Data Sheet

SCHOTT

N-PSK53
620635.360

n_d = 1.62014	ν_d = 63.48	$n_F - n_C$ = 0.009769
n_e = 1.62247	ν_e = 63.19	$n_{F'} - n_{C'}$ = 0.009851

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.59216
$n_{1970.1}$	1970.1	1.59732
$n_{1529.6}$	1529.6	1.60280
$n_{1060.0}$	1060.0	1.60851
n_t	1014.0	1.60917
n_s	852.1	1.61191
n_r	706.5	1.61547
n_C	656.3	1.61717
$n_{C'}$	643.8	1.61764
$n_{632.8}$	632.8	1.61808
n_D	589.3	1.62005
n_d	587.6	1.62014
n_e	546.1	1.62247
n_F	486.1	1.62694
$n_{F'}$	480.0	1.62749
n_g	435.8	1.63223
n_h	404.7	1.63662
n_i	365.0	1.64409
$n_{334.1}$	334.1	1.65211
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.3434087
B_2	0.241417935
B_3	0.952896897
C_1	0.00675074317
C_2	0.0219910513
C_3	103.551457

Constants of Dispersion dn/dT

D_0	$-9.29 \cdot 10^{-6}$
D_1	$5.78 \cdot 10^{-9}$
D_2	$8.87 \cdot 10^{-13}$
E_0	$4.59 \cdot 10^{-7}$
E_1	$5.86 \cdot 10^{-10}$
λ_{TK} [µm]	0.155

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.609	0.290
2325	0.764	0.510
1970	0.915	0.800
1530	0.982	0.956
1060	0.998	0.994
700	0.998	0.994
660	0.997	0.993
620	0.997	0.992
580	0.998	0.994
546	0.998	0.995
500	0.997	0.992
460	0.994	0.986
436	0.993	0.982
420	0.992	0.979
405	0.988	0.970
400	0.985	0.964
390	0.976	0.940
380	0.959	0.900
370	0.928	0.830
365	0.905	0.780
350	0.776	0.530
334	0.525	0.200
320	0.230	0.030
310	0.061	
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	36/31
(*= λ_{70}/λ_5)	

Remarks

inquiry glass

Relative Partial Dispersion

$P_{s,t}$	0.2803
$P_{C,s}$	0.5384
$P_{d,C}$	0.3045
$P_{e,d}$	0.2385
$P_{g,F}$	0.5423
$P_{i,h}$	0.7641
$P'_{s,t}$	0.2779
$P'_{C',s}$	0.5820
$P'_{d,C'}$	0.2538
$P'_{e,d}$	0.2365
$P'_{g,F'}$	0.4814
$P'_{i,h}$	0.7577

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	-0.0274
$\Delta P_{C,s}$	-0.0125
$\Delta P_{F,e}$	0.0020
$\Delta P_{g,F}$	0.0053
$\Delta P_{i,g}$	0.0214

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.4
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.9
T_g [°C]	618
$T_{10^{13.0}}$ [°C]	606
$T_{10^{7.6}}$ [°C]	709
c_p [J/(g·K)]	
λ [W/(m·K)]	
ρ [g/cm^3]	3.60
E [10^3 N/mm^2]	78
µ	0.288
K [10^{-6} mm^2/N]	1.16
$HK_{0.1/20}$	440
HG	6
CR	2
FR	1
SR	52.3
AR	1.2
PR	4.3

Temperature Coefficients of 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	-2.5	-2.0	-1.5	-4.7	-4.2	-3.8
+20/ +40	-2.9	-2.3	-1.8	-4.3	-3.8	-3.2
+60/ +80	-3.0	-2.3	-1.7	-4.1	-3.4	-2.8