Data Sheet

SCHOTT

N-PSK53A
618634.357

$n_d = 1.61800$	$\nu_d = 63.39$	$n_F - n_C = 0.009749$
$n_e = 1.62033$	$\nu_e = 63.10$	$n_{F'} - n_{C'} = 0.009831$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.59015
$n_{1970.1}$	1970.1	1.59528
$n_{1529.6}$	1529.6	1.60073
$n_{1060.0}$	1060.0	1.60641
n_t	1014.0	1.60706
n_s	852.1	1.60979
n_r	706.5	1.61334
n_C	656.3	1.61503
$n_{C'}$	643.8	1.61550
$n_{632.8}$	632.8	1.61595
n_D	589.3	1.61791
n_d	587.6	1.61800
n_e	546.1	1.62033
n_F	486.1	1.62478
$n_{F'}$	480.0	1.62534
n_g	435.8	1.63007
n_h	404.7	1.63445
n_i	365.0	1.64190
$n_{334.1}$	334.1	1.64991
$n_{312.6}$	312.6	1.65724
$n_{296.7}$	296.7	1.66390
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.38121836
B_2	0.196745645
B_3	0.886089205
C_1	0.00706416337
C_2	0.0233251345
C_3	97.4847345

Constants of Dispersion dn/dT

D_0	$-9.28 \cdot 10^{-6}$
D_1	$7.19 \cdot 10^{-9}$
D_2	$1.45 \cdot 10^{-12}$
E_0	$4.06 \cdot 10^{-7}$
E_1	$3.17 \cdot 10^{-10}$
λ_{TK} [µm]	0.19

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

step 0.5 available

Relative Partial Dispersion

$P_{s,t}$	0.2797
$P_{C,s}$	0.5380
$P_{d,C}$	0.3044
$P_{e,d}$	0.2385
$P_{g,F}$	0.5424
$P_{i,h}$	0.7642
$P'_{s,t}$	0.2774
$P'_{C',s}$	0.5816
$P'_{d,C'}$	0.2538
$P'_{e,d}$	0.2365
$P'_{g,F'}$	0.4815
$P'_{i,h}$	0.7578

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

$\Delta P_{C,t}$	-0.0279
$\Delta P_{C,s}$	-0.0127
$\Delta P_{F,e}$	0.0020
$\Delta P_{g,F}$	0.0052
$\Delta P_{i,g}$	0.0208

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.6
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.8
T_g [°C]	606
$T_{10}^{13.0}$ [°C]	609
$T_{10}^{7.6}$ [°C]	699
c_p [J/(g·K)]	0.590
λ [W/(m·K)]	0.640
AT [°C]	647
ρ [g/cm^3]	3.57
E [10^3 N/mm^2]	76
µ	0.288
K [10^{-6} mm^2/N]	1.16
HK$_{0.1/20}$	415
HG	6
Abrasion Aa	284
CR	1
FR	1
SR	53.3
AR	2.3
PR	4.3
SR-J	5
WR-J	1

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	-2.6	-2.1	-1.6	-4.7	-4.3	-3.8
+20/ +40	-2.9	-2.4	-1.8	-4.3	-3.8	-3.3
+60/ +80	-2.9	-2.3	-1.8	-4.0	-3.5	-2.9