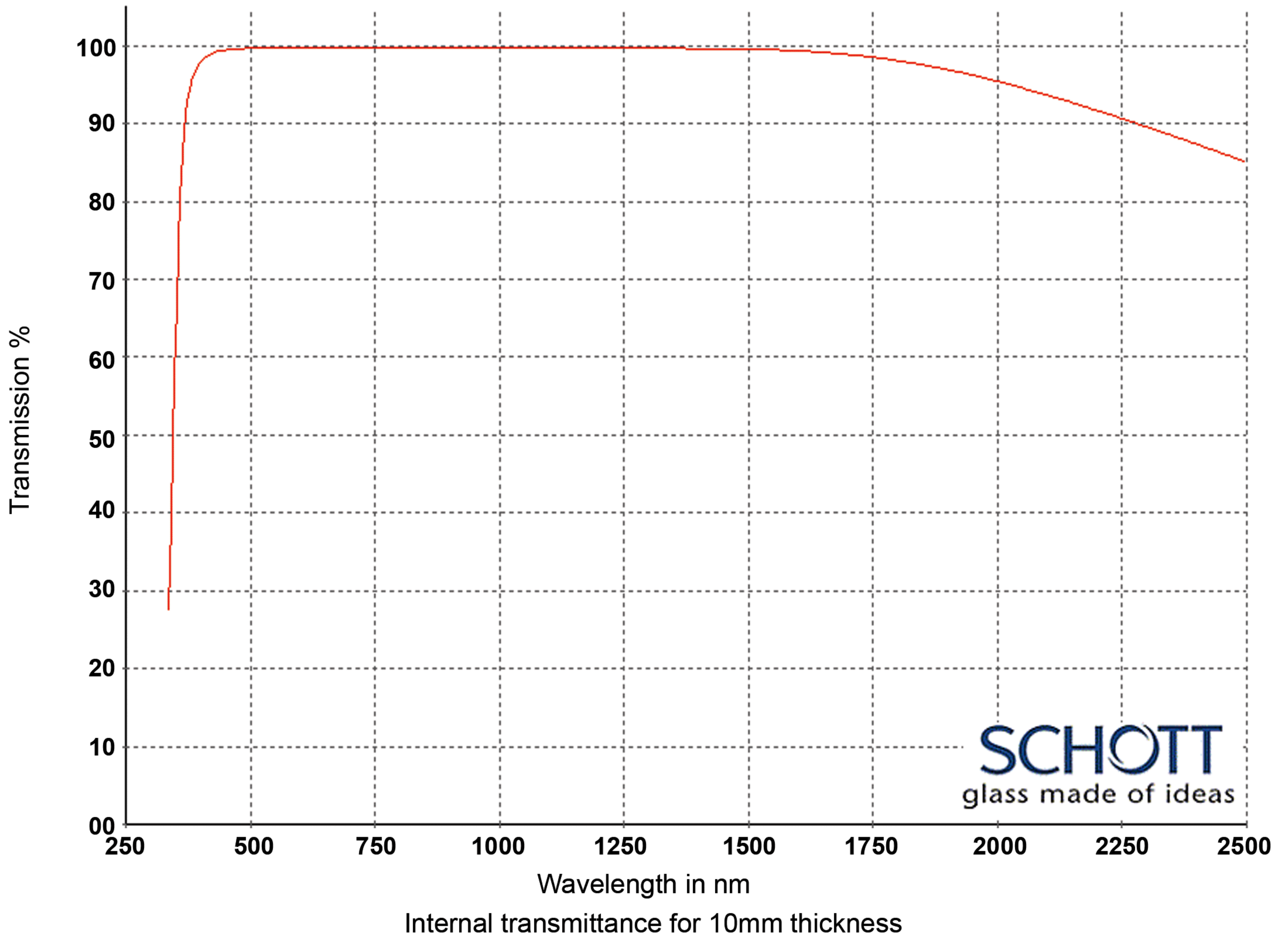




KNIGHT OPTICAL

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Title: Optical Glasses - 250-2500nm  
Material: SCHOTT SF5 for 250nm - 2500 transmission  
Range: OPG - SF5



WAVELENGTH	BASF51 (T%)
2500 nm	0.850
2325 nm	0.890
1970 nm	0.959
1530 nm	0.995
1060 nm	0.998
700 nm	0.998
660 nm	0.998
620 nm	0.998
580 nm	0.998
546 nm	0.998
500 nm	0.997
460 nm	0.995
436 nm	0.993
420 nm	0.989
405 nm	0.983
400 nm	0.980
390 nm	0.967
380 nm	0.950
370 nm	0.910
365 nm	0.880
350 nm	0.630
334 nm	0.200
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

### Refractive Indices

	$\lambda$ [nm]	
$n_{2325.4}$	2325.4	1.63289
$n_{1970.1}$	1970.1	1.63785
$n_{1529.6}$	1529.6	1.64359
$n_{1060.0}$	1060.0	1.65104
$n_t$	1014.0	1.65206
$n_s$	852.1	1.65664
$n_r$	706.5	1.66327
$n_C$	656.3	1.66661
$n_{C'}$	643.8	1.66756
$n_{632.8}$	632.8	1.66846
$n_D$	589.3	1.67252
$n_d$	587.6	1.67270
$n_e$	546.1	1.67764
$n_F$	486.1	1.68750
$n_{F'}$	480.0	1.68876
$n_g$	435.8	1.69986
$n_h$	404.7	1.71069
$n_i$	365.0	1.73056
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

### Internal Transmittance $\tau_i$

$\lambda$ [nm]	$\tau_i$ [10 mm]	$\tau_i$ [25 mm]
2500	0.85	0.66
2325	0.89	0.74
1970	0.959	0.900
1530	0.995	0.987
1060	0.998	0.996
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.996
546	0.998	0.996
500	0.997	0.993
460	0.995	0.988
436	0.993	0.982
420	0.989	0.973
405	0.983	0.959
400	0.980	0.950
390	0.967	0.920
380	0.950	0.88
370	0.910	0.80
365	0.88	0.73
350	0.63	0.31
334	0.20	
320		
310		
300		
290		
280		
270		
260		
250		

### Relative Partial Dispersion

$P_{s,t}$	0.2194
$P_{C,s}$	0.4775
$P_{d,C}$	0.2915
$P_{e,d}$	0.2366
$P_{g,F}$	0.5919
$P_{i,h}$	0.9513
$P'_{s,t}$	0.2162
$P'_{C's}$	0.5153
$P'_{d,C'}$	0.2423
$P'_{e,d}$	0.2331
$P'_{g,F'}$	0.5237
$P'_{i,h}$	0.9374

### Deviation of Rel. Partial Dispersion

#### $\Delta P$ from "Normal Line"

$\Delta P_{C,t}$	-0.0010
$\Delta P_{C,s}$	-0.0005
$\Delta P_{F,e}$	0.0005
$\Delta P_{g,F}$	0.0023
$\Delta P_{i,g}$	0.0160

### Constants of Dispersion Formula

$B_1$	$1.46141885 \cdot 10^{+00}$
$B_2$	$2.47713019 \cdot 10^{-01}$
$B_3$	$9.49995832 \cdot 10^{-01}$
$C_1$	$1.11826126 \cdot 10^{-02}$
$C_2$	$5.08594669 \cdot 10^{-02}$
$C_3$	$1.12041888 \cdot 10^{+02}$

### Constants of Formula $dn/dT$

$D_0$	$2.59 \cdot 10^{-06}$
$D_1$	$1.76 \cdot 10^{-08}$
$D_2$	$-2.03 \cdot 10^{-11}$
$E_0$	$1.17 \cdot 10^{-06}$
$E_1$	$1.09 \cdot 10^{-09}$
$\lambda_{TK}[\mu m]$	0.255

### Color Code

$\lambda_{80}/\lambda_5$	37/33
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### Remarks


### Temperature Coefficients of Refractive Index

[°C]	$\Delta n_{rel}/\Delta T [10^{-6}/K]$			$\Delta n_{abs}/\Delta T [10^{-6}/K]$		
	1060.0	e	g	1060.0	e	g
-40/-20	3.1	5.1	7.4	0.9	2.8	5.1
+20/+40	3.5	5.8	8.4	2.1	4.4	6.9
+60/+80	3.9	6.4	9.2	2.8	5.2	8.0

### Other Properties

$\alpha_{-30/+70^\circ C} [10^{-6}/K]$	8.2
$\alpha_{+20/+300^\circ C} [10^{-6}/K]$	9.0
Tg[°C]	425
$T_{10}^{13.0} [^\circ C]$	421
$T_{10}^{7.6} [^\circ C]$	580
$c_p [J/(g \cdot K)]$	
$\lambda [W/(m \cdot K)]$	
$\rho [g/cm^3]$	4.07
$E [10^3 N/mm^2]$	56
$\mu$	0.233
$K [10^{-6} mm^2/N]$	2.28
HK <sub>0.1/20</sub>	410
HG	2
B	1
CR	1
FR	1
SR	2
AR	2.3
PR	3