9.4E-01	2500	9.1E-01	4000	1.6E-01
270	< 1.0E-05	570	9.9E-01	870	9.5E-01	1170	9.4E-01	2550	9.1E-01	4050	1.5E-01
280	< 1.0E-05	580	9.9E-01	880	9.5E-01	1180	9.4E-01	2600	9.1E-01	4100	1.3E-01
290	< 1.0E-05	590	9.9E-01	890	9.5E-01	1190	9.4E-01	2650	8.9E-01	4150	1.1E-01
300	< 1.0E-05	600	9.9E-01	900	9.5E-01	1200	9.4E-01	2700	8.2E-01	4200	9.5E-02
310	< 1.0E-05	610	9.9E-01	910	9.5E-01	1250	9.4E-01	2750	3.7E-01	4250	7.1E-02
320	< 1.0E-05	620	9.9E-01	920	9.5E-01	1300	9.5E-01	2800	2.5E-01	4300	5.1E-02
330	< 1.0E-05	630	9.8E-01	930	9.5E-01	1350	9.5E-01	2850	2.6E-01	4350	3.3E-02
340	< 1.0E-05	640	9.8E-01	940	9.4E-01	1400	9.5E-01	2900	2.7E-01	4400	1.9E-02
350	< 1.0E-05	650	9.8E-01	950	9.4E-01	1450	9.5E-01	2950	2.7E-01	4450	8.8E-03
360	< 1.0E-05	660	9.8E-01	960	9.4E-01	1500	9.6E-01	3000	2.7E-01	4500	3.3E-03
370	< 1.0E-05	670	9.8E-01	970	9.4E-01	1550	9.6E-01	3050	2.7E-01	4550	1.2E-03
380	< 1.0E-05	680	9.8E-01	980	9.4E-01	1600	9.7E-01	3100	2.5E-01	4600	3.4E-04
390	< 1.0E-05	690	9.8E-01	990	9.4E-01	1650	9.7E-01	3150	2.3E-01	4650	1.0E-04
400	< 1.0E-05	700	9.8E-01	1000	9.4E-01	1700	9.7E-01	3200	2.2E-01	4700	3.7E-05
410	< 1.0E-05	710	9.8E-01	1010	9.4E-01	1750	9.7E-01	3250	2.0E-01	4750	1.4E-05
420	< 1.0E-05	720	9.7E-01	1020	9.4E-01	1800	9.7E-01	3300	1.8E-01	4800	< 1.0E-05
430	< 1.0E-05	730	9.7E-01	1030	9.4E-01	1850	9.6E-01	3350	1.7E-01	4850	< 1.0E-05
440	< 1.0E-05	740	9.7E-01	1040	9.4E-01	1900	9.6E-01	3400	1.6E-01	4900	< 1.0E-05
450	< 1.0E-05	750	9.7E-01	1050	9.4E-01	1950	9.6E-01	3450	1.5E-01	4950	< 1.0E-05
460	1.0E-02	760	9.7E-01	1060	9.4E-01	2000	9.6E-01	3500	1.4E-01	5000	< 1.0E-05
470	2.6E-01	770	9.6E-01	1070	9.4E-01	2050	9.6E-01	3550	1.4E-01	5050	< 1.0E-05
480	7.1E-01	780	9.6E-01	1080	9.4E-01	2100	9.5E-01	3600	1.4E-01	5100	< 1.0E-05
490	9.0E-01	790	9.6E-01	1090	9.4E-01	2150	9.5E-01	3650	1.4E-01	5150	< 1.0E-05