Datasheet

SCHOTT
glass made of ideas

N-LASF31A
883408.551

n_d = 1.88300	ν_d = 40.76	$n_F - n_C$ = 0.021663
n_e = 1.88815	ν_e = 40.52	$n_{F'} - n_{C'}$ = 0.021921

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.83590
$n_{1970.1}$	1970.1	1.84267
$n_{1529.6}$	1529.6	1.85026
$n_{1060.0}$	1060.0	1.85937
n_t	1014.0	1.86054
n_s	852.1	1.86572
n_r	706.5	1.87298
n_C	656.3	1.87656
$n_{C'}$	643.8	1.87757
$n_{632.8}$	632.8	1.87853
n_D	589.3	1.88281
n_d	587.6	1.88300
n_e	546.1	1.88815
n_F	486.1	1.89822
$n_{F'}$	480.0	1.89950
n_g	435.8	1.91050
n_h	404.7	1.92093
n_i	365.0	1.93920
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.964850750
B_2	0.475231259
B_3	1.483601090
C_1	0.009820602
C_2	0.0344713438
C_3	110.73986300

Constants of Formula for dn/dT

D_0	1.67E-06
D_1	8.90E-09
D_2	-8.73E-12
E_0	7.47E-07
E_1	7.46E-10
λ_{TK} [µm]	0.207

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.640	0.320
2325	0.820	0.620
1970	0.963	0.910
1530	0.993	0.983
1060	0.998	0.995
700	0.997	0.992
660	0.996	0.991
620	0.996	0.990
580	0.996	0.990
546	0.996	0.990
500	0.991	0.978
460	0.980	0.950
436	0.970	0.930
420	0.960	0.900
405	0.940	0.860
400	0.930	0.840
390	0.910	0.780
380	0.860	0.690
370	0.780	0.540
365	0.730	0.450
350	0.490	0.170
334	0.130	0.010
320	0.060	0.000
310	0.000	
300	0.000	
290		
280		
270		
260		
250		

Color Code

λ70 /λ5	38/33

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2391
$P_{C,s}$	0.5004
$P_{d,C}$	0.2972
$P_{e,d}$	0.2377
$P_{g,F}$	0.5667
$P_{i,h}$	0.8436

Relative Partial Dispersion P'

$P'_{s,t}$	0.2363
$P'_{C',s}$	0.5407
$P'_{d,C'}$	0.2475
$P'_{e,d}$	0.2349
$P'_{g,F'}$	0.5021
$P'_{i,h}$	0.8337

Deviation of Rel. Partial Disp. ΔP from the normal line

$\Delta P_{C,t}$	0.0012
$\Delta P_{C,s}$	0.0025
$\Delta P_{F,e}$	-0.0019
$\Delta P_{g,F}$	-0.0085
$\Delta P_{i,g}$	-0.0575

Chemical Properties

CR	1
FR	0
SR	2.3
AR	1
PR	1

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	6.7
$\alpha_{+20/+300°C}$ [10^{-6}/K]	7.7
T_g [°C]	719
$T_{10^{13}}$ [°C]	720
$T_{10^{7.6}}$ [°C]	830
c_p [J/(g*K)]	0.440
λ [W/(m•K)]	0.790
ρ [g/cm³]	5.51
E [10^3 N/mm²]	126
µ	0.301
K [10^{-6} mm²/N]	1.18
$HK_{0.1/20}$	650
HG	2

Temperature Coefficients of the Refractive Index

	$\Delta n_{rel}/\Delta T$ [10^{-6}/K]			$\Delta n_{abs}/\Delta T$ [10^{-6}/K]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.4	4.8	6.3	0.9	2.3	3.7
+20/+40	3.3	4.9	6.6	1.7	3.3	4.9
+60/+80	3.4	5.2	6.9	2.2	3.9	5.6