Data Sheet

SCHOTT

P-PK53
527662.283

$n_d = 1.52690$	$\nu_d = 66.22$	$n_F - n_C = 0.007957$
$n_e = 1.52880$	$\nu_e = 65.92$	$n_{F'} - n_{C'} = 0.008022$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	
$n_{1970.1}$	1970.1	1.50808
$n_{1529.6}$	1529.6	1.51265
$n_{1060.0}$	1060.0	1.51738
n_t	1014.0	1.51792
n_s	852.1	1.52017
n_r	706.5	1.52309
n_C	656.3	1.52447
$n_{C'}$	643.8	1.52486
$n_{632.8}$	632.8	1.52522
n_D	589.3	1.52683
n_d	587.6	1.52690
n_e	546.1	1.52880
n_F	486.1	1.53243
$n_{F'}$	480.0	1.53288
n_g	435.8	1.53673
n_h	404.7	1.54029
n_i	365.0	1.54633
$n_{334.1}$	334.1	1.55280
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	0.960316767
B_2	0.340437227
B_3	0.777865595
C_1	0.00531032986
C_2	0.0175073434
C_3	106.87533

Constants of Dispersion dn/dT

D_0	$-1.65 \cdot 10^{-5}$
D_1	$-5.14 \cdot 10^{-10}$
D_2	$-2.02 \cdot 10^{-11}$
E_0	$4.11 \cdot 10^{-7}$
E_1	$4.17 \cdot 10^{-10}$
λ_{TK} [µm]	0.208

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.468	0.150
2325	0.574	0.250
1970	0.787	0.550
1530	0.981	0.954
1060	0.998	0.994
700	0.997	0.992
660	0.997	0.992
620	0.998	0.994
580	0.998	0.996
546	0.999	0.997
500	0.998	0.995
460	0.996	0.990
436	0.995	0.987
420	0.994	0.985
405	0.994	0.985
400	0.994	0.985
390	0.990	0.976
380	0.980	0.950
370	0.959	0.900
365	0.941	0.860
350	0.815	0.600
334	0.515	0.190
320	0.181	0.010
310	0.039	
300	0.003	
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	36/31
(*= λ_{70}/λ_5)	

Remarks

inquiry glass, suitable for precision molding

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	-4.9	-4.5	-4.1	-7.0	-6.6	-6.2
+20/ +40	-5.6	-5.2	-4.7	-6.9	-6.5	-6.1
+60/ +80	-6.0	-5.5	-5.0	-7.0	-6.5	-6.0

Relative Partial Dispersion

$P_{s,t}$	0.2829
$P_{C,s}$	0.5408
$P_{d,C}$	0.3049
$P_{e,d}$	0.2386
$P_{g,F}$	0.5408
$P_{i,h}$	0.7592
$P'_{s,t}$	0.2806
$P'_{C',s}$	0.5846
$P'_{d,C'}$	0.2542
$P'_{e,d}$	0.2366
$P'_{g,F'}$	0.4802
$P'_{i,h}$	0.7530

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

$\Delta P_{C,t}$	-0.0354
$\Delta P_{C,s}$	-0.0165
$\Delta P_{F,e}$	0.0030
$\Delta P_{g,F}$	0.0084
$\Delta P_{i,g}$	0.0375

Other Properties

$\alpha_{-30/+70°C}[10^{-6}/K]$	13.3
$\alpha_{+20/+300°C}[10^{-6}/K]$	16.0
T_g[°C]	383
$T_{10}^{13.0}$[°C]	390
$T_{10}^{7.6}$[°C]	453
c_p[J/(g·K)]	0.770
λ [W/(m·K)]	0.640
ρ [g/cm^3]	2.83
E[10^3 N/mm^2]	59
μ	0.271
K[10^{-6} mm^2/N]	2.06
HK$_{0.1/20}$	335
HG	6
CR	2
FR	1
SR	51
AR	4.3
PR	4.3