

K10
501564.252

$n_d = 1.50137$	$v_d = 56.41$	$n_F - n_C = 0.008888$
$n_e = 1.50349$	$v_e = 56.15$	$n_F' - n_C' = 0.008967$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.47507
$n_{1970.1}$	1970.1	1.48008
$n_{1529.6}$	1529.6	1.48536
$n_{1060.0}$	1060.0	1.49076
n_t	1014.0	1.49137
n_s	852.1	1.49389
n_r	706.5	1.49713
n_C	656.3	1.49867
$n_{C'}$	643.8	1.49910
$n_{632.8}$	632.8	1.49950
n_D	589.3	1.50129
n_d	587.6	1.50137
n_e	546.1	1.50349
n_F	486.1	1.50756
$n_{F'}$	480.0	1.50807
n_g	435.8	1.51243
n_h	404.7	1.51649
n_i	365.0	1.52350
$n_{334.1}$	334.1	1.53120
$n_{312.6}$	312.6	1.53844
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.770	0.520
2325	0.830	0.630
1970	0.940	0.850
1530	0.993	0.983
1060	0.998	0.996
700	0.999	0.997
660	0.998	0.994
620	0.997	0.993
580	0.997	0.993
546	0.997	0.992
500	0.996	0.991
460	0.996	0.990
436	0.995	0.988
420	0.995	0.988
405	0.995	0.987
400	0.994	0.986
390	0.993	0.982
380	0.989	0.973
370	0.986	0.966
365	0.983	0.958
350	0.963	0.910
334	0.880	0.720
320	0.630	0.310
310	0.370	0.130
300	0.140	0.020
290		
280		
270		
260		
250		

Relative Partial Dispersion	
$P_{s,t}$	0.2835
$P_{C,s}$	0.5385
$P_{d,C}$	0.3037
$P_{e,d}$	0.2382
$P_{g,F}$	0.5475
$P_{i,h}$	0.7888
$P'_{s,t}$	0.2810
$P'_{C,s}$	0.5817
$P'_{d,C'}$	0.2531
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4860
$P'_{i,h}$	0.7819

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0094
$\Delta P_{C,s}$	0.0041
$\Delta P_{F,e}$	-0.0007
$\Delta P_{g,F}$	-0.0015
$\Delta P_{i,g}$	-0.0048

Constants of Dispersion Formula	
B_1	1.15687082
B_2	0.064262544
B_3	0.872376139
C_1	0.00809424251
C_2	0.0386051284
C_3	104.7477300

Color Code	
λ_{80} / λ_5	33/30

Remarks	
lead containing glass type	

Constants of Formula for dn/dT	
D_0	4.86E-06
D_1	1.72E-08
D_2	-3.02E-11
E_0	3.82E-07
E_1	4.53E-10
λ_{TK} [μm]	0.260

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.4
T_g [°C]	459
T_{10}^{13} [°C]	453
$T_{10}^{7.6}$ [°C]	691
c_p [J/(g·K)]	0.770
λ [W/(m·K)]	1.120
ρ [g/cm ³]	2.52
E [10^3 N/mm ²]	65
μ	0.190
K [10^{-6} mm ² /N]	3.12
$HK_{0.1/20}$	470
HG	4
CR	1
FR	0
SR	1
AR	1
PR	1.2

Temperature Coefficients of the Refractive Index						
[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/+20	3.3	3.9	4.5	1.3	1.8	2.4
+20/+40	3.6	4.2	4.9	2.3	2.9	3.6
+60/+80	3.8	4.5	5.2	2.8	3.4	4.2

As of 01-Feb-2014 , subject to change

IGF Exhibit 1020