Data Sheet

SCHOTT

N-LASF45HT
801350.363

n_d = 1.80107	ν_d = 34.97	$n_F - n_C$ = 0.022905
n_e = 1.80650	ν_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	1.730300080
C_1	0.01121719200
C_2	0.0505134972
C_3	147.1065050

Constants of Formula for dn/dT

D_0	2.78E-06
D_1	8.73E-09
D_2	-2.65E-11
E_0	8.24E-07
E_1	1.15E-09
λ_{TK} [µm]	0.255

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.810	0.580
2325	0.880	0.720
1970	0.972	0.930
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	0.930
436	0.958	0.900
420	0.940	0.860
405	0.910	0.780
400	0.890	0.740
390	0.830	0.620
380	0.720	0.440
370	0.530	0.200
365	0.400	0.100
350	0.030	0.000
334	0.000	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80} / λ_5	43/35

(*= λ_{70}/λ_5)

Remarks

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	3.8	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

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 Dispersion 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} [°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