Data Sheet

SCHOTT

N-LASF46B
904313.451

n_d = 1.90366	ν_d = 31.32	$n_F - n_C$ = 0.028852
n_e = 1.91048	ν_e = 31.09	$n_{F'} - n_{C'}$ = 0.029289

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.84657
$n_{1970.1}$	1970.1	1.85418
$n_{1529.6}$	1529.6	1.86283
$n_{1060.0}$	1060.0	1.87362
n_t	1014.0	1.87505
n_s	852.1	1.88146
n_r	706.5	1.89065
n_C	656.3	1.89526
$n_{C'}$	643.8	1.89657
$n_{632.8}$	632.8	1.89781
n_D	589.3	1.90341
n_d	587.6	1.90366
n_e	546.1	1.91048
n_F	486.1	1.92411
$n_{F'}$	480.0	1.92586
n_g	435.8	1.94130
n_h	404.7	1.95647
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	

Constants of Dispersion Formula

B_1	2.17988922
B_2	0.306495184
B_3	1.568824370
C_1	0.01258053840
C_2	0.0567191367
C_3	105.3165380

Constants of Formula for dn/dT

D_0	5.98E-06
D_1	1.30E-08
D_2	-3.50E-12
E_0	9.13E-07
E_1	1.24E-09
λ_{TK} [µm]	0.267

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.560	0.230
2325	0.790	0.550
1970	0.954	0.890
1530	0.991	0.977
1060	0.998	0.996
700	0.996	0.989
660	0.993	0.983
620	0.992	0.980
580	0.991	0.978
546	0.989	0.972
500	0.977	0.940
460	0.954	0.890
436	0.930	0.840
420	0.900	0.770
405	0.850	0.660
400	0.820	0.600
390	0.710	0.420
380	0.500	0.180
370	0.180	0.010
365	0.050	0.000
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80} / λ_5	41/37*

(*= λ_{70}/λ_5)

Remarks

suitable for precision molding

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	6.1	8.2	10.7	3.6	5.6	8.1
+20/+40	6.4	8.9	11.8	4.8	7.2	10.1
+60/+80	6.8	9.5	12.7	5.5	8.2	11.4

Relative Partial Dispersion

$P_{s,t}$	0.2222
$P_{C,s}$	0.4783
$P_{d,C}$	0.2911
$P_{e,d}$	0.2364
$P_{g,F}$	0.5956
$P_{i,h}$	
$P'_{s,t}$	0.2189
$P'_{C',s}$	0.5160
$P'_{d,C'}$	0.2419
$P'_{e,d}$	0.2329
$P'_{g,F'}$	0.5270
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line

$\Delta P_{C,t}$	0.0069
$\Delta P_{C,s}$	0.0024
$\Delta P_{F,e}$	0.0006
$\Delta P_{g,F}$	0.0045
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	6.0
$\alpha_{+20/+300°C}$ [10^{-6}/K]	7.1
T_g [°C]	611
T_{10}^{13} [°C]	613
$T_{10}^{7.6}$ [°C]	703
c_p [J/(g*K)]	0.550
λ [W/(m•K)]	0.880
AT [°C]	649
ρ [g/cm^3]	4.51
E [10^3 N/mm^2]	121
µ	0.303
K [10^{-6} mm^2/N]	1.87
HK$_{0.1/20}$	712
Abrasion Aa	55
CR	1
FR	0
SR	3.3
AR	1
PR	1
SR-J	2
WR-J	1