Datasheet

SCHOTT
glass made of ideas

N-ZK7A
508610.247

n_d = 1.50805	ν_d = 61.04	$n_F - n_C$ = 0.008323
n_e = 1.51004	ν_e = 60.84	$n_{F'} - n_{C'}$ = 0.008384

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.48001
$n_{1970.1}$	1970.1	1.48582
$n_{1529.6}$	1529.6	1.49184
$n_{1060.0}$	1060.0	1.49768
n_t	1014.0	1.49831
n_s	852.1	1.50086
n_r	706.5	1.50403
n_C	656.3	1.50550
$n_{C'}$	643.8	1.50591
$n_{632.8}$	632.8	1.50629
n_D	589.3	1.50798
n_d	587.6	1.50805
n_e	546.1	1.51004
n_F	486.1	1.51382
$n_{F'}$	480.0	1.51429
n_g	435.8	1.51829
n_h	404.7	1.52198
n_i	365.0	1.52826
$n_{334.1}$	334.1	1.53500
$n_{312.6}$	312.6	1.54118
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.075098910
B_2	0.168895044
B_3	0.860503983
C_1	0.006766017
C_2	0.0230642817
C_3	89.04987780

Constants of Formula for dn/dT

D_0	1.09E-05
D_1	1.98E-08
D_2	-1.49E-11
E_0	4.48E-07
E_1	3.26E-10
λ_{TK} [µm]	0.183

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.660	0.350
2325	0.850	0.660
1970	0.971	0.930
1530	0.990	0.976
1060	0.998	0.994
700	0.998	0.996
660	0.998	0.994
620	0.998	0.994
580	0.998	0.995
546	0.998	0.995
500	0.997	0.993
460	0.995	0.988
436	0.994	0.984
420	0.992	0.981
405	0.991	0.977
400	0.990	0.975
390	0.987	0.969
380	0.982	0.956
370	0.976	0.940
365	0.971	0.930
350	0.940	0.860
334	0.850	0.670
320	0.690	0.390
310	0.490	0.170
300	0.220	0.030
290	0.030	
280		
270		
260		
250		

Color Code

λ80 / λ5	34/29

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.3058
$P_{C,s}$	0.5576
$P_{d,C}$	0.3070
$P_{e,d}$	0.2386
$P_{g,F}$	0.5368
$P_{i,h}$	0.7540

Relative Partial Dispersion P'

$P'_{s,t}$	0.3036
$P'_{C',s}$	0.6024
$P'_{d,C'}$	0.2560
$P'_{e,d}$	0.2369
$P'_{g,F'}$	0.4770
$P'_{i,h}$	0.7486

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

$\Delta P_{C,t}$	0.0289
$\Delta P_{C,s}$	0.0125
$\Delta P_{F,e}$	-0.0019
$\Delta P_{g,F}$	-0.0043
$\Delta P_{i,g}$	-0.0146

Chemical Properties

CR	1
FR	0
SR	2
AR	1.2
PR	2.2

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	4.6
$\alpha_{+20/+300°C}$ [10^{-6}/K]	5.2
T_g [°C]	519
$T_{10^{13}}$ [°C]	547
$T_{10^{7.6}}$ [°C]	729
c_p [J/(g*K)]	0.770
λ [W/(m•K)]	1.042
ρ [g/cm³]	2.47
E [10^3 N/mm²]	70
µ	0.214
K [10^{-6} mm²/N]	3.63
$HK_{0.1/20}$	530

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	5.8	6.5	7.0	3.8	4.4	4.9
+20/+40	6.1	6.8	7.4	4.9	5.5	6.1
+60/+80	6.5	7.2	7.9	5.5	6.2	6.8