Data Sheet

SCHOTT

FK5HTi
487705.245

$n_d = 1.48748$	$\nu_d = 70.47$	$n_F - n_C = 0.006918$
$n_e = 1.48913$	$\nu_e = 70.29$	$n_{F'} - n_{C'} = 0.006959$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.46180
$n_{1970.1}$	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	1.48409
n_C	656.3	1.48534
$n_{C'}$	643.8	1.48568
$n_{632.8}$	632.8	1.48600
n_D	589.3	1.48742
n_d	587.6	1.48748
n_e	546.1	1.48913
n_F	486.1	1.49225
$n_{F'}$	480.0	1.49264
n_g	435.8	1.49591
n_h	404.7	1.49892
n_i	365.0	1.50398
$n_{334.1}$	334.1	1.50935
$n_{312.6}$	312.6	1.51423
$n_{296.7}$	296.7	1.51861
$n_{280.4}$	280.4	1.52409
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	0.90936218
B_2	0.279077054
B_3	0.891813298
C_1	0.0052014247
C_2	0.0158938446
C_3	95.9109448

Constants of Dispersion dn/dT

D_0	$-7.47 \cdot 10^{-6}$
D_1	$1.58 \cdot 10^{-8}$
D_2	$-1.23 \cdot 10^{-11}$
E_0	$3.58 \cdot 10^{-7}$
E_1	$4.03 \cdot 10^{-10}$
λ_{TK} [µm]	0.164

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.683	0.385
2325	0.830	0.628
1970	0.971	0.930
1530	0.986	0.965
1060	0.999	0.998
700	0.999	0.997
660	0.998	0.995
620	0.998	0.994
580	0.998	0.995
546	0.998	0.995
500	0.998	0.994
460	0.998	0.995
436	0.998	0.996
420	0.999	0.997
405	0.999	0.997
400	0.999	0.997
390	0.999	0.997
380	0.998	0.996
370	0.999	0.996
365	0.998	0.996
350	0.998	0.994
334	0.996	0.989
320	0.992	0.979
310	0.983	0.958
300	0.959	0.900
290	0.896	0.760
280	0.764	0.510
270	0.546	0.220
260	0.302	0.050
250	0.120	0.002

Color Code

λ_{80}/λ_5	29/25
(*= λ_{70}/λ_5)	

Remarks

i-line glass

Relative Partial Dispersion

$P_{s,t}$	0.3253
$P_{C,s}$	0.5742
$P_{d,C}$	0.3098
$P_{e,d}$	0.2388
$P_{g,F}$	0.5288
$P_{i,h}$	0.7315
$P'_{s,t}$	0.3234
$P'_{C',s}$	0.6203
$P'_{d,C'}$	0.2584
$P'_{e,d}$	0.2374
$P'_{g,F'}$	0.4703
$P'_{i,h}$	0.7271

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
$\Delta P_{i,g}$	0.0321

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
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	
CR	2
FR	1
SR	4
AR	2
PR	2.3

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	-1.6	-1.2	-0.9	-3.6	-3.3	-3.0
+20/ +40	-1.5	-1.1	-0.7	-2.7	-2.4	-2.0
+60/ +80	-1.3	-0.8	-0.4	-2.3	-1.8	-1.5