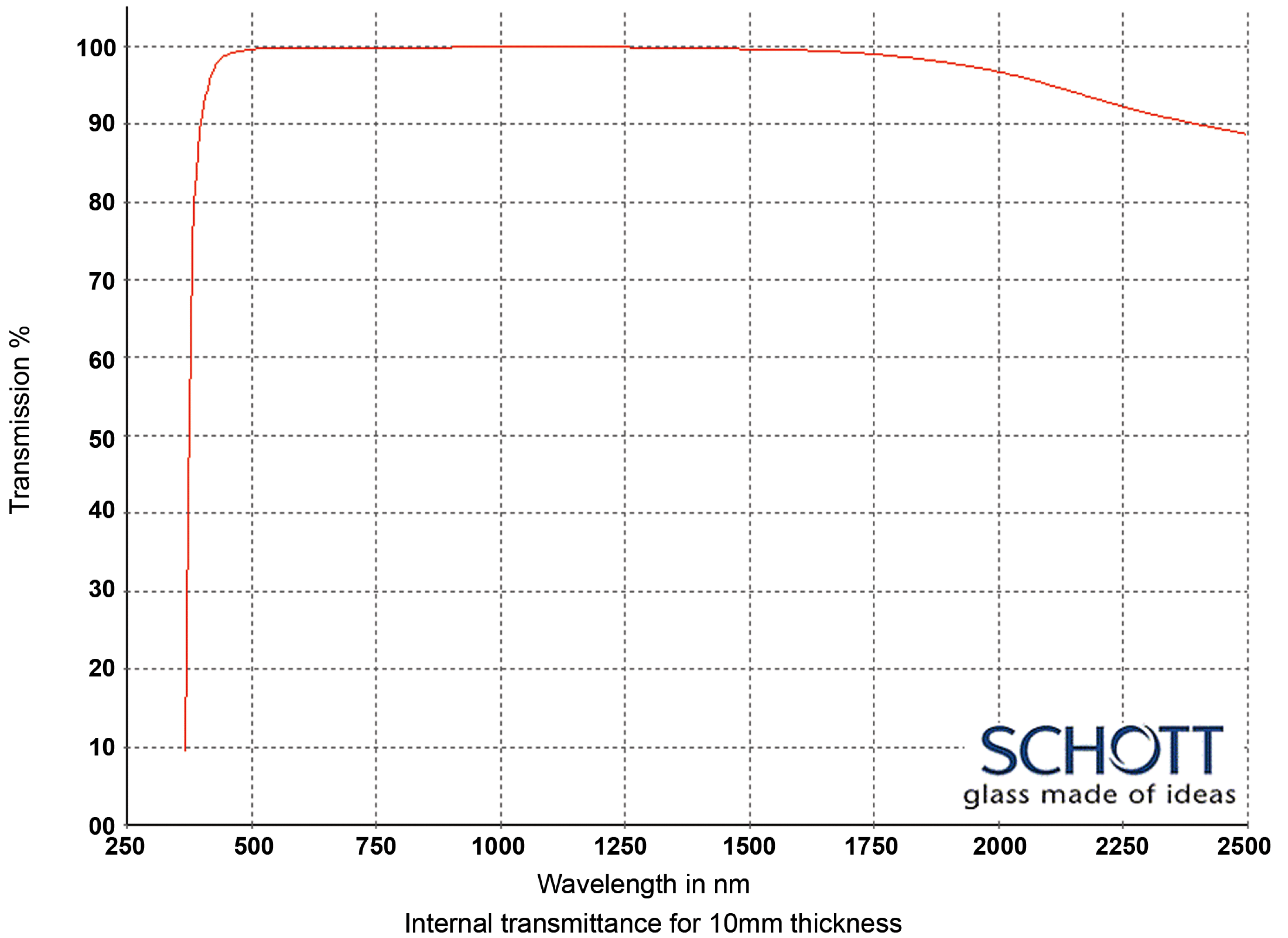




KNIGHT OPTICAL

Tel: +44 (0)1622 859444  
Fax: +44 (0)1622 859555  
info@knightoptical.co.uk  
www.knightoptical.co.uk

Title: Optical Glasses - 250-2500nm  
Material: SCHOTT SF6 for 250nm - 2500 transmission  
Range: OPG - SF6



**SCHOTT**  
glass made of ideas

WAVELENGTH	BASF51 (T%)
2500 nm	0.887
2325 nm	0.910
1970 nm	0.971
1530 nm	0.996
1060 nm	0.999
700 nm	0.998
660 nm	0.998
620 nm	0.998
580 nm	0.998
546 nm	0.998
500 nm	0.996
460 nm	0.991
436 nm	0.982
420 nm	0.963
405 nm	0.928
400 nm	0.910
390 nm	0.842
380 nm	0.700
370 nm	0.220
365 nm	0.050
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

### Refractive Indices

	$\lambda$ [nm]	
$n_{2325.4}$	2325.4	1.75302
$n_{1970.1}$	1970.1	1.75813
$n_{1529.6}$	1529.6	1.76444
$n_{1060.0}$	1060.0	1.77380
$n_t$	1014.0	1.77517
$n_s$	852.1	1.78157
$n_r$	706.5	1.79117
$n_C$	656.3	1.79609
$n_{C'}$	643.8	1.79750
$n_{632.8}$	632.8	1.79884
$n_D$	589.3	1.80491
$n_d$	587.6	1.80518
$n_e$	546.1	1.81265
$n_F$	486.1	1.82775
$n_{F'}$	480.0	1.82970
$n_g$	435.8	1.84707
$n_h$	404.7	1.86436
$n_i$	365.0	1.89703
$n_{334.1}$	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

$B_1$	$1.72448482 \cdot 10^{+00}$
$B_2$	$3.90104889 \cdot 10^{-01}$
$B_3$	$1.04572858 \cdot 10^{+00}$
$C_1$	$1.34871947 \cdot 10^{-02}$
$C_2$	$5.69318095 \cdot 10^{-02}$
$C_3$	$1.18557185 \cdot 10^{+02}$

### Constants of Formula $dn/dT$

$D_0$	$6.69 \cdot 10^{-06}$
$D_1$	$1.78 \cdot 10^{-08}$
$D_2$	$-3.36 \cdot 10^{-11}$
$E_0$	$1.77 \cdot 10^{-06}$
$E_1$	$1.70 \cdot 10^{-09}$
$\lambda_{TK}[\mu m]$	0.269

### 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	6.1	9.9	14.5	3.7	7.4	11.9
+20/+40	6.8	11.1	16.2	5.3	9.5	14.6
+60/+80	7.3	11.8	17.4	6.1	10.6	16.1

### Internal Transmittance $\tau_i$

$\lambda$ [nm]	$\tau_i$ [10 mm]	$\tau_i$ [25 mm]
2500	0.89	0.74
2325	0.910	0.79
1970	0.971	0.930
1530	0.996	0.990
1060	0.999	0.998
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.996
546	0.998	0.995
500	0.996	0.991
460	0.991	0.978
436	0.982	0.955
420	0.963	0.910
405	0.928	0.83
400	0.910	0.79
390	0.84	0.65
380	0.70	0.42
370	0.22	0.02
365	0.05	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

### Color Code

$\lambda_{80}/\lambda_5$	42/37
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### Remarks


### Relative Partial Dispersion

$P_{s,t}$	0.2020
$P_{C,s}$	0.4588
$P_{d,C}$	0.2871
$P_{e,d}$	0.2359
$P_{g,F}$	0.6102
$P_{i,h}$	1.0316
$P'_{s,t}$	0.1986
$P'_{C's}$	0.4950
$P'_{d,C'}$	0.2384
$P'_{e,d}$	0.2319
$P'_{g,F'}$	0.5393
$P'_{i,h}$	1.0143

### Deviation of Rel. Partial Dispersion

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

$\Delta P_{C,t}$	-0.0048
$\Delta P_{C,s}$	-0.0033
$\Delta P_{F,e}$	0.0020
$\Delta P_{g,F}$	0.0092
$\Delta P_{i,g}$	0.0669

### Other Properties

$\alpha_{-30/+70^\circ C} [10^{-6}/K]$	8.1
$\alpha_{+20/+300^\circ C} [10^{-6}/K]$	9.0
Tg[°C]	423
$T_{10}^{13.0} [^\circ C]$	410
$T_{10}^{7.6} [^\circ C]$	538
$c_p [J/(g \cdot K)]$	0.389
$\lambda [W/(m \cdot K)]$	0.673
$\rho [g/cm^3]$	5.18
$E [10^3 N/mm^2]$	55
$\mu$	0.244
$K [10^{-6} mm^2/N]$	0.65
HK <sub>0.1/20</sub>	370
HG	
B	0
CR	2
FR	3
SR	51.3
AR	2.3
PR	3.3