Data Sheet

SCHOTT

N-LASF45HT
801350.363

$n_d = 1.80107$	$\nu_d = 34.97$	$n_F - n_C = 0.022905$
$n_e = 1.80650$	$\nu_e = 34.72$	$n_{F'} - n_{C'} = 0.023227$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.75487
$n_{1970.1}$	1970.1	1.76104
$n_{1529.6}$	1529.6	1.76809
$n_{1060.0}$	1060.0	1.77689
n_t	1014.0	1.77805
n_s	852.1	1.78325
n_r	706.5	1.79066
n_C	656.3	1.79436
$n_{C'}$	643.8	1.79541
$n_{632.8}$	632.8	1.79640
n_D	589.3	1.80087
n_d	587.6	1.80107
n_e	546.1	1.80650
n_F	486.1	1.81726
$n_{F'}$	480.0	1.81864
n_g	435.8	1.83068
n_h	404.7	1.84237
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	1.87140198
B_2	0.267777879
B_3	1.73030008
C_1	0.011217192
C_2	0.0505134972
C_3	147.106505

Constants of Dispersion dn/dT

D_0	$2.78 \cdot 10^{-6}$
D_1	$8.73 \cdot 10^{-9}$
D_2	$-2.65 \cdot 10^{-11}$
E_0	$8.24 \cdot 10^{-7}$
E_1	$1.15 \cdot 10^{-9}$
λ_{TK} [µm]	0.255

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.805	0.581
2325	0.879	0.724
1970	0.972	0.932
1530	0.995	0.988
1060	0.999	0.997
700	0.996	0.990
660	0.995	0.987
620	0.994	0.986
580	0.994	0.986
546	0.993	0.983
500	0.985	0.964
460	0.972	0.931
436	0.958	0.898
420	0.941	0.858
405	0.906	0.781
400	0.886	0.739
390	0.825	0.619
380	0.719	0.439
370	0.528	0.203
365	0.395	0.098
350	0.033	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	43/35
(*= λ_{70}/λ_5)	

Remarks

Relative Partial Dispersion

$P_{s,t}$	0.2268
$P_{C,s}$	0.4849
$P_{d,C}$	0.2930
$P_{e,d}$	0.2368
$P_{g,F}$	0.5859
$P_{i,h}$	
$P'_{s,t}$	0.2237
$P'_{C',s}$	0.5235
$P'_{d,C'}$	0.2437
$P'_{e,d}$	0.2336
$P'_{g,F'}$	0.5186
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0009
$\Delta P_{C,s}$	0.0005
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	0.0009
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.4
$\alpha_{+20/+300°C}$ [10^{-6}/K]	8.6
T_g [°C]	647
$T_{10}^{13.0}$ [°C]	652
$T_{10}^{7.6}$ [°C]	773
c_p [J/(g·K)]	0.660
λ [W/(m·K)]	1.020
ρ [g/cm^3]	3.63
E [10^3 N/mm^2]	116
μ	0.281
K [10^{-6} mm^2/N]	2.01
HK$_{0.1/20}$	630
HG	3
CR	1
FR	0
SR	3.2
AR	1
PR	1

Temperature Coefficients of 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	3.8	5.4	7.3	1.4	3.0	4.7
+20/ +40	3.8	5.7	7.9	2.3	4.1	6.2
+60/ +80	3.8	5.9	8.3	2.6	4.7	7.0