Datasheet

SCHOTT
glass made of ideas

N-KZFS4HT
613445.300

n_d = 1.61336	ν_d = 44.49	$n_F - n_C$ = 0.013785
n_e = 1.61664	ν_e = 44.27	$n_{F'} - n_{C'}$ = 0.013929

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.57535
$n_{1970.1}$	1970.1	1.58233
$n_{1529.6}$	1529.6	1.58971
$n_{1060.0}$	1060.0	1.59739
n_t	1014.0	1.59828
n_s	852.1	1.60199
n_r	706.5	1.60688
n_C	656.3	1.60922
$n_{C'}$	643.8	1.60987
$n_{632.8}$	632.8	1.61049
n_D	589.3	1.61324
n_d	587.6	1.61336
n_e	546.1	1.61664
n_F	486.1	1.62300
$n_{F'}$	480.0	1.62380
n_g	435.8	1.63071
n_h	404.7	1.63723
n_i	365.0	1.64865
$n_{334.1}$	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	1.350554240
B_2	0.197575506
B_3	1.099629920
C_1	0.008762821
C_2	0.0371767201
C_3	90.38669940

Constants of Formula for dn/dT

D_0	1.81E-06
D_1	1.16E-08
D_2	-7.99E-12
E_0	6.20E-07
E_1	7.94E-10
λ_{TK} [µm]	0.205

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.510	0.190
2325	0.750	0.490
1970	0.951	0.880
1530	0.984	0.961
1060	0.999	0.999
700	0.998	0.994
660	0.997	0.993
620	0.997	0.992
580	0.997	0.993
546	0.997	0.993
500	0.995	0.988
460	0.992	0.980
436	0.990	0.975
420	0.988	0.971
405	0.986	0.966
400	0.985	0.962
390	0.980	0.951
380	0.973	0.930
370	0.959	0.900
365	0.950	0.870
350	0.870	0.700
334	0.550	0.220
320	0.060	0.000
310		
300		
290		
280		
270		
260		
250		

Color Code

λ80 / λ5	36/32

Remarks

suitable for precision molding

step 0.5 available

Relative Partial Dispersion P

$P_{s,t}$	0.2694
$P_{C,s}$	0.5240
$P_{d,C}$	0.3006
$P_{e,d}$	0.2378
$P_{g,F}$	0.5590
$P_{i,h}$	0.8284

Relative Partial Dispersion P'

$P'_{s,t}$	0.2666
$P'_{C',s}$	0.5657
$P'_{d,C'}$	0.2503
$P'_{e,d}$	0.2353
$P'_{g,F'}$	0.4958
$P'_{i,h}$	0.8199

Deviation of Rel. Partial Disp. ΔP from the normal line

$\Delta P_{C,t}$	0.0373
$\Delta P_{C,s}$	0.0173
$\Delta P_{F,e}$	-0.0033
$\Delta P_{g,F}$	-0.0100
$\Delta P_{i,g}$	-0.0496

Chemical Properties

CR	1
FR	1
SR	3.4
AR	1.2
PR	1
SR-J	6
WR-J	4

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.3
$\alpha_{+20/+300°C}$ [10^{-6}/K]	8.2
T_g [°C]	536
$T_{10^{13}}$ [°C]	541
$T_{10^{7.6}}$ [°C]	664
c_p [J/(g*K)]	0.760
λ [W/(m•K)]	0.840
AT [°C]	597
ρ [g/cm^3]	3.00
E [10^3 N/mm^2]	78
µ	0.241
K [10^{-6} mm^2/N]	3.90
$HK_{0.1/20}$	520
HG	3
Abrasion Aa	130

Temperature Coefficients of the 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	2.7	3.5	4.4	0.5	1.3	2.2
+20/+40	2.7	3.7	4.7	1.3	2.3	3.2
+60/+80	2.8	3.9	5.0	1.7	2.8	3.9