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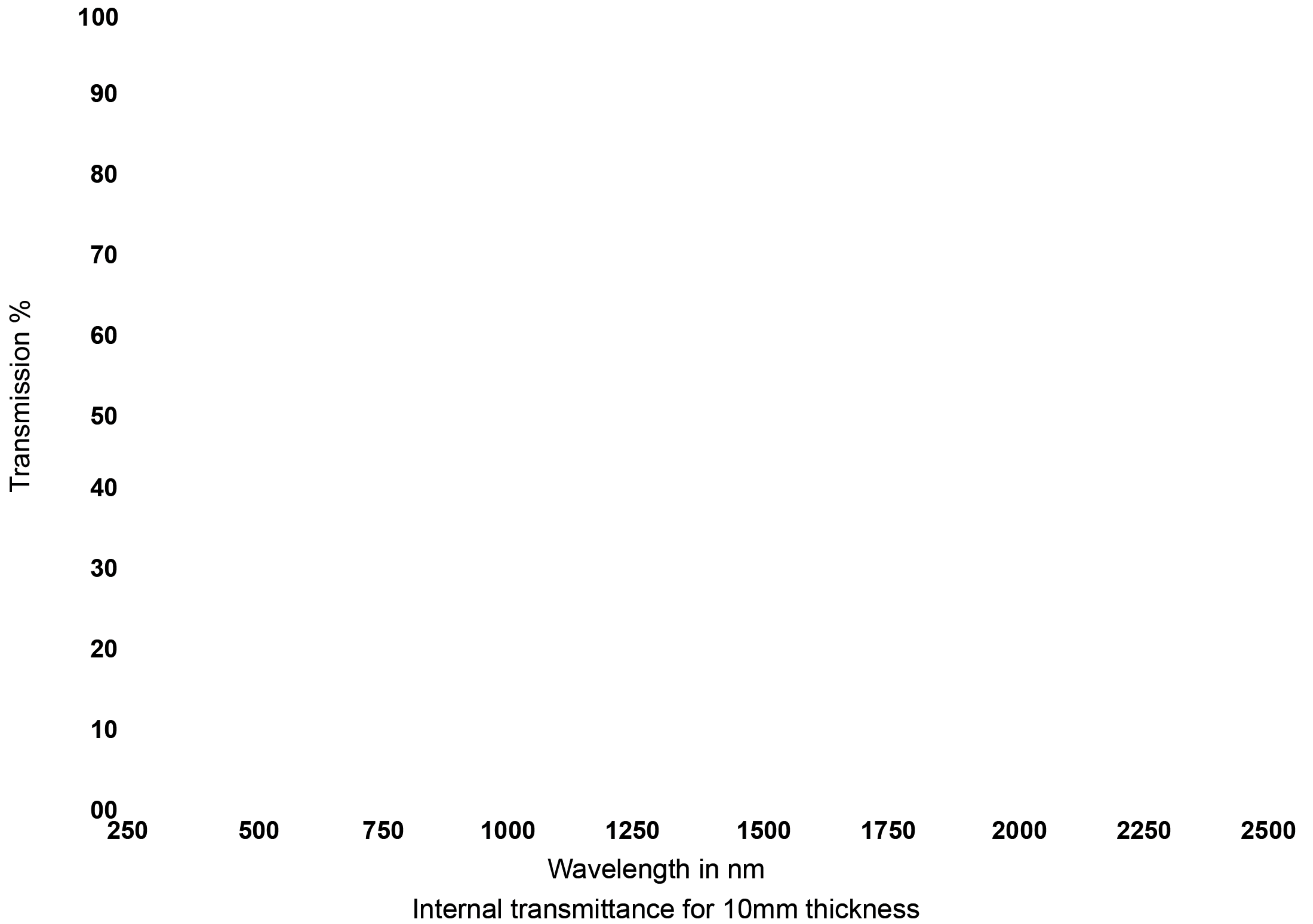
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Title: Optical Glasses - 250-2500nm

Material: SCHOTT N-LASF31 for 250nm - 2500 transmission

Range: OPG - N-LASF31



WAVELENGTH	BASF51 (T%)
2500 nm	0.780
2325 nm	0.920
1970 nm	0.984
1530 nm	0.997
1060 nm	0.997
700 nm	0.998
660 nm	0.998
620 nm	0.997
580 nm	0.997
546 nm	0.996
500 nm	0.989
460 nm	0.976
436 nm	0.963
420 nm	0.950
405 nm	0.930
400 nm	0.920
390 nm	0.890
380 nm	0.840
370 nm	0.780
365 nm	0.730
350 nm	0.540
334 nm	0.280
320 nm	0.090
310 nm	0.030
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	1.83529
$n_{1970.1}$	1970.1	1.84153
$n_{1529.6}$	1529.6	1.84862
$n_{1060.0}$	1060.0	1.85736
n_t	1014.0	1.85851
n_s	852.1	1.86358
n_r	706.5	1.87074
n_C	656.3	1.87429
$n_{C'}$	643.8	1.87529
$n_{632.8}$	632.8	1.87624
n_D	589.3	1.88048
n_d	587.6	1.88067
n_e	546.1	1.88577
n_F	486.1	1.89576
$n_{F'}$	480.0	1.89702
n_g	435.8	1.90793
n_h	404.7	1.91824
n_i	365.0	1.93628
$n_{334.1}$	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	0.78	0.54
2325	0.920	0.81
1970	0.984	0.960
1530	0.997	0.992
1060	0.997	0.993
700	0.998	0.994
660	0.998	0.994
620	0.997	0.993
580	0.997	0.993
546	0.996	0.990
500	0.989	0.973
460	0.976	0.940
436	0.963	0.910
420	0.950	0.88
405	0.930	0.84
400	0.920	0.82
390	0.89	0.75
380	0.84	0.65
370	0.78	0.53
365	0.73	0.46
350	0.54	0.21
334	0.28	0.04
320	0.09	0.02
310	0.03	
300		
290		
280		
270		
260		
250		

Relative Partial Dispersion

$P_{s,t}$	0.2364
$P_{C,s}$	0.4986
$P_{d,C}$	0.2971
$P_{e,d}$	0.2377
$P_{g,F}$	0.5665
$P_{i,h}$	0.8397
$P'_{s,t}$	0.2336
$P'_{C's}$	0.5389
$P'_{d,C'}$	0.2474
$P'_{e,d}$	0.2349
$P'_{g,F'}$	0.5018
$P'_{i,h}$	0.8297

Deviation of Rel. Partial Dispersion

ΔP from "Normal Line"

$\Delta P_{C,t}$	-0.0046
$\Delta P_{C,s}$	0.0001
$\Delta P_{F,e}$	-0.0016
$\Delta P_{g,F}$	-0.0084
$\Delta P_{i,g}$	-0.0603

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/\text{K}$]	6.8
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/\text{K}$]	7.7
T_g [$^\circ\text{C}$]	758
$T_{10}^{13.0}$ [$^\circ\text{C}$]	756
$T_{10}^{7.6}$ [$^\circ\text{C}$]	
c_p [$\text{J}/(\text{g}\cdot\text{K})$]	
λ [$\text{W}/(\text{m}\cdot\text{K})$]	0.910
ρ [g/cm^3]	5.41
E [$10^3\text{N}/\text{mm}^2$]	124
μ	0.299
K [$10^{-6}\text{mm}^2/\text{N}$]	1.10
$HK_{0.1/20}$	770
HG	2
B	1
CR	1
FR	0
SR	2
AR	1
PR	1

Constants of Dispersion Formula

B_1	$1.71317198 \cdot 10^{+00}$
B_2	$7.18575109 \cdot 10^{-01}$
B_3	$1.72332470 \cdot 10^{+00}$
C_1	$8.19172228 \cdot 10^{-03}$
C_2	$2.97801704 \cdot 10^{-02}$
C_3	$1.38461313 \cdot 10^{+02}$

Constants of Formula dn/dT

D_0	$2.29 \cdot 10^{-06}$
D_1	$8.93 \cdot 10^{-09}$
D_2	$-1.59 \cdot 10^{-11}$
E_0	$6.52 \cdot 10^{-07}$
E_1	$8.09 \cdot 10^{-10}$
λ_{TK} [μm]	0.236

Color Code

λ_{80}/λ_5	45/32
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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	3.7	5.0	6.5	1.2	2.5	3.8
+20/+40	3.6	5.2	6.8	2.0	3.5	5.1
+60/+80	3.7	5.4	7.2	2.5	4.1	5.9