

Data Sheet

SCHOTT

N-LASF40
834373.443

$n_d = 1.83404$	$v_d = 37.30$	$n_F - n_C = 0.022363$
$n_e = 1.83935$	$v_e = 37.04$	$n_F - n_C = 0.022658$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.78600
$n_{1970.1}$	1970.1	1.79298
$n_{1529.6}$	1529.6	1.80074
$n_{1060.0}$	1060.0	1.80999
n_t	1014.0	1.81118
n_s	852.1	1.81643
n_r	706.5	1.82380
n_c	656.3	1.82745
$n_{c'}$	643.8	1.82849
$n_{632.8}$	632.8	1.82946
n_d	589.3	1.83385
n_e	587.6	1.83404
n_f	546.1	1.83935
$n_{f'}$	486.1	1.84981
n_g	480.0	1.85114
n_g	435.8	1.86275
n_h	404.7	1.87393
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Internal Transmittance τ_i		
λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.565	0.240
2325	0.810	0.590
1970	0.963	0.910
1530	0.993	0.982
1060	0.998	0.995
700	0.998	0.996
660	0.998	0.994
620	0.997	0.993
580	0.997	0.992
546	0.995	0.988
500	0.987	0.969
460	0.973	0.933
436	0.954	0.890
420	0.937	0.850
405	0.905	0.780
400	0.891	0.750
390	0.842	0.650
380	0.764	0.510
370	0.601	0.280
365	0.468	0.150
350	0.044	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Relative Partial Dispersion	
$P_{s,t}$	0.2346
$P_{C,s}$	0.4929
$P_{d,C}$	0.2948
$P_{e,d}$	0.2371
$P_{g,F}$	0.5786
$P_{i,h}$	
$P'_{s,t}$	0.2315
$P'_{C,s}$	0.5321
$P'_{d,C}$	0.2453
$P'_{e,d}$	0.2340
$P'_{g,F}$	0.5124
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"	
$\Delta P_{C,t}$	0.0055
$\Delta P_{C,s}$	0.0030
$\Delta P_{F,e}$	-0.0007
$\Delta P_{g,F}$	-0.0024
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ\text{C}} [10^{-6}/\text{K}]$	5.8
$\alpha_{+20/+300^\circ\text{C}} [10^{-6}/\text{K}]$	6.9
$T_g [\text{ }^\circ\text{C}]$	590
$T_{10}^{13.0} [\text{ }^\circ\text{C}]$	591
$T_{10}^{7.6} [\text{ }^\circ\text{C}]$	677
$c_p [\text{J/(g}\cdot\text{K})]$	0.550
$\lambda [\text{W/(m}\cdot\text{K})]$	0.810
$\rho [\text{g/cm}^3]$	4.43
$E [10^3 \text{ N/mm}^2]$	111
μ	0.304
$K [10^{-6} \text{ mm}^2/\text{N}]$	2.19
$HK_{0.1/20}$	580
HG	1
B	0
CR	1
FR	1
SR	51.2
AR	1
PR	1.3

Constants of Dispersion Formula		
B_1	1.98550331	
B_2	0.274057042	
B_3	1.28945661	
C_1	0.010958331	
C_2	0.0474551603	
C_3	96.9085286	

Constants of Dispersion dn/dT		
D_0	$8.10 \cdot 10^{-6}$	
D_1	$1.25 \cdot 10^{-8}$	
D_2	$-1.73 \cdot 10^{-11}$	
E_0	$8.27 \cdot 10^{-7}$	
E_1	$1.08 \cdot 10^{-9}$	
$\lambda_{TK} [\mu\text{m}]$	0.238	

Color Code	
λ_{80}/λ_5	39/35*
(* = λ_{70}/λ_5)	

Remarks	

Temperature Coefficients of Refractive Index						
	$\Delta n_{\text{rel}}/\Delta T [10^{-6}/\text{K}]$		$\Delta n_{\text{abs}}/\Delta T [10^{-6}/\text{K}]$			
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	7.1	8.8	10.6	4.6	6.3	8.0
+20/+40	7.3	9.3	11.4	5.7	7.7	9.8
+60/+80	7.6	9.7	12.0	6.3	8.5	10.8