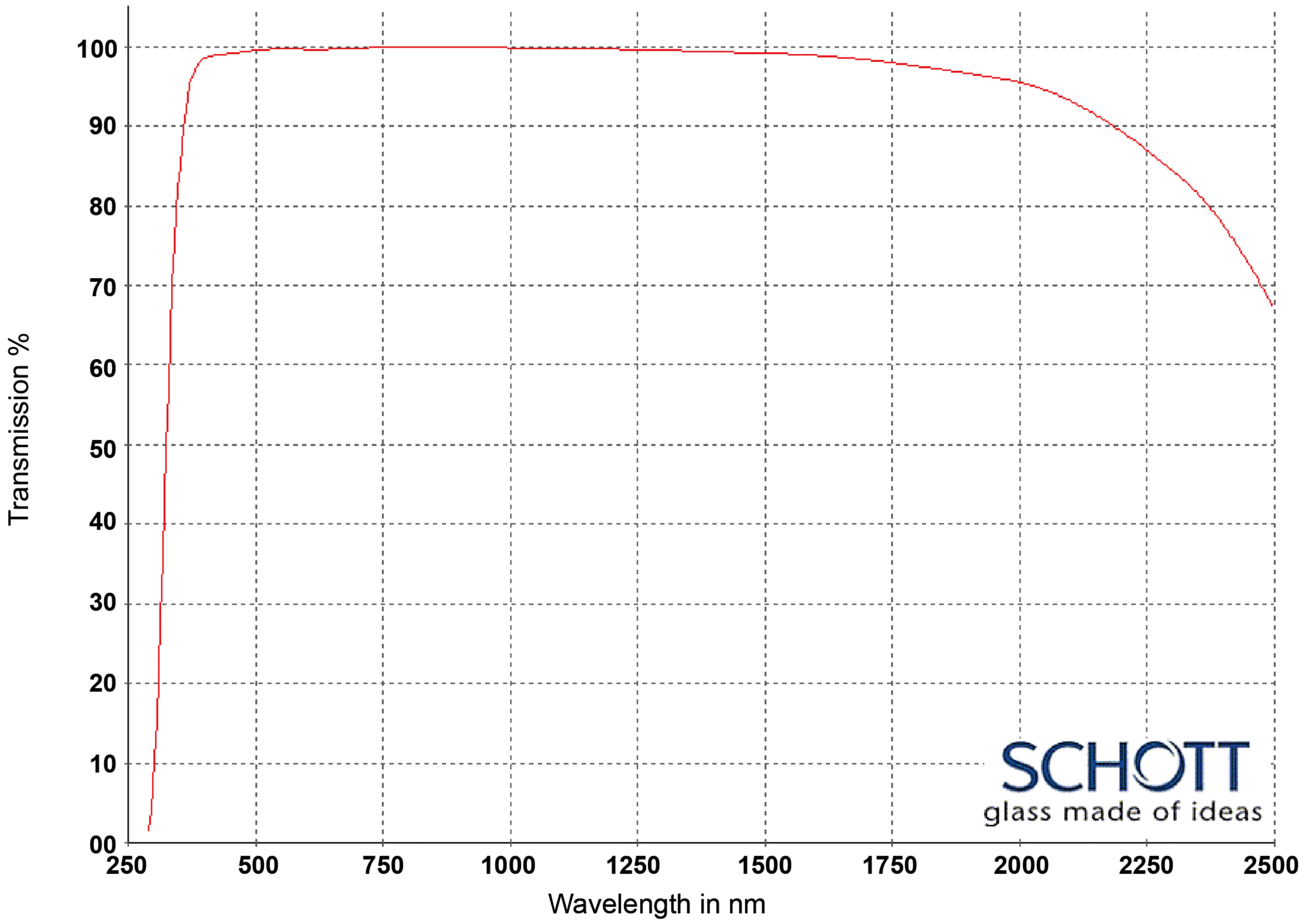




KNIGHT OPTICAL

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Title: Optical Glasses - 250-2500nm  
Material: SCHOTT N-LAK22 for 250nm - 2500 transmission  
Range: OPG - N-LAK22



Internal transmittance for 10mm thickness

WAVELENGTH	N-LAK22 (T%)
2500 nm	0.670
2325 nm	0.830
1970 nm	0.959
1530 nm	0.991
1060 nm	0.998
700 nm	0.998
660 nm	0.997
620 nm	0.996
580 nm	0.997
546 nm	0.997
500 nm	0.995
460 nm	0.992
436 nm	0.990
420 nm	0.989
405 nm	0.987
400 nm	0.985
390 nm	0.980
380 nm	0.967
370 nm	0.950
365 nm	0.930
350 nm	0.840
334 nm	0.660
320 nm	0.400
310 nm	0.210
300 nm	0.080
290 nm	0.010
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	1.61915
$n_{1970.1}$	1970.1	1.62488
$n_{1529.6}$	1529.6	1.63100
$n_{1060.0}$	1060.0	1.63747
$n_t$	1014.0	1.63823
$n_s$	852.1	1.64141
$n_r$	706.5	1.64560
$n_C$	656.3	1.64760
$n_{C'}$	643.8	1.64816
$n_{632.8}$	632.8	1.64868
$n_D$	589.3	1.65103
$n_d$	587.6	1.65113
$n_e$	546.1	1.65391
$n_F$	486.1	1.65925
$n_{F'}$	480.0	1.65992
$n_g$	435.8	1.66562
$n_h$	404.7	1.67092
$n_i$	365.0	1.67997
$n_{334.1}$	334.1	1.68975
$n_{312.6}$	312.6	1.69876
$n_{296.7}$	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	0.67	0.37
2325	0.83	0.62
1970	0.959	0.900
1530	0.991	0.978
1060	0.998	0.994
700	0.998	0.994
660	0.997	0.992
620	0.996	0.991
580	0.997	0.993
546	0.997	0.993
500	0.995	0.988
460	0.992	0.980
436	0.990	0.975
420	0.989	0.973
405	0.987	0.968
400	0.985	0.964
390	0.980	0.950
380	0.967	0.920
370	0.950	0.87
365	0.930	0.84
350	0.84	0.66
334	0.66	0.35
320	0.40	0.10
310	0.21	0.02
300	0.08	
290	0.01	
280		
270		
260		
250		

### Relative Partial Dispersion

$P_{s,t}$	0.2729
$P_{C,s}$	0.5314
$P_{d,C}$	0.3031
$P_{e,d}$	0.2384
$P_{g,F}$	0.5467
$P_{i,h}$	0.7771
$P'_{s,t}$	0.2704
$P'_{C's}$	0.5744
$P'_{d,C'}$	0.2527
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4851
$P'_{i,h}$	0.7702

### Deviation of Rel. Partial Dispersion

#### $\Delta P$ from "Normal Line"

$\Delta P_{C,t}$	-0.0058
$\Delta P_{C,s}$	-0.0018
$\Delta P_{F,e}$	-0.0005
$\Delta P_{g,F}$	-0.0031
$\Delta P_{i,g}$	-0.0236

### Constants of Dispersion Formula

$B_1$	$1.14229781 \cdot 10^{+00}$
$B_2$	$5.35138441 \cdot 10^{-01}$
$B_3$	$1.04088385 \cdot 10^{+00}$
$C_1$	$5.85778594 \cdot 10^{-03}$
$C_2$	$1.98546147 \cdot 10^{-02}$
$C_3$	$1.00834017 \cdot 10^{+02}$

### Constants of Formula $dn/dT$

$D_0$	$1.36 \cdot 10^{-06}$
$D_1$	$1.49 \cdot 10^{-08}$
$D_2$	$-1.29 \cdot 10^{-11}$
$E_0$	$3.41 \cdot 10^{-07}$
$E_1$	$2.09 \cdot 10^{-10}$
$\lambda_{TK}[\mu m]$	0.262

### Color Code

$\lambda_{80}/\lambda_5$	36/30
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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	2.2	2.9	3.6	0.0	0.6	1.3
+20/+40	2.4	3.1	3.9	1.0	1.7	2.4
+60/+80	2.7	3.4	4.2	1.6	2.3	3.1

### Other Properties

$\alpha_{-30/+70^\circ C} [10^{-6}/K]$	6.6
$\alpha_{+20/+300^\circ C} [10^{-6}/K]$	7.4
Tg[°C]	689
$T_{10}^{13.0} [^\circ C]$	673
$T_{10}^{7.6} [^\circ C]$	
$c_p [J/(g \cdot K)]$	0.550
$\lambda [W/(m \cdot K)]$	
$\rho [g/cm^3]$	3.77
$E [10^3 N/mm^2]$	90
$\mu$	0.266
$K [10^{-6} mm^2/N]$	1.82
HK <sub>0.1/20</sub>	600
HG	4
B	0
CR	2
FR	2
SR	51.2
AR	1
PR	2.3