Data Sheet

SCHOTT

P-SF8
689313.290

$n_d = 1.68893$	$\nu_d = 31.25$	$n_F - n_C = 0.022046$
$n_e = 1.69414$	$\nu_e = 31.01$	$n_{F'} - n_{C'} = 0.022386$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.64480
$n_{1970.1}$	1970.1	1.65079
$n_{1529.6}$	1529.6	1.65760
$n_{1060.0}$	1060.0	1.66598
n_t	1014.0	1.66708
n_s	852.1	1.67200
n_r	706.5	1.67901
n_C	656.3	1.68252
$n_{C'}$	643.8	1.68353
$n_{632.8}$	632.8	1.68447
n_D	589.3	1.68874
n_d	587.6	1.68893
n_e	546.1	1.69414
n_F	486.1	1.70457
$n_{F'}$	480.0	1.70591
n_g	435.8	1.71778
n_h	404.7	1.72950
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	1.55370411
B_2	0.206332561
B_3	1.39708831
C_1	0.011658267
C_2	0.0582087757
C_3	130.748028

Constants of Dispersion dn/dT

D_0	$-4.27 \cdot 10^{-6}$
D_1	$8.16 \cdot 10^{-9}$
D_2	$-2.00 \cdot 10^{-11}$
E_0	$9.02 \cdot 10^{-7}$
E_1	$1.22 \cdot 10^{-9}$
λ_{TK} [µm]	0.272

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.727	0.450
2325	0.799	0.570
1970	0.937	0.850
1530	0.991	0.977
1060	0.999	0.997
700	0.995	0.988
660	0.994	0.984
620	0.994	0.984
580	0.995	0.987
546	0.994	0.986
500	0.989	0.972
460	0.980	0.950
436	0.971	0.930
420	0.959	0.900
405	0.937	0.850
400	0.924	0.820
390	0.872	0.710
380	0.746	0.480
370	0.468	0.150
365	0.260	0.040
350	0.001	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	40/36
(*= λ_{70}/λ_5)	

Remarks

suitable for precision molding

Relative Partial Dispersion

$P_{s,t}$	0.2229
$P_{C,s}$	0.4776
$P_{d,C}$	0.2905
$P_{e,d}$	0.2362
$P_{g,F}$	0.5991
$P_{i,h}$	
$P'_{s,t}$	0.2195
$P'_{C',s}$	0.5150
$P'_{d,C'}$	0.2414
$P'_{e,d}$	0.2326
$P'_{g,F'}$	0.5301
$P'_{i,h}$	

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

$\Delta P_{C,t}$	0.0072
$\Delta P_{C,s}$	0.0018
$\Delta P_{F,e}$	0.0013
$\Delta P_{g,F}$	0.0079
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.4
$\alpha_{+20/+300°C}$ [10^{-6}/K]	11.1
T_g [°C]	524
$T_{10}^{13.0}$ [°C]	531
$T_{10}^{7.6}$ [°C]	629
c_p [J/(g·K)]	0.790
λ [W/(m·K)]	1.020
AT [°C]	580
ρ [g/cm^3]	2.90
E [10^3 N/mm^2]	86
μ	0.253
K [10^{-6} mm^2/N]	2.73
$HK_{0.1/20}$	533
HG	
Abrasion Aa	200
CR	1
FR	0
SR	1
AR	1.2
PR	1
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	-0.2	1.3	3.2	-2.4	-1.0	0.8
+20/ +40	-0.3	1.5	3.7	-1.7	0.0	2.2
+60/ +80	-0.3	1.7	4.1	-1.4	0.5	3.0