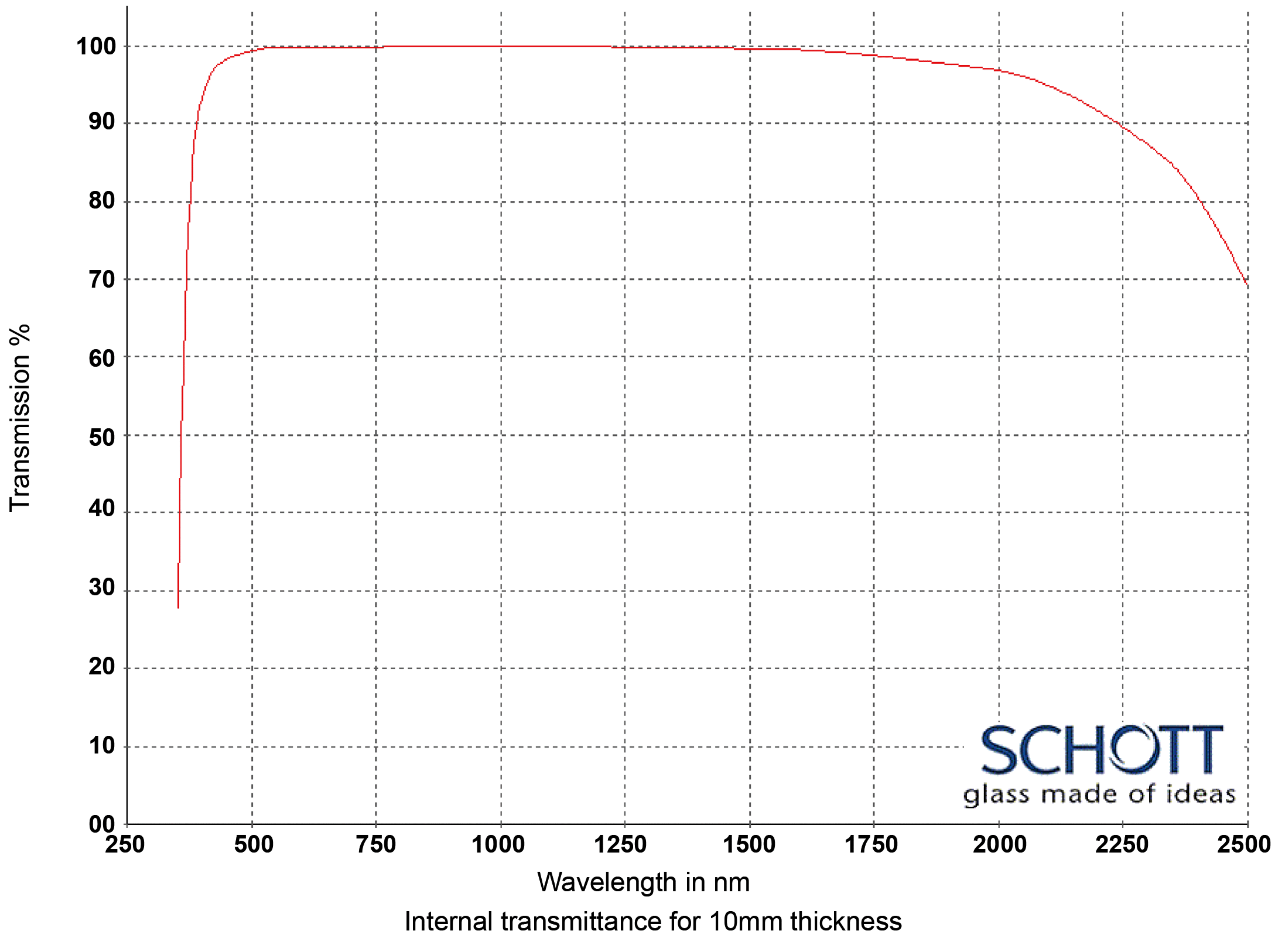




KNIGHT OPTICAL

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Title: Optical Glasses - 250-2500nm
Material: N-LAF2 for 250nm - 2500 transmission
Range: N-LAF2



SCHOTT
glass made of ideas

WAVELENGTH	N-LAF2 (T%)
2500 nm	0.690
2325 nm	0.860
1970 nm	0.971
1530 nm	0.996
1060 nm	0.999
700 nm	0.998
660 nm	0.997
620 nm	0.997
580 nm	0.997
546 nm	0.998
500 nm	0.993
460 nm	0.985
436 nm	0.976
420 nm	0.965
405 nm	0.940
400 nm	0.930
390 nm	0.900
380 nm	0.830
370 nm	0.710
365 nm	0.630
350 nm	0.230
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

	λ [nm]	
$n_{2325.4}$	2325.4	1.70582
$n_{1970.1}$	1970.1	1.71169
$n_{1529.6}$	1529.6	1.71816
$n_{1060.0}$	1060.0	1.72563
n_t	1014.0	1.72656
n_s	852.1	1.73064
n_r	706.5	1.73627
n_C	656.3	1.73903
$n_{C'}$	643.8	1.73981
$n_{632.8}$	632.8	1.74054
n_D	589.3	1.74383
n_d	587.6	1.74397
n_e	546.1	1.74791
n_F	486.1	1.75562
$n_{F'}$	480.0	1.75659
n_g	435.8	1.76500
n_h	404.7	1.77298
n_i	365.0	1.78703
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Internal Transmittance τ_i

λ [nm]	τ_i [10 mm]	τ_i [25 mm]
2500	0.69	0.40
2325	0.86	0.69
1970	0.971	0.930
1530	0.996	0.990
1060	0.999	0.997
700	0.998	0.996
660	0.997	0.993
620	0.997	0.992
580	0.997	0.993
546	0.998	0.994
500	0.993	0.983
460	0.985	0.962
436	0.976	0.940
420	0.965	0.920
405	0.940	0.87
400	0.930	0.84
390	0.900	0.76
380	0.83	0.63
370	0.71	0.43
365	0.63	0.31
350	0.23	0.03
334		
320		
310		
300		
290		
280		
270		
260		
250		

Relative Partial Dispersion

$P_{s,t}$	0.2459
$P_{C,s}$	0.5057
$P_{d,C}$	0.2979
$P_{e,d}$	0.2377
$P_{g,F}$	0.5656
$P_{i,h}$	0.8470
$P'_{s,t}$	0.2431
$P'_{C's}$	0.5464
$P'_{d,C'}$	0.2481
$P'_{e,d}$	0.2350
$P'_{g,F'}$	0.5012
$P'_{i,h}$	0.8373

Constants of Dispersion Formula

B_1	$1.80984227 \cdot 10^{+00}$
B_2	$1.57295550 \cdot 10^{-01}$
B_3	$1.09300370 \cdot 10^{+00}$
C_1	$1.01711622 \cdot 10^{-02}$
C_2	$4.42431765 \cdot 10^{-02}$
C_3	$1.00687748 \cdot 10^{+02}$

Constants of Formula dn/dT

D_0	$-3.64 \cdot 10^{-06}$
D_1	$9.20 \cdot 10^{-09}$
D_2	$-6.00 \cdot 10^{-12}$
E_0	$6.43 \cdot 10^{-07}$
E_1	$6.11 \cdot 10^{-10}$
$\lambda_{TK}[\mu m]$	0.220

Color Code

λ_{80}/λ_5	40/34
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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	0.0	1.0	2.1	-2.3	-1.3	-0.3
+20/+40	-0.1	1.0	2.3	-1.6	-0.5	0.7
+60/+80	-0.1	1.2	2.5	-1.2	0.0	1.3

Deviation of Rel. Partial Dispersion

ΔP from "Normal Line"

$\Delta P_{C,t}$	-0.0061
$\Delta P_{C,s}$	-0.0017
$\Delta P_{F,e}$	-0.0004
$\Delta P_{g,F}$	-0.0027
$\Delta P_{i,g}$	-0.0202

Other Properties

$\alpha_{-30/+70^\circ C} [10^{-6}/K]$	8.1
$\alpha_{+20/+300^\circ C} [10^{-6}/K]$	9.1
$T_g [^\circ C]$	653
$T_{10}^{13.0} [^\circ C]$	645
$T_{10}^{7.6} [^\circ C]$	742
$c_p [J/(g \cdot K)]$	0.510
$\lambda [W/(m \cdot K)]$	0.670
$\rho [g/cm^3]$	4.30
$E [10^3 N/mm^2]$	94
μ	0.288
$K [10^{-6} mm^2/N]$	1.42
$HK_{0.1/20}$	530
HG	6
B	1
CR	2
FR	3
SR	52.2
AR	1
PR	2.2