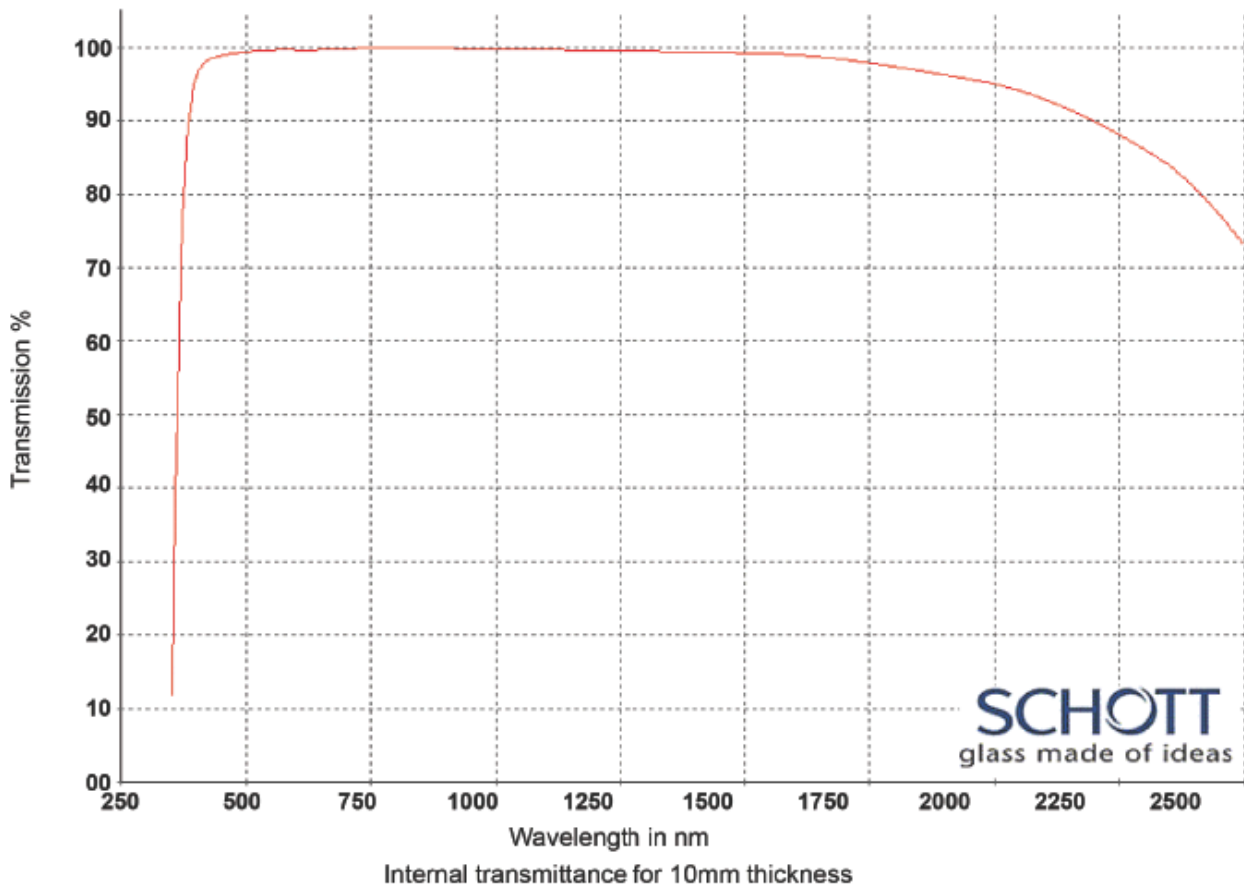


OPTICAL GLASSES: VISIBLE – NEAR INFRA-RED

Title: Optical Glasses - 250-2500nm

Material/Specification: Schott N-BAF3 for 250nm - 2500nm transmission

Range/Description: OPG-N-BAF3



WAVELENGTH	N-BAF3 (T%)
2500 nm	0.730
2325 nm	0.850
1970 nm	0.954
1530 nm	0.992
1060 nm	0.997
700 nm	0.998
660 nm	0.997
620 nm	0.996
580 nm	0.997
546 nm	0.996
500 nm	0.994
460 nm	0.990
436 nm	0.986
420 nm	0.981
405 nm	0.967
400 nm	0.959
390 nm	0.920
380 nm	0.850
370 nm	0.690
365 nm	0.570
350 nm	0.060
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

+44 (0)1622 859444
 info@knightoptical.co.uk
 www.knightoptical.com



OPTICAL GLASSES: VISIBLE – NEAR INFRA-RED

SCHOTT
glass made of ideas

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.54998
$n_{1970.1}$	1970.1	1.55574
$n_{1529.6}$	1529.6	1.56192
$n_{1060.0}$	1060.0	1.56850
n_t	1014.0	1.56927
n_s	852.1	1.57254
n_r	706.5	1.57689
n_C	656.3	1.57899
$n_{C'}$	643.8	1.57958
$n_{632.8}$	632.8	1.58013
n_D	589.3	1.58261
n_d	587.6	1.58272
n_e	546.1	1.58569
n_F	486.1	1.59149
$n_{F'}$	480.0	1.59222
n_g	435.8	1.59857
n_h	404.7	1.60463
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	$1.34859634 \cdot 10^{+00}$
B_2	$1.07644240 \cdot 10^{-01}$
B_3	$1.13207084 \cdot 10^{+00}$
C_1	$8.71492932 \cdot 10^{-03}$
C_2	$4.78406436 \cdot 10^{-02}$
C_3	$1.12936116 \cdot 10^{+02}$

Constants of Formula dn/dT	
D_0	$1.40 \cdot 10^{-06}$
D_1	$1.24 \cdot 10^{-08}$
D_2	$-9.39 \cdot 10^{-12}$
E_0	$5.91 \cdot 10^{-07}$
E_1	$7.44 \cdot 10^{-10}$
$\lambda_{TK}[\mu\text{m}]$	0.235

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	2.4	3.2	4.1	0.3	1.1	1.9
+20/+40	2.4	3.4	4.4	1.0	2.0	3.0
+60/+80	2.5	3.6	4.8	1.5	2.5	3.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10 mm]	τ_i [25 mm]
2500	0.73	0.46
2325	0.85	0.66
1970	0.954	0.89
1530	0.992	0.980
1060	0.997	0.993
700	0.998	0.994
660	0.997	0.992
620	0.996	0.991
580	0.997	0.993
546	0.996	0.991
500	0.994	0.985
460	0.990	0.975
436	0.986	0.965
420	0.981	0.952
405	0.967	0.920
400	0.959	0.900
390	0.920	0.82
380	0.85	0.67
370	0.69	0.40
365	0.57	0.24
350	0.06	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
λ_{80}/λ_{5}	39/35
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2616
$P_{C,s}$	0.5160
$P_{d,C}$	0.2987
$P_{e,d}$	0.2375
$P_{g,F}$	0.5669
$P_{i,h}$	
$P'_{s,t}$	0.2587
$P'_{C,s}$	0.5569
$P'_{d,C'}$	0.2487
$P'_{e,d}$	0.2348
$P'_{g,F'}$	0.5026
$P'_{i,h}$	

Deviation of Rel. Partial Dispersion ΔP from "Normal Line"	
$\Delta P_{C,t}$	0.0114
$\Delta P_{C,s}$	0.0044
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	0.0015
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ\text{C}} [10^{-6}/K]$	7.2
$\alpha_{+20/+300^\circ\text{C}} [10^{-6}/K]$	8.2
$T_g [^\circ\text{C}]$	583
$T_{10}^{13.0} [^\circ\text{C}]$	573
$T_{10}^{7.6} [^\circ\text{C}]$	714
$c_p [J/(g \cdot K)]$	0.760
$\lambda [W/(m \cdot K)]$	1.040
$\rho [g/cm^3]$	2.79
$E [10^3 N/mm^2]$	82
μ	0.226
$K [10^{-6} mm^2/N]$	2.73
$HK_{0.1/20}$	560
HG	2
B	1
CR	1
FR	0
SR	1
AR	1
PR	1

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