Data Sheet

SCHOTT

N-FK5
487704.245

$n_d = 1.48749$	$\nu_d = 70.41$	$n_F - n_C = 0.006924$
$n_e = 1.48914$	$\nu_e = 70.23$	$n_{F'} - n_{C'} = 0.006965$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.46181
$n_{1970.1}$	1970.1	1.46738
$n_{1529.6}$	1529.6	1.47312
$n_{1060.0}$	1060.0	1.47855
n_t	1014.0	1.47912
n_s	852.1	1.48137
n_r	706.5	1.48410
n_C	656.3	1.48535
$n_{C'}$	643.8	1.48569
$n_{632.8}$	632.8	1.48601
n_D	589.3	1.48743
n_d	587.6	1.48749
n_e	546.1	1.48914
n_F	486.1	1.49227
$n_{F'}$	480.0	1.49266
n_g	435.8	1.49593
n_h	404.7	1.49894
n_i	365.0	1.50401
$n_{334.1}$	334.1	1.50939
$n_{312.6}$	312.6	1.51428
$n_{296.7}$	296.7	1.51867
$n_{280.4}$	280.4	1.52415
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	0.844309338
B_2	0.344147824
B_3	0.910790213
C_1	0.00475111955
C_2	0.0149814849
C_3	97.8600293

Constants of Dispersion dn/dT

D_0	$-7.24 \cdot 10^{-6}$
D_1	$1.58 \cdot 10^{-8}$
D_2	$-9.51 \cdot 10^{-12}$
E_0	$3.51 \cdot 10^{-7}$
E_1	$4.61 \cdot 10^{-10}$
λ_{TK} [µm]	0.156

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.679	0.380
2325	0.831	0.630
1970	0.971	0.930
1530	0.986	0.965
1060	0.999	0.998
700	0.998	0.996
660	0.998	0.994
620	0.997	0.993
580	0.998	0.994
546	0.998	0.994
500	0.997	0.993
460	0.997	0.993
436	0.997	0.993
420	0.997	0.993
405	0.998	0.994
400	0.998	0.994
390	0.998	0.994
380	0.996	0.990
370	0.997	0.992
365	0.997	0.992
350	0.995	0.987
334	0.989	0.972
320	0.971	0.930
310	0.941	0.860
300	0.867	0.700
290	0.693	0.400
280	0.397	0.110
270	0.070	
260		
250		

Color Code

λ_{80}/λ_5	30/27
(*= λ_{70}/λ_5)	

Remarks

suitable for precision molding

Relative Partial Dispersion

$P_{s,t}$	0.3252
$P_{C,s}$	0.5740
$P_{d,C}$	0.3097
$P_{e,d}$	0.2388
$P_{g,F}$	0.5290
$P_{i,h}$	0.7319
$P'_{s,t}$	0.3232
$P'_{C',s}$	0.6201
$P'_{d,C'}$	0.2584
$P'_{e,d}$	0.2374
$P'_{g,F'}$	0.4704
$P'_{i,h}$	0.7276

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

$\Delta P_{C,t}$	0.0202
$\Delta P_{C,s}$	0.0070
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	0.0036
$\Delta P_{i,g}$	0.0322

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.2
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.0
T_g [°C]	466
$T_{10}^{13.0}$ [°C]	469
$T_{10}^{7.6}$ [°C]	672
c_p [J/(g·K)]	0.808
λ [W/(m·K)]	0.925
AT [°C]	557
ρ [g/cm^3]	2.45
E [10^3 N/mm^2]	62
µ	0.232
K [10^{-6} mm^2/N]	2.91
$HK_{0.1/20}$	520
HG	3
HG-J	109
B	1
CR	2
FR	1
SR	4
AR	2
PR	2.3
SR-J	5
WR-J	4

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	-1.5	-1.2	-0.9	-3.5	-3.2	-2.9
+20/ +40	-1.4	-1.0	-0.6	-2.6	-2.3	-2.0
+60/ +80	-1.2	-0.7	-0.3	-2.2	-1.8	-1.4