Datasheet

SCHOTT
glass made of ideas

N-FK51A
487845.368

n_d = 1.48656	ν_d = 84.47	$n_F - n_C$ = 0.005760
n_e = 1.48794	ν_e = 84.07	$n_{F'} - n_{C'}$ = 0.005804

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.46958
$n_{1970.1}$	1970.1	1.47271
$n_{1529.6}$	1529.6	1.47608
$n_{1060.0}$	1060.0	1.47959
n_t	1014.0	1.47999
n_s	852.1	1.48165
n_r	706.5	1.48379
n_C	656.3	1.48480
$n_{C'}$	643.8	1.48508
$n_{632.8}$	632.8	1.48534
n_D	589.3	1.48651
n_d	587.6	1.48656
n_e	546.1	1.48794
n_F	486.1	1.49056
$n_{F'}$	480.0	1.49088
n_g	435.8	1.49364
n_h	404.7	1.49618
n_i	365.0	1.50046
$n_{334.1}$	334.1	1.50501
$n_{312.6}$	312.6	1.50911
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	0.971247817
B_2	0.216901417
B_3	0.904651666
C_1	0.004723020
C_2	0.0153575612
C_3	168.68133000

Constants of Formula for dn/dT

D_0	-1.83E-05
D_1	-7.89E-09
D_2	-1.63E-12
E_0	3.74E-07
E_1	3.46E-10
λ_{TK} [µm]	0.150

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.89	0.75
2325	0.93	0.84
1970	0.996	0.989
1530	0.996	0.990
1060	0.998	0.994
700	0.998	0.995
660	0.998	0.995
620	0.998	0.996
580	0.999	0.997
546	0.999	0.997
500	0.998	0.996
460	0.997	0.993
436	0.997	0.992
420	0.997	0.992
405	0.997	0.993
400	0.997	0.993
390	0.997	0.992
380	0.995	0.988
370	0.990	0.976
365	0.985	0.963
350	0.95	0.88
334	0.83	0.63
320	0.62	0.30
310	0.43	0.12
300	0.26	0.04
290	0.14	0.01
280	0.06	
270		
260		
250		

Color Code

λ80 / λ5	34/28

Remarks

suitable for precision molding

step 0.5 available

Relative Partial Dispersion P

$P_{s,t}$	0.2879
$P_{C,s}$	0.5465
$P_{d,C}$	0.3062
$P_{e,d}$	0.2388
$P_{g,F}$	0.5359
$P_{i,h}$	0.7429

Relative Partial Dispersion P'

$P'_{s,t}$	0.2858
$P'_{C',s}$	0.5909
$P'_{d,C'}$	0.2554
$P'_{e,d}$	0.2370
$P'_{g,F'}$	0.4759
$P'_{i,h}$	0.7373

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

$\Delta P_{C,t}$	-0.1112
$\Delta P_{C,s}$	-0.0533
$\Delta P_{F,e}$	0.0110
$\Delta P_{g,F}$	0.0342
$\Delta P_{i,g}$	0.1675

Chemical Properties

CR	1
FR	0
SR	52.3
AR	2.2
PR	4.3
SR-J	3
WR-J	1

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	12.7
$\alpha_{+20/+300°C}$ [10^{-6}/K]	14.8
T_g [°C]	464
$T_{10^{13}}$ [°C]	463
$T_{10^{7.6}}$ [°C]	527
c_p [J/(g*K)]	0.690
λ [W/(m•K)]	0.760
AT [°C]	503
ρ [g/cm^3]	3.68
E [10^3 N/mm^2]	73
µ	0.302
K [10^{-6} mm^2/N]	0.63
$HK_{0.1/20}$	345
HG	6
Abrasion Aa	528

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	-4.9	-4.6	-4.3	-6.9	-6.6	-6.4
+20/+40	-6.0	-5.7	-5.3	-7.3	-7.0	-6.7
+60/+80	-6.5	-6.2	-5.8	-7.5	-7.2	-6.9