Datasheet

SCHOTT
glass made of ideas

N-BK7HT
517642.251

n_d = 1.51680	ν_d = 64.17	$n_F - n_C$ = 0.008054
n_e = 1.51872	ν_e = 63.96	$n_{F'} - n_{C'}$ = 0.008110

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.48921
$n_{1970.1}$	1970.1	1.49495
$n_{1529.6}$	1529.6	1.50091
$n_{1060.0}$	1060.0	1.50669
n_t	1014.0	1.50731
n_s	852.1	1.50980
n_r	706.5	1.51289
n_C	656.3	1.51432
$n_{C'}$	643.8	1.51472
$n_{632.8}$	632.8	1.51509
n_D	589.3	1.51673
n_d	587.6	1.51680
n_e	546.1	1.51872
n_F	486.1	1.52238
$n_{F'}$	480.0	1.52283
n_g	435.8	1.52668
n_h	404.7	1.53024
n_i	365.0	1.53627
$n_{334.1}$	334.1	1.54272
$n_{312.6}$	312.6	1.54862
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.039612120
B_2	0.231792344
B_3	1.010469450
C_1	0.006000699
C_2	0.0200179144
C_3	103.56065300

Constants of Formula for dn/dT

D_0	1.86E-06
D_1	1.31E-08
D_2	-1.37E-11
E_0	4.34E-07
E_1	6.27E-10
λ_{TK} [µm]	0.170

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.750	0.490
2325	0.850	0.660
1970	0.954	0.890
1530	0.995	0.987
1060	0.999	0.999
700	0.999	0.998
660	0.999	0.997
620	0.999	0.997
580	0.999	0.998
546	0.999	0.998
500	0.999	0.997
460	0.998	0.996
436	0.998	0.996
420	0.998	0.996
405	0.998	0.996
400	0.998	0.996
390	0.998	0.994
380	0.997	0.992
370	0.996	0.989
365	0.994	0.985
350	0.985	0.964
334	0.950	0.880
320	0.820	0.600
310	0.570	0.240
300	0.220	0.020
290	0.040	
280	0.000	
270		
260		
250		

Color Code

λ80 / λ5	33/29

Remarks

step 0.5 available

Relative Partial Dispersion P

$P_{s,t}$	0.3098
$P_{C,s}$	0.5612
$P_{d,C}$	0.3076
$P_{e,d}$	0.2386
$P_{g,F}$	0.5349
$P_{i,h}$	0.7483

Relative Partial Dispersion P'

$P'_{s,t}$	0.3076
$P'_{C',s}$	0.6062
$P'_{d,C'}$	0.2566
$P'_{e,d}$	0.2370
$P'_{g,F'}$	0.4754
$P'_{i,h}$	0.7432

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

$\Delta P_{C,t}$	0.0216
$\Delta P_{C,s}$	0.0087
$\Delta P_{F,e}$	-0.0009
$\Delta P_{g,F}$	-0.0009
$\Delta P_{i,g}$	0.0035

Chemical Properties

CR	1
FR	0
SR	1
AR	2.3
PR	2.3

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.1
$\alpha_{+20/+300°C}$ [10^{-6}/K]	8.3
T_g [°C]	557
$T_{10^{13}}$ [°C]	557
$T_{10^{7.6}}$ [°C]	719
c_p [J/(g*K)]	0.858
λ [W/(m•K)]	1.114
ρ [g/cm³]	2.51
E [10^3 N/mm²]	82
µ	0.206
K [10^{-6} mm²/N]	2.77
$HK_{0.1/20}$	610
HG	3

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	2.4	2.9	3.3	0.3	0.8	1.2
+20/+40	2.4	3.0	3.5	1.1	1.6	2.1
+60/+80	2.5	3.1	3.7	1.5	2.1	2.7