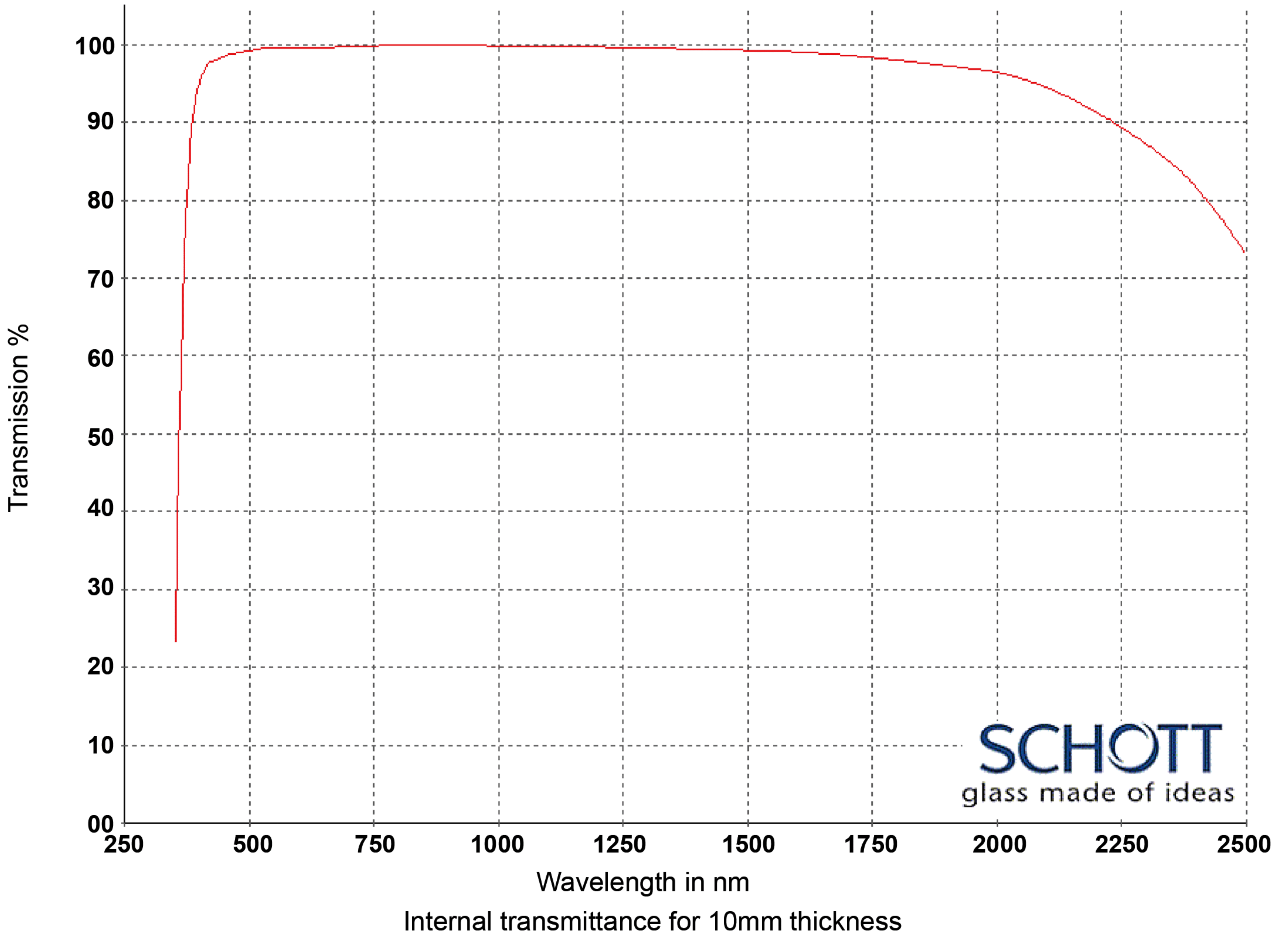




KNIGHT OPTICAL

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Title: Optical Glasses - 250-2500nm  
Material: Schott N-BAF10 for 250nm - 2500 transmission  
Range: OPG - N-BAF10



**SCHOTT**  
glass made of ideas

WAVELENGTH	N-BAF10 (T%)
2500 nm	0.730
2325 nm	0.860
1970 nm	0.967
1530 nm	0.992
1060 nm	0.998
700 nm	0.998
660 nm	0.996
620 nm	0.996
580 nm	0.996
546 nm	0.996
500 nm	0.992
460 nm	0.987
436 nm	0.981
420 nm	0.976
405 nm	0.959
400 nm	0.950
390 nm	0.920
380 nm	0.850
370 nm	0.720
365 nm	0.630
350 nm	0.180
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

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Whilst every effort has been made to verify the data, Knight Optical (UK) Ltd can take no responsibility for its accuracy.

### Refractive Indices

	$\lambda$ [nm]	
$n_{2325.4}$	2325.4	1.63524
$n_{1970.1}$	1970.1	1.64094
$n_{1529.6}$	1529.6	1.64714
$n_{1060.0}$	1060.0	1.65404
$n_t$	1014.0	1.65488
$n_s$	852.1	1.65849
$n_r$	706.5	1.66339
$n_C$	656.3	1.66578
$n_{C'}$	643.8	1.66645
$n_{632.8}$	632.8	1.66708
$n_D$	589.3	1.66990
$n_d$	587.6	1.67003
$n_e$	546.1	1.67341
$n_F$	486.1	1.68000
$n_{F'}$	480.0	1.68083
$n_g$	435.8	1.68801
$n_h$	404.7	1.69480
$n_i$	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	0.73	0.45
2325	0.86	0.68
1970	0.967	0.920
1530	0.992	0.980
1060	0.998	0.994
700	0.998	0.994
660	0.996	0.990
620	0.996	0.991
580	0.996	0.990
546	0.996	0.990
500	0.992	0.981
460	0.987	0.967
436	0.981	0.954
420	0.976	0.940
405	0.959	0.900
400	0.950	0.88
390	0.920	0.80
380	0.85	0.66
370	0.72	0.44
365	0.63	0.31
350	0.18	0.01
334		
320		
310		
300		
290		
280		
270		
260		
250		

### Relative Partial Dispersion

$P_{s,t}$	0.2539
$P_{C,s}$	0.5122
$P_{d,C}$	0.2989
$P_{e,d}$	0.2377
$P_{g,F}$	0.5629
$P_{i,h}$	
$P'_{s,t}$	0.2511
$P'_{C's}$	0.5533
$P'_{d,C'}$	0.2489
$P'_{e,d}$	0.2351
$P'_{g,F'}$	0.4990
$P'_{i,h}$	

### Deviation of Rel. Partial Dispersion

$\Delta P$ from "Normal Line"	
$\Delta P_{C,t}$	-0.0024
$\Delta P_{C,s}$	-0.0005
$\Delta P_{F,e}$	-0.0003
$\Delta P_{g,F}$	-0.0016
$\Delta P_{i,g}$	

### Constants of Dispersion Formula

$B_1$	$1.58514950 \cdot 10^{+00}$
$B_2$	$1.43559385 \cdot 10^{-01}$
$B_3$	$1.08521269 \cdot 10^{+00}$
$C_1$	$9.26681282 \cdot 10^{-03}$
$C_2$	$4.24489805 \cdot 10^{-02}$
$C_3$	$1.05613573 \cdot 10^{+02}$

### Constants of Formula $dn/dT$

$D_0$	$3.79 \cdot 10^{-06}$
$D_1$	$1.28 \cdot 10^{-08}$
$D_2$	$-1.42 \cdot 10^{-11}$
$E_0$	$5.84 \cdot 10^{-07}$
$E_1$	$7.60 \cdot 10^{-10}$
$\lambda_{TK}[\mu m]$	0.220

### Color Code

$\lambda_{80}/\lambda_5$	39/35
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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	3.7	4.7	5.6	1.5	2.4	3.3
+20/+40	3.8	4.9	6.0	2.4	3.5	4.5
+60/+80	4.0	5.2	6.4	2.9	4.1	5.3

### Other Properties

$\alpha_{-30/+70^\circ C} [10^{-6}/K]$	6.2
$\alpha_{+20/+300^\circ C} [10^{-6}/K]$	7.0
Tg[°C]	660
$T_{10}^{13.0} [^\circ C]$	652
$T_{10}^{7.6} [^\circ C]$	790
$c_p [J/(g \cdot K)]$	0.560
$\lambda [W/(m \cdot K)]$	0.780
$\rho [g/cm^3]$	3.75
$E [10^3 N/mm^2]$	89
$\mu$	0.271
$K [10^{-6} mm^2/N]$	2.37
HK <sub>0.1/20</sub>	620
HG	4
B	1
CR	1
FR	0
SR	4.3
AR	1.3
PR	1