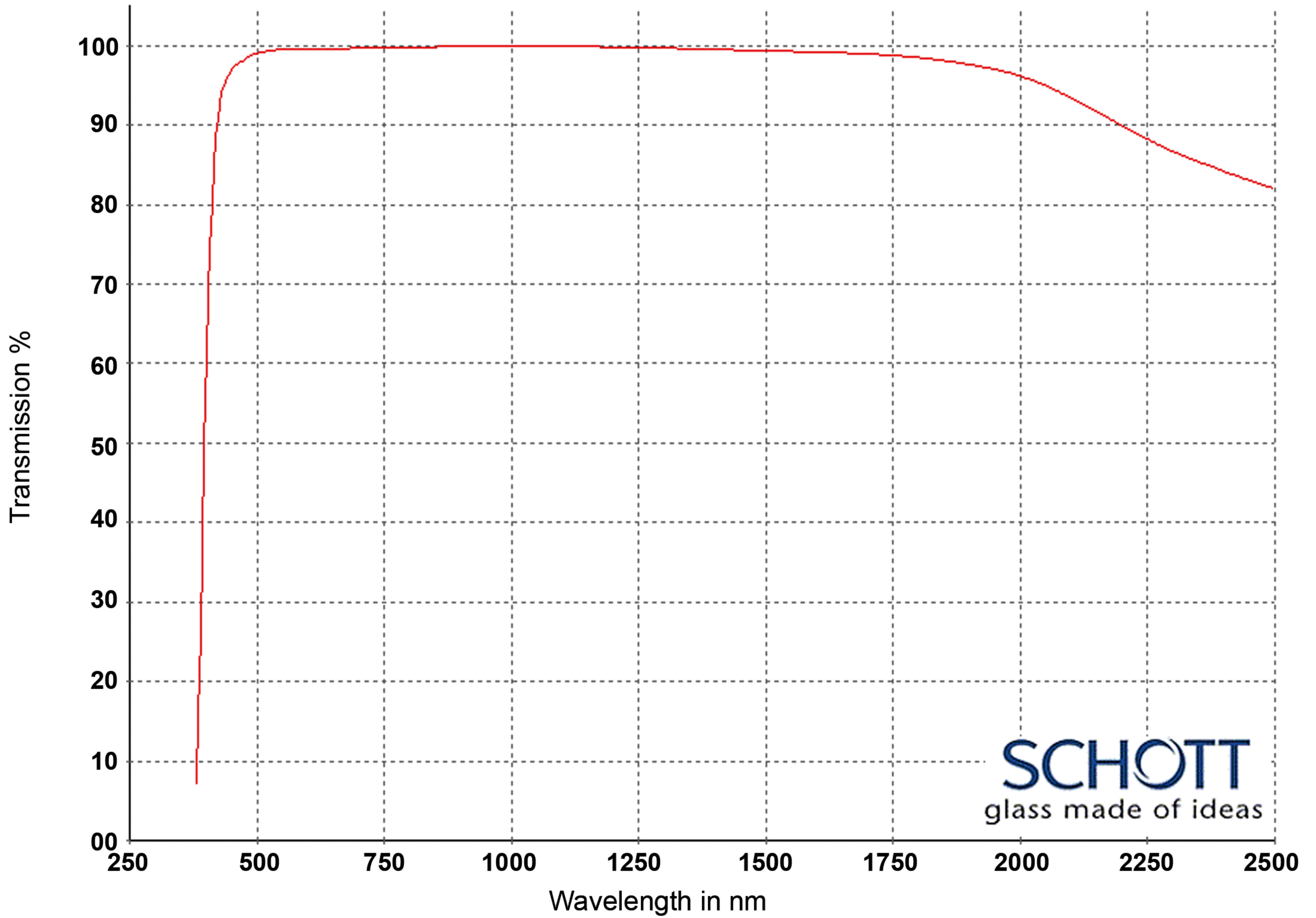




KNIGHT OPTICAL

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Title: Optical Glasses - 250-2500nm  
Material: SCHOTT SF14 for 250nm - 2500 transmission  
Range: OPG - SF14



Internal transmittance for 10mm thickness

WAVELENGTH	SF14 (T%)
2500 nm	0.820
2325 nm	0.860
1970 nm	0.967
1530 nm	0.993
1060 nm	0.999
700 nm	0.997
660 nm	0.996
620 nm	0.996
580 nm	0.996
546 nm	0.995
500 nm	0.990
460 nm	0.976
436 nm	0.950
420 nm	0.890
405 nm	0.700
400 nm	0.600
390 nm	0.280
380 nm	0.040
370 nm	0.000
365 nm	0.000
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	1.71211
$n_{1970.1}$	1970.1	1.71756
$n_{1529.6}$	1529.6	1.72407
$n_{1060.0}$	1060.0	1.73313
$n_t$	1014.0	1.73442
$n_s$	852.1	1.74033
$n_r$	706.5	1.74910
$n_C$	656.3	1.75357
$n_{C'}$	643.8	1.75486
$n_{632.8}$	632.8	1.75606
$n_D$	589.3	1.76157
$n_d$	587.6	1.76182
$n_e$	546.1	1.76859
$n_F$	486.1	1.78229
$n_{F'}$	480.0	1.78407
$n_g$	435.8	1.79989
$n_h$	404.7	1.81573
$n_i$	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	

### Internal Transmittance $\tau_i$

$\lambda$ [nm]	$\tau_i$ [10 mm]	$\tau_i$ [25 mm]
2500	0.82	0.60
2325	0.86	0.69
1970	0.967	0.920
1530	0.993	0.982
1060	0.999	0.997
700	0.997	0.992
660	0.996	0.990
620	0.996	0.990
580	0.996	0.990
546	0.995	0.988
500	0.990	0.974
460	0.976	0.940
436	0.950	0.87
420	0.89	0.74
405	0.70	0.41
400	0.60	0.28
390	0.28	0.04
380	0.04	
370		
365		
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

### Relative Partial Dispersion

$P_{s,t}$	0.2060
$P_{C,s}$	0.4612
$P_{d,C}$	0.2871
$P_{e,d}$	0.2357
$P_{g,F}$	0.6126
$P_{i,h}$	
$P'_{s,t}$	0.2025
$P'_{C's}$	0.4972
$P'_{d,C'}$	0.2384
$P'_{e,d}$	0.2317
$P'_{g,F'}$	0.5415
$P'_{i,h}$	

### Deviation of Rel. Partial Dispersion

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

$\Delta P_{C,t}$	-0.0037
$\Delta P_{C,s}$	-0.0036
$\Delta P_{F,e}$	0.0027
$\Delta P_{g,F}$	0.0134
$\Delta P_{i,g}$	

### Other Properties

$\alpha_{-30/+70^\circ\text{C}} [10^{-6}/\text{K}]$	6.6
$\alpha_{+20/+300^\circ\text{C}} [10^{-6}/\text{K}]$	7.4
$T_g [^\circ\text{C}]$	478
$T_{10}^{13.0} [^\circ\text{C}]$	479
$T_{10}^{7.6} [^\circ\text{C}]$	617
$c_p [\text{J}/(\text{g}\cdot\text{K})]$	0.440
$\lambda [\text{W}/(\text{m}\cdot\text{K})]$	0.770
$\rho [\text{g}/\text{cm}^3]$	4.54
$E [10^3 \text{N}/\text{mm}^2]$	65
$\mu$	0.231
$K [10^{-6} \text{mm}^2/\text{N}]$	1.62
$HK_{0.1/20}$	430
HG	1
B	1
CR	1
FR	0
SR	1
AR	1.2
PR	1

### Constants of Dispersion Formula

$B_1$	$1.69182538 \cdot 10^{+00}$
$B_2$	$2.85919934 \cdot 10^{-01}$
$B_3$	$1.12595145 \cdot 10^{+00}$
$C_1$	$1.33151542 \cdot 10^{-02}$
$C_2$	$6.12647445 \cdot 10^{-02}$
$C_3$	$1.18405242 \cdot 10^{+02}$

### Constants of Formula $dn/dT$

$D_0$	$8.85 \cdot 10^{-06}$
$D_1$	$1.81 \cdot 10^{-08}$
$D_2$	$-4.12 \cdot 10^{-11}$
$E_0$	$1.39 \cdot 10^{-06}$
$E_1$	$1.53 \cdot 10^{-09}$
$\lambda_{TK} [\mu\text{m}]$	0.279

### Color Code

$\lambda_{80}/\lambda_5$	43/38
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### Remarks


### Temperature Coefficients of Refractive Index

[ $^\circ\text{C}$ ]	$\Delta n_{rel}/\Delta T [10^{-6}/\text{K}]$			$\Delta n_{abs}/\Delta T [10^{-6}/\text{K}]$		
	1060.0	e	g	1060.0	e	g
-40/ -20	6.9	9.8	13.5	4.6	7.4	11.0
+20/+40	7.6	11.0	15.2	6.1	9.4	13.6
+60/+80	8.0	11.6	16.2	6.8	10.4	15.0