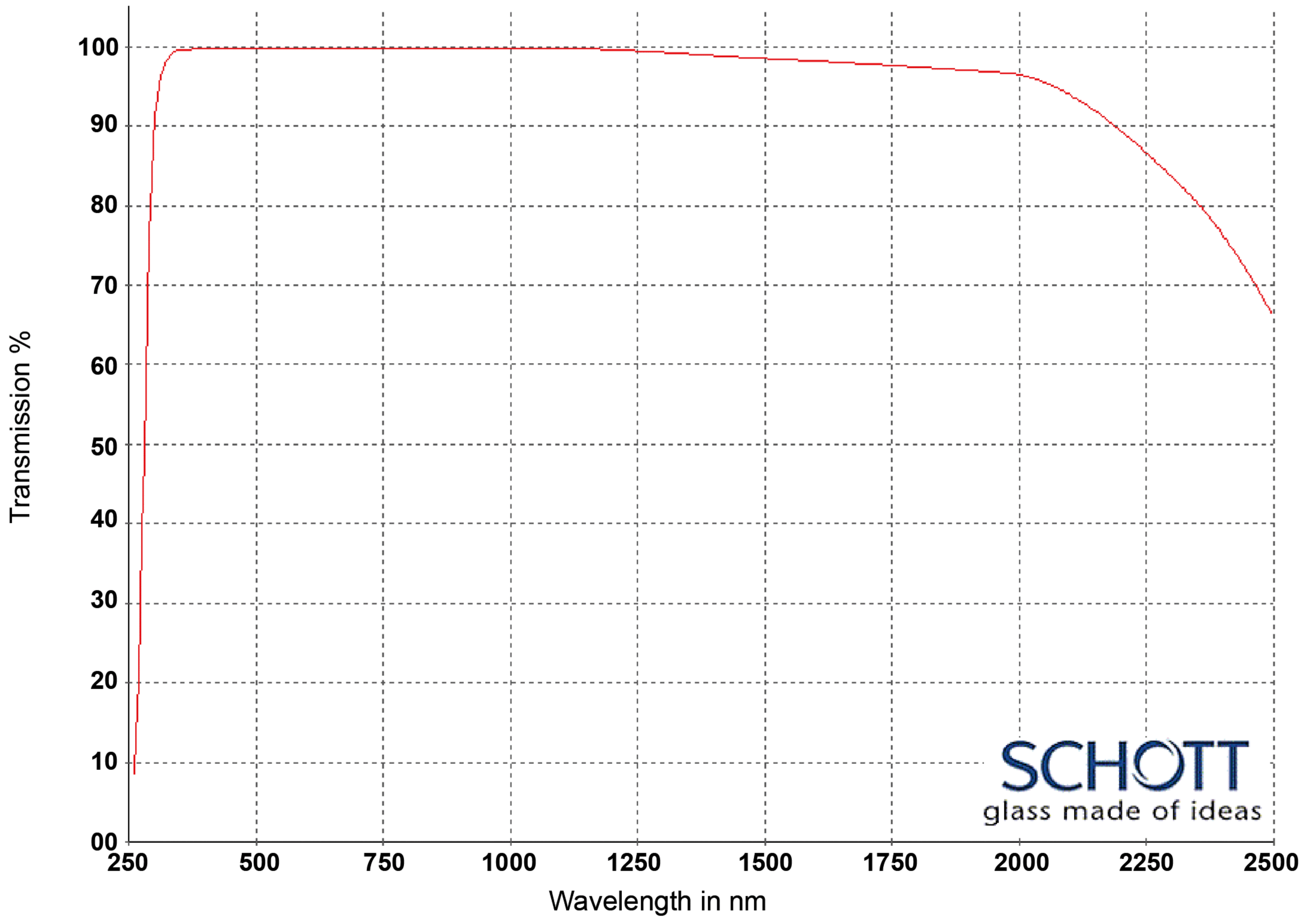




KNIGHT OPTICAL

Tel: +44 (0)1622 859444  
Fax: +44 (0)1622 859555  
info@knightoptical.co.uk  
www.knightoptical.co.uk

Title: Optical Glasses - 250-2500nm  
Material: Schott N-FK5 for 250nm - 2500 transmission  
Range: OPG - N-FK5



Internal transmittance for 10mm thickness

WAVELENGTH	N-FK5 (T%)
2500 nm	0.660
2325 nm	0.820
1970 nm	0.967
1530 nm	0.984
1060 nm	0.998
700 nm	0.998
660 nm	0.998
620 nm	0.998
580 nm	0.998
546 nm	0.998
500 nm	0.998
460 nm	0.998
436 nm	0.998
420 nm	0.998
405 nm	0.997
400 nm	0.997
390 nm	0.997
380 nm	0.997
370 nm	0.996
365 nm	0.996
350 nm	0.996
334 nm	0.990
320 nm	0.976
310 nm	0.950
300 nm	0.890
290 nm	0.730
280 nm	0.480
270 nm	0.230
260 nm	0.070
250 nm	0.000

© Knight Optical (UK) Ltd.

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	1.46181
$n_{1970.1}$	1970.1	1.46738
$n_{1529.6}$	1529.6	1.47312
$n_{1060.0}$	1060.0	1.47855
$n_t$	1014.0	1.47912
$n_s$	852.1	1.48137
$n_r$	706.5	1.48410
$n_C$	656.3	1.48535
$n_{C'}$	643.8	1.48569
$n_{632.8}$	632.8	1.48601
$n_D$	589.3	1.48743
$n_d$	587.6	1.48749
$n_e$	546.1	1.48914
$n_F$	486.1	1.49227
$n_{F'}$	480.0	1.49266
$n_g$	435.8	1.49593
$n_h$	404.7	1.49894
$n_i$	365.0	1.50401
$n_{334.1}$	334.1	1.50939
$n_{312.6}$	312.6	1.51428
$n_{296.7}$	296.7	1.51867
$n_{280.4}$	280.4	1.52415
$n_{248.3}$	248.3	

### Internal Transmittance $\tau_i$

$\lambda$ [nm]	$\tau_i$ [10 mm]	$\tau_i$ [25 mm]
2500	0.66	0.35
2325	0.82	0.60
1970	0.967	0.920
1530	0.984	0.960
1060	0.998	0.994
700	0.998	0.996
660	0.998	0.994
620	0.998	0.994
580	0.998	0.995
546	0.998	0.995
500	0.998	0.995
460	0.998	0.994
436	0.998	0.994
420	0.998	0.994
405	0.997	0.993
400	0.997	0.993
390	0.997	0.993
380	0.997	0.992
370	0.996	0.991
365	0.996	0.990
350	0.996	0.989
334	0.990	0.976
320	0.976	0.940
310	0.950	0.88
300	0.89	0.74
290	0.73	0.46
280	0.48	0.16
270	0.23	0.03
260	0.07	
250		

### Relative Partial Dispersion

$P_{s,t}$	0.3252
$P_{C,s}$	0.5740
$P_{d,C}$	0.3097
$P_{e,d}$	0.2388
$P_{g,F}$	0.5290
$P_{i,h}$	0.7319
$P'_{s,t}$	0.3232
$P'_{C's}$	0.6201
$P'_{d,C'}$	0.2584
$P'_{e,d}$	0.2374
$P'_{g,F'}$	0.4704
$P'_{i,h}$	0.7276

### Constants of Dispersion Formula

$B_1$	$8.44309338 \cdot 10^{-01}$
$B_2$	$3.44147824 \cdot 10^{-01}$
$B_3$	$9.10790213 \cdot 10^{-01}$
$C_1$	$4.75111955 \cdot 10^{-03}$
$C_2$	$1.49814849 \cdot 10^{-02}$
$C_3$	$9.78600293 \cdot 10^{+01}$

### Constants of Formula $dn/dT$

$D_0$	$-7.24 \cdot 10^{-06}$
$D_1$	$1.58 \cdot 10^{-08}$
$D_2$	$-9.51 \cdot 10^{-12}$
$E_0$	$3.51 \cdot 10^{-07}$
$E_1$	$4.61 \cdot 10^{-10}$
$\lambda_{TK} [\mu m]$	0.156

### Color Code

$\lambda_{80}/\lambda_5$	30/25
--------------------------	-------

### 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	-1.5	-1.2	-0.9	-3.5	-3.2	-2.9
+20/+40	-1.4	-1.0	-0.6	-2.6	-2.3	-2.0
+60/+80	-1.2	-0.7	-0.3	-2.2	-1.8	-1.4

### Deviation of Rel. Partial Dispersion

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

$\Delta P_{C,t}$	0.0202
$\Delta P_{C,s}$	0.0070
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	0.0036
$\Delta P_{i,g}$	0.0322

### Other Properties

$\alpha_{-30/+70^\circ C} [10^{-6}/K]$	9.2
$\alpha_{+20/+300^\circ C} [10^{-6}/K]$	10.0
$T_g [^\circ C]$	466
$T_{10}^{13.0} [^\circ C]$	469
$T_{10}^{7.6} [^\circ C]$	672
$c_p [J/(g \cdot K)]$	0.808
$\lambda [W/(m \cdot K)]$	0.925
$\rho [g/cm^3]$	2.45
$E [10^3 N/mm^2]$	62
$\mu$	0.232
$K [10^{-6} mm^2/N]$	2.91
$HK_{0.1/20}$	520
HG	3
B	1
CR	2
FR	1
SR	4
AR	2
PR	2.3