

Near infrared absorption (Color Compensating) Filter



OPTICS DIVISION

CM700

Standard Thickness

t= 1.00

T50% : 602±4

T400 ≥ 82

T500 ≥ 86

T700 ≤ 6

T1200 ≤ 10

λ (nm)	n	T (%)	τ (%)	A	K ($\times 10^{-4}$)
		1.00	1.00		
2500	1.51191				
2400	1.51319				
2300	1.51442				
2200	1.51562				
2100	1.51677				
2000	1.51789				
1900	1.51897				
1800	1.52002				
1700	1.52104				
1600	1.52204				
1550	1.52254				
1500	1.52303				
1450	1.52353				
1400	1.52402				
1350	1.52452				
1300	1.52502				
1250	1.52554				
1200	1.52606	6.15	6.72	1.17	2.58
1180	1.52628	5.18	5.66	1.25	2.70
1160	1.52650	4.24	4.63	1.33	2.84
1140	1.52672	3.43	3.75	1.43	2.98
1120	1.52694	2.76	3.01	1.52	3.12
1100	1.52717	2.20	2.41	1.62	3.26
1080	1.52740	1.75	1.91	1.72	3.40
1060	1.52764	1.37	1.50	1.82	3.54
1040	1.52789	1.07	1.17	1.93	3.68
1020	1.52814	0.82	0.90	2.05	3.82
1000	1.52840	0.63	0.69	2.16	3.96
990	1.52853	0.55	0.61	2.22	4.02
980	1.52866	0.49	0.53	2.27	4.08
970	1.52880	0.43	0.46	2.33	4.15
960	1.52894	0.37	0.41	2.39	4.20
950	1.52908	0.33	0.36	2.44	4.25
940	1.52922	0.29	0.32	2.50	4.30
930	1.52936	0.26	0.28	2.55	4.34
920	1.52951	0.23	0.25	2.60	4.39
910	1.52966	0.21	0.22	2.65	4.42
900	1.52982	0.18	0.20	2.70	4.45
890	1.52997	0.17	0.19	2.73	4.45
880	1.53014	0.16	0.17	2.77	4.46
870	1.53030	0.15	0.16	2.79	4.45
860	1.53047	0.14	0.16	2.80	4.42
850	1.53064	0.15	0.16	2.80	4.36
840	1.53081	0.15	0.16	2.79	4.30
830	1.53100	0.15	0.16	2.80	4.26
820	1.53118	0.15	0.16	2.79	4.19
810	1.53137	0.17	0.18	2.74	4.07
800	1.53156	0.19	0.21	2.68	3.93
790	1.53176	0.22	0.24	2.62	3.79
780	1.53197	0.27	0.29	2.53	3.62
770	1.53218	0.33	0.36	2.45	3.45
760	1.53240	0.43	0.47	2.33	3.25
750	1.53263	0.56	0.61	2.21	3.04
740	1.53286	0.76	0.84	2.08	2.82
730	1.53310	1.05	1.15	1.94	2.59
720	1.53334	1.51	1.65	1.78	2.35
710	1.53360	2.16	2.37	1.63	2.12
700	1.53387	3.06	3.35	1.48	1.89

[illegible]

Specific Gravity	
d	3.06

Chemical Properties	
D _W	1
D _A	5
T _{Blue}	
D _{NaOH}	
D _{STPP}	
D ₀	
D _H	

Thermal Properties	
$T_g (^{\circ}\text{C})$	411
$T_s (^{\circ}\text{C})$	457
$T_{10^{14.5}} (^{\circ}\text{C})$	
$T_{10^{13}} (^{\circ}\text{C})$	
$T_{10^{7.6}} (^{\circ}\text{C})$	
$\alpha_{-30/+70^{\circ}\text{C}} (10^{-7}/^{\circ}\text{C})$	
$\alpha_{100/300^{\circ}\text{C}} (10^{-7}/^{\circ}\text{C})$	146
$\lambda [\text{W}/(\text{m}\cdot\text{K})]$	
$C_p [\text{kJ}/(\text{kg}\cdot\text{K})]$	

Mechanical Properties	
H _K	375
F _A	520
E (GPa)	73
G (GPa)	29
μ	0.27
σ_b (MPa)	

Constants of dispersion formula			
A_0	2.3310080	E	0
A_1	-7.5454820	E	-3
A_2	1.2675578	E	-2
A_3	-1.8236884	E	-4
A_4	4.1745573	E	-5
A_5	-1.6235392	E	-6

Refractive Index & ν d		
nC	656. 273	1. 53515
nd	587. 562	1. 53769
nF	486. 133	1. 54345
ν d		64. 78

Chromaticity coordinates		
	T	τ
x	0.254	0.254
y	0.318	0.318

Transmittance ratio		
	T	τ
700nm/500nm	0.034	0.034
600nm/500nm	0.571	0.571
400nm/500nm	0.984	0.987

Remarks	

Date:	2025. 11. 10

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						T1200 ≤10

