Data Sheet

SCHOTT

P-SF69
723292.293

$n_d = 1.72250$	$\nu_d = 29.23$	$n_F - n_C = 0.024718$
$n_e = 1.72883$	$\nu_e = 29.00$	$n_{F'} - n_{C'} = 0.025116$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.67440
$n_{1970.1}$	1970.1	1.68073
$n_{1529.6}$	1529.6	1.68797
$n_{1060.0}$	1060.0	1.69705
n_t	1014.0	1.69826
n_s	852.1	1.70367
n_r	706.5	1.71144
n_C	656.3	1.71535
$n_{C'}$	643.8	1.71647
$n_{632.8}$	632.8	1.71752
n_D	589.3	1.72229
n_d	587.6	1.72250
n_e	546.1	1.72833
n_F	486.1	1.74007
$n_{F'}$	480.0	1.74158
n_g	435.8	1.75502
n_h	404.7	1.76840
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.62594647
B_2	0.235927609
B_3	1.67434623
C_1	0.0121696677
C_2	0.0600710405
C_3	145.651908

Constants of Dispersion dn/dT

D_0	$-2.55 \cdot 10^{-6}$
D_1	$5.68 \cdot 10^{-9}$
D_2	$-2.85 \cdot 10^{-11}$
E_0	$9.50 \cdot 10^{-7}$
E_1	$1.54 \cdot 10^{-9}$
λ_{TK} [µm]	0.275

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.804	0.580
2325	0.857	0.680
1970	0.954	0.890
1530	0.993	0.983
1060	0.999	0.998
700	0.998	0.994
660	0.997	0.993
620	0.997	0.993
580	0.998	0.994
546	0.997	0.992
500	0.993	0.983
460	0.985	0.964
436	0.976	0.940
420	0.963	0.910
405	0.933	0.840
400	0.915	0.800
390	0.847	0.660
380	0.686	0.390
370	0.364	0.080
365	0.160	0.009
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	41/36
(*= λ_{70}/λ_5)	

Remarks

suitable for precision molding

Relative Partial Dispersion

$P_{s,t}$	0.2188
$P_{C,s}$	0.4727
$P_{d,C}$	0.2893
$P_{e,d}$	0.2360
$P_{g,F}$	0.6050
$P_{i,h}$	
$P'_{s,t}$	0.2153
$P'_{C',s}$	0.5096
$P'_{d,C'}$	0.2403
$P'_{e,d}$	0.2322
$P'_{g,F'}$	0.5352
$P'_{i,h}$	

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

$\Delta P_{C,t}$	0.0078
$\Delta P_{C,s}$	0.0016
$\Delta P_{F,e}$	0.0017
$\Delta P_{g,F}$	0.0104
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.0
$\alpha_{+20/+300°C}$ [10^{-6}/K]	11.1
T_g [°C]	508
$T_{10}^{13.0}$ [°C]	508
$T_{10}^{7.6}$ [°C]	602
c_p [J/(g·K)]	0.820
λ [W/(m·K)]	1.120
AT [°C]	547
ρ [g/cm^3]	2.93
E [10^3 N/mm^2]	96
µ	0.251
K [10^{-6} mm^2/N]	2.66
HK$_{0.1/20}$	612
HG	
CR	0
FR	0
SR	0
AR	0
PR	0
SR-J	1
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	0.9	2.5	4.6	-1.4	0.1	2.1
+20/ +40	0.6	2.6	5.2	-0.8	1.1	3.6
+60/ +80	0.5	2.8	5.6	-0.6	1.6	4.4