KNIGHT OPTICAL
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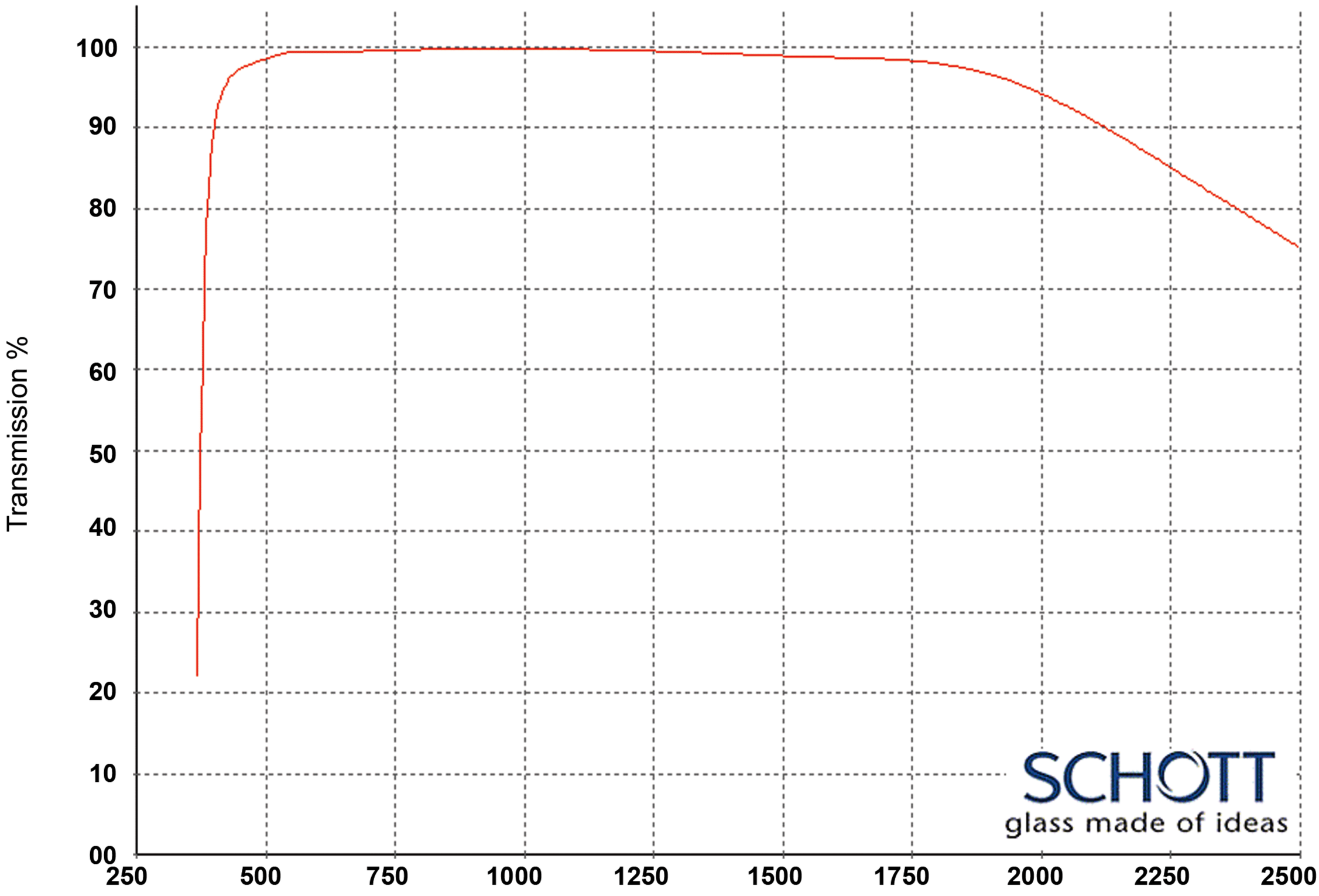
Title: Optical Glasses - 250-2500nm
Material: SCHOTT N-SF8 for 250nm - 2500 transmission
Range: OPG - N-SF8



Internal transmittance for 10mm thickness

WAVELENGTH	BASF51 (T%)
2500 nm	0.750
2325 nm	0.820
1970 nm	0.950
1530 nm	0.988
1060 nm	0.997
700 nm	0.995
660 nm	0.993
620 nm	0.993
580 nm	0.994
546 nm	0.993
500 nm	0.985
460 nm	0.976
436 nm	0.965
420 nm	0.950
405 nm	0.920
400 nm	0.900
390 nm	0.830
380 nm	0.670
370 nm	0.350
365 nm	0.160
350 nm	0.000
334 nm	0.000
320 nm	0.000
310 nm	0.000
300 nm	0.000
290 nm	0.000
280 nm	0.000
270 nm	0.000
260 nm	0.000
250 nm	0.000

SCHOTT
glass made of ideas

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.64448
$n_{1970.1}$	1970.1	1.65060
$n_{1529.6}$	1529.6	1.65753
$n_{1060.0}$	1060.0	1.66600
n_t	1014.0	1.66711
n_s	852.1	1.67203
n_r	706.5	1.67904
n_C	656.3	1.68254
$n_{C'}$	643.8	1.68354
$n_{632.8}$	632.8	1.68448
n_D	589.3	1.68874
n_d	587.6	1.68894
n_e	546.1	1.69413
n_F	486.1	1.70455
$n_{F'}$	480.0	1.70589
n_g	435.8	1.71775
n_h	404.7	1.72948
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	$1.55075812 \cdot 10^{+00}$
B_2	$2.09816918 \cdot 10^{-01}$
B_3	$1.46205491 \cdot 10^{+00}$
C_1	$1.14338344 \cdot 10^{-02}$
C_2	$5.82725652 \cdot 10^{-02}$
C_3	$1.33241650 \cdot 10^{+02}$

Constants of Formula dn/dT	
D_0	$-1.93 \cdot 10^{-06}$
D_1	$9.69 \cdot 10^{-09}$
D_2	$-2.34 \cdot 10^{-11}$
E_0	$8.31 \cdot 10^{-07}$
E_1	$1.15 \cdot 10^{-09}$
λ_{TK}[µm]	0.277

Internal Transmittance τ_i		
λ [nm]	τ_i [10 mm]	τ_i [25 mm]
2500	0.75	0.48
2325	0.82	0.60
1970	0.950	0.87
1530	0.988	0.970
1060	0.997	0.993
700	0.995	0.987
660	0.993	0.983
620	0.993	0.983
580	0.994	0.986
546	0.993	0.983
500	0.985	0.963
460	0.976	0.940
436	0.965	0.910
420	0.950	0.88
405	0.920	0.81
400	0.900	0.77
390	0.83	0.63
380	0.67	0.37
370	0.35	0.07
365	0.16	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
λ_{80}/λ_5	41/36

Remarks	

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	1.0	2.4	4.2	-1.3	0.1	1.8
+20/+40	0.9	2.6	4.8	-0.5	1.2	3.3
+60/+80	1.0	2.9	5.3	-0.1	1.7	4.1

Relative Partial Dispersion	
$P_{s.t}$	0.2236
$P_{C.s}$	0.4778
$P_{d.C}$	0.2905
$P_{e.d}$	0.2362
$P_{g.F}$	0.5999
$P_{i.h}$	
$P'_{s.t}$	0.2202
$P'_{C'.s}$	0.5152
$P'_{d.C'}$	0.2413
$P'_{e.d}$	0.2326
$P'_{g.F'}$	0.5308
$P'_{i.h}$	

Deviation of Rel. Partial Dispersion ΔP from "Normal Line"	
$\Delta P_{C.t}$	0.0080
$\Delta P_{C.s}$	0.0019
$\Delta P_{F.e}$	0.0014
$\Delta P_{g.F}$	0.0087
$\Delta P_{i.g}$	

Other Properties	
$\alpha_{-30/+70°C}[10^{-6}/K]$	8.6
$\alpha_{+20/+300°C}[10^{-6}/K]$	9.9
Tg[°C]	567
$T_{10}^{13.0}$[°C]	564
$T_{10}^{7.6}$[°C]	678
c_p[J/(g·K)]	0.770
λ[W/(m·K)]	1.030
ρ[g/cm³]	2.90
E[10^3N/mm²]	88
µ	0.245
K[10^{-6}mm²/N]	2.95
$HK_{0.1/20}$	600
HG	4
B	1
CR	1
FR	0
SR	1
AR	1
PR	1

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