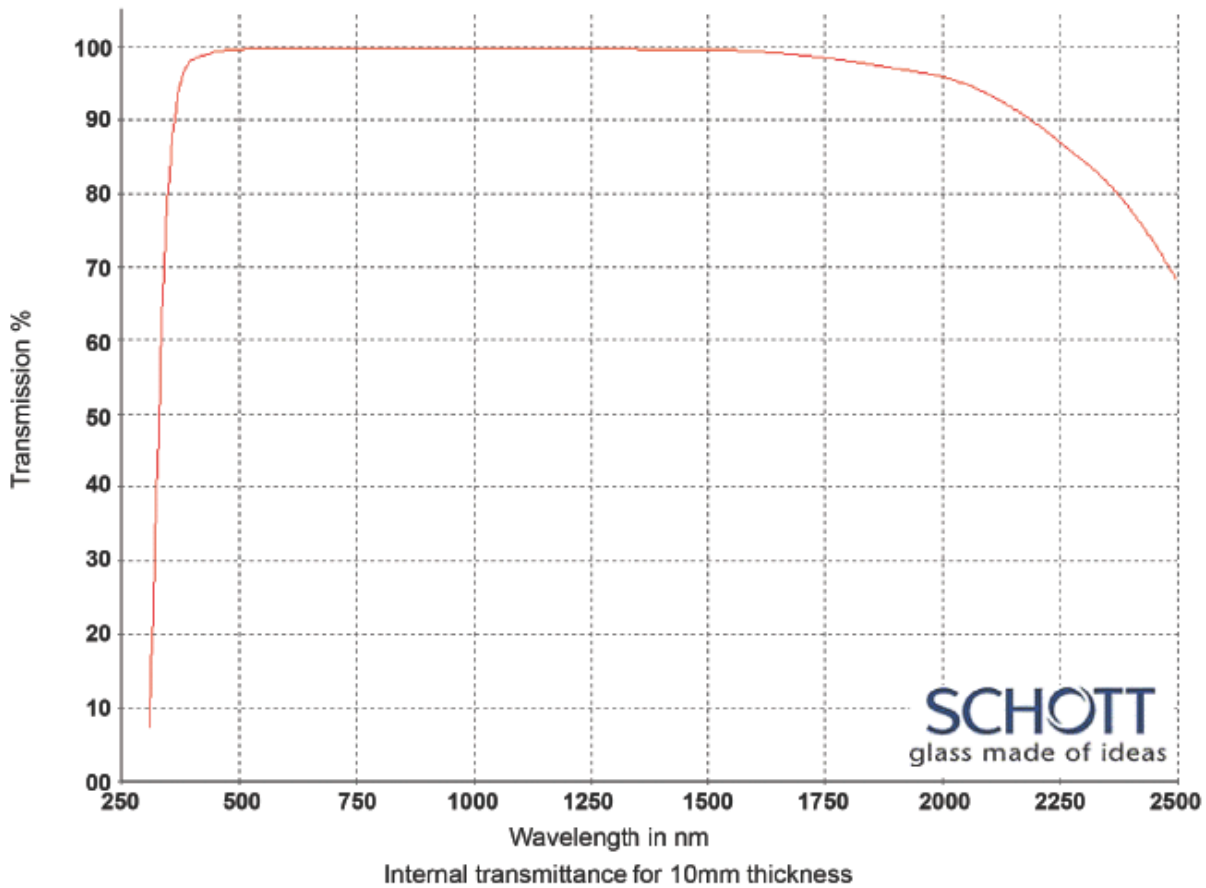


OPTICAL GLASSES: VISIBLE – NEAR INFRA-RED

Title: Optical Glasses - 250-2500nm

Material/Specification: Schott LASF35 for 250nm - 2500nm transmission

Range/Description: OPG-LASF35



WAVELENGTH	LASF35 (T%)
2500 nm	0.860
2325 nm	0.950
1970 nm	0.989
1530 nm	0.997
1060 nm	0.996
700 nm	0.991
660 nm	0.988
620 nm	0.985
580 nm	0.979
546 nm	0.965
500 nm	0.920
460 nm	0.830
436 nm	0.740
420 nm	0.630
405 nm	0.490
400 nm	0.430
390 nm	0.300
380 nm	0.160
370 nm	0.060
365 nm	0.030
350 nm	0.010
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
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SCHOTT
glass made of ideas

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.95946
$n_{1970.1}$	1970.1	1.96639
$n_{1529.6}$	1529.6	1.97472
$n_{1060.0}$	1060.0	1.98624
n_t	1014.0	1.98786
n_s	852.1	1.99531
n_r	706.5	2.00628
n_C	656.3	2.01185
$n_{C'}$	643.8	2.01343
$n_{632.8}$	632.8	2.01493
n_D	589.3	2.02173
n_d	587.6	2.02204
n_e	546.1	2.03035
n_F	486.1	2.04702
$n_{F'}$	480.0	2.04916
n_g	435.8	2.06805
n_h	404.7	2.08663
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	$2.45505861 \cdot 10^{+00}$
B_2	$4.53006077 \cdot 10^{-01}$
B_3	$2.38513080 \cdot 10^{+00}$
C_1	$1.35670404 \cdot 10^{-02}$
C_2	$5.45803020 \cdot 10^{-02}$
C_3	$1.67904715 \cdot 10^{+02}$

Constants of Formula dn/dT	
D_0	$1.43 \cdot 10^{-07}$
D_1	$8.71 \cdot 10^{-09}$
D_2	$-2.71 \cdot 10^{-11}$
E_0	$1.02 \cdot 10^{-06}$
E_1	$1.50 \cdot 10^{-09}$
$\lambda_{TK}[\mu\text{m}]$	0.263

Temperature Coefficients of Refractive Index						
[°C]	$\Delta n_{\text{rel}}/\Delta T [10^{-6}/\text{K}]$			$\Delta n_{\text{abs}}/\Delta T [10^{-6}/\text{K}]$		
	1060.0	e	g	1060.0	e	g
-40/-20	2.6	5.0	7.8	-0.1	2.2	5.0
+20/+40	2.7	5.5	9.0	1.0	3.8	7.1
+60/+80	2.8	5.9	9.7	1.4	4.5	8.3

Internal Transmittance τ_t		
λ [nm]	τ_t [10 mm]	τ_t [25 mm]
2500	0.86	0.69
2325	0.950	0.88
1970	0.989	0.972
1530	0.997	0.992
1060	0.996	0.990
700	0.991	0.978
660	0.988	0.970
620	0.985	0.962
580	0.979	0.950
546	0.965	0.920
500	0.920	0.81
460	0.83	0.63
436	0.74	0.47
420	0.63	0.32
405	0.49	0.17
400	0.43	0.12
390	0.30	0.05
380	0.16	0.01
370	0.06	
365	0.03	
350	0.01	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
λ_{80}/λ_{5}	-/37

Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2118
$P_{C,s}$	0.4701
$P_{d,C}$	0.2899
$P_{e,d}$	0.2364
$P_{g,F}$	0.5982
$P_{i,h}$	
$P'_{s,t}$	0.2086
$P'_{C,s}$	0.5073
$P'_{d,C'}$	0.2409
$P'_{e,d}$	0.2327
$P'_{g,F'}$	0.5291
$P'_{i,h}$	

Deviation of Rel. Partial Dispersion ΔP from "Normal Line"	
$\Delta P_{C,t}$	-0.0009
$\Delta P_{C,s}$	-0.0006
$\Delta P_{F,e}$	0.0006
$\Delta P_{g,F}$	0.0033
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ\text{C}} [10^{-6}/\text{K}]$	7.4
$\alpha_{+20/+300^\circ\text{C}} [10^{-6}/\text{K}]$	8.5
$T_g [^\circ\text{C}]$	774
$T_{10}^{13.0} [^\circ\text{C}]$	
$T_{10}^{7.6} [^\circ\text{C}]$	
$c_p [\text{J}/(\text{g}\cdot\text{K})]$	0.445
$\lambda [\text{W}/(\text{m}\cdot\text{K})]$	0.920
$\rho [\text{g}/\text{cm}^3]$	5.41
$E [10^3 \text{N}/\text{mm}^2]$	132
μ	0.303
$K [10^{-6} \text{mm}^2/\text{N}]$	0.73
$HK_{0.1/20}$	810
HG	
B	2
CR	1
FR	0
SR	1.3
AR	1
PR	1.3

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