HOYA

HOYA CANDEO OPTRONICS CORPORATION

Thickness 2.50 mm

B410

Transmittance (T) units: %

λnm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390
T	0.0	0.0	0.0	0.0	0.0	0.0	1.3	7.8	17.5	29.4	43.2	57.2	68.8	77.4	83.3	87.1	89.4	91.0	91.7	92.1
λnm	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590
T	92.1	92.0	91.7	91.1	89.9	88.8	87.7	85.5	81.9	77.0	70.9	63.7	55.7	47.1	39.0	29.9	21.6	15.2	10.5	7.1
λnm	600	610	620	630	640	650	660	670	680	690	700	710	720	730	740	750	760	770	780	790
T	4.1	1.7	1.0	0.9	1.0	0.8	0.4	0.5	0.7	0.7	1.2	4.3	13.8	29.6	50.4	72.5	85.3	90.1	91.5	92.0
λnm	800	810	820	830	840	850	860	870	880	890	900	910	920	930	940	950	960	970	980	990
T	92.1	92.1	92.1	92.1	92.1	92.0	91.9	91.8	91.8	91.7	91.6	91.5	91.4	91.3	91.1	91.0	90.8	90.7	90.4	90.2
λnm	1000	1010	1020	1030	1040	1050	1060	1070	1080	1090	1100	1120	1140	1160	1180	1200				
T	90.0	89.7	89.5	89.2	88.8	88.5	88.1	87.7	87.4	87.0	86.5	85.5	84.3	83.2	81.8	80.4				

Refractive Index/Absorption coefficient/Reflection coefficent

λnm	400	500	600	700	800	900	1000
n	1.486	1.473	1.467	1.463	1.460	1.459	1.457
K	4.2E-08	3.4E-06	5.9E-05	1.1E-04	2.8E-08	6.9E-11	1.4E-12
P	0.926	0.929	0.931	0.932	0.932	0.933	0.933

Classes of Bubbles and Inclusions

Bubble Class
3

Color Specification

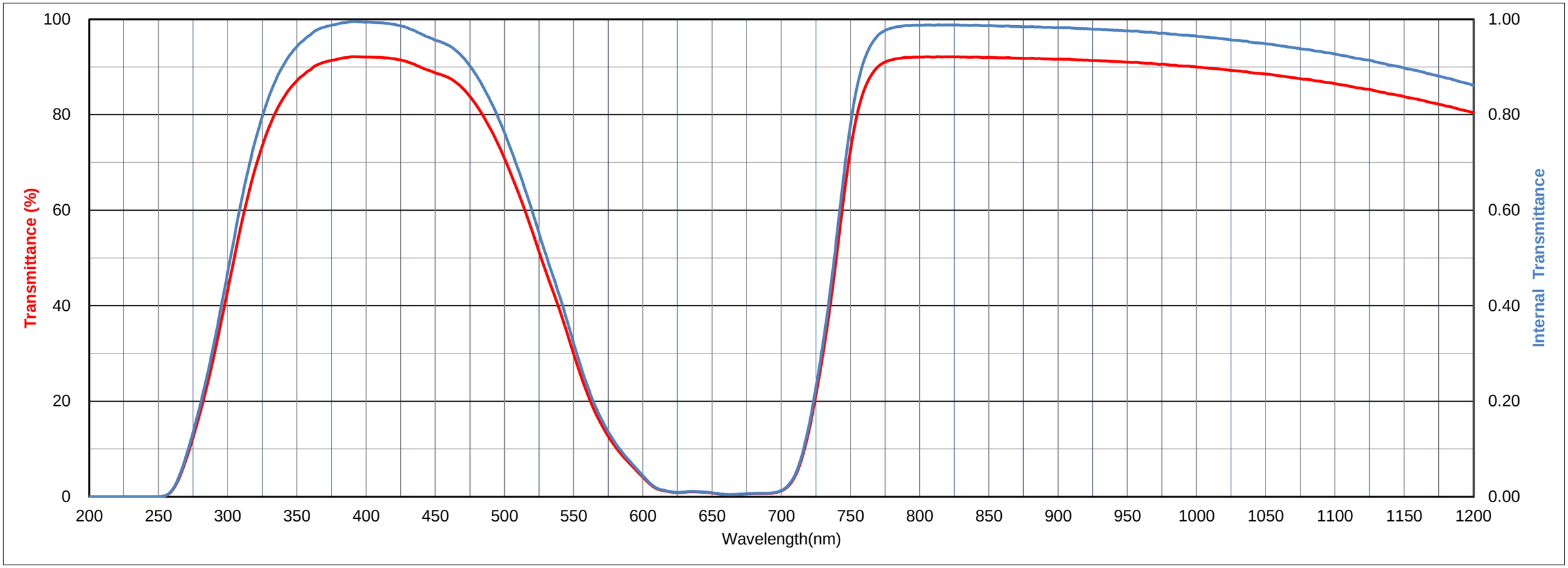
	x	y	Y	λ_d	P_e
A	0.198	0.339	22	490	62
C	0.162	0.190	30	480	68
D65	0.162	0.205	30	481	67

Properties

Chemical		Thermal				Mechanical		Others
D_W	D_A	Tg	Ts	α -30/70	α 100/300	H_K	F_A	d
3	4	410	500	70	79	420	120	2.27

Tolerance of Transmittance (T)

Maximum Transmitance	Less than 1% Wavelength at Short wave Side	Less than 5% Wavelength at Long wave Side
Tmax(%)	λs1(nm)	λl5(nm)
91±3	>250	<600



All data is mean values of various melts.

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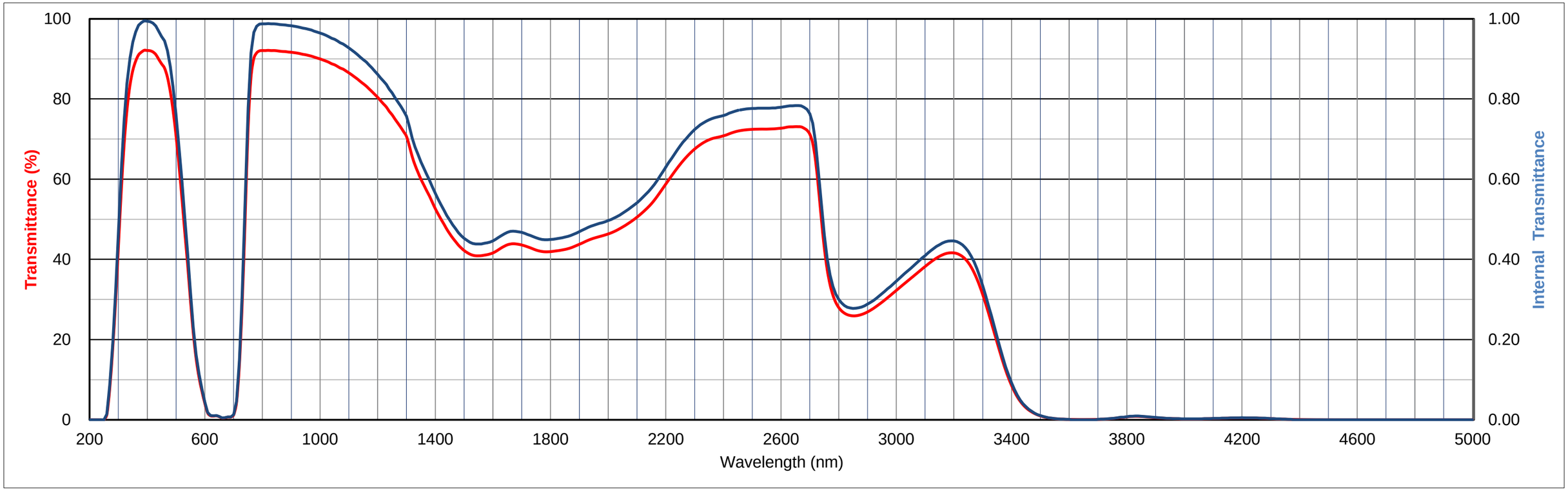
λnm	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590
T	92.1	92.0	91.7	91.1	89.9	88.8	87.7	85.5	81.9	77.0	70.9	63.7	55.7	47.1	39.0	29.9	21.6	15.2	10.5	7.1
λnm	600	610	620	630	640	650	660	670	680	690	700	710	720	730	740	750	760	770	780	790
T	4.1	1.7	1.0	0.9	1.0	0.8	0.4	0.5	0.7	0.7	1.2	4.3	13.8	29.6	50.4	72.5	85.3	90.1	91.5	92.0
λnm	800	810	820	830	840	850	860	870	880	890	900	910	920	930	940	950	960	970	980	990
T	92.1	92.1	92.1	92.1	92.1	92.0	91.9	91.8	91.8	91.7	91.6	91.5	91.4	91.3	91.1	91.0	90.8	90.7	90.4	90.2
λnm	1000	1010	1020	1030	1040	1050	1060	1070	1080	1090	1100	1110	1120	1130	1140	1150	1160	1170	1180	1190
T	90.0	89.7	89.5	89.2	88.8	88.5	88.1	87.7	87.4	87.0	86.5	86.0	85.5	85.0	84.3	83.8	83.2	82.5	81.8	81.1
λnm	1200	1210	1220	1230	1240	1250	1260	1270	1280	1290	1300	1310	1320	1330	1340	1350	1360	1370	1380	1390
T	80.4	79.6	78.8	78.0	76.9	76.1	75.0	74.0	72.9	71.8	70.6	68.3	65.6	63.4	61.7	60.0	58.6	57.1	55.7	54.2
λnm	1400	1410	1420	1430	1440	1450	1460	1470	1480	1490	1500	1510	1520	1530	1540	1550	1560	1570	1580	1590
T	52.6	51.3	50.0	48.8	47.5	46.4	45.4	44.5	43.6	42.8	42.2	41.7	41.3	41.0	40.9	40.9	40.9	41.0	41.2	41.4
λnm	1600	1610	1620	1630	1640	1650	1660	1670	1680	1690	1700	1710	1720	1730	1740	1750	1760	1770	1780	1790
T	41.6	42.0	42.4	42.9	43.3	43.6	43.8	43.9	43.8	43.7	43.6	43.4	43.1	42.9	42.6	42.3	42.1	42.0	41.9	41.9
λnm	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990
T	41.9	42.0	42.1	42.2	42.3	42.5	42.6	42.9	43.1	43.5	43.8	44.1	44.4	44.7	45.0	45.3	45.5	45.7	45.9	46.1
λnm	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950
T	46.3	48.1	50.5	53.9	58.8	63.7	67.5	69.8	70.8	72.0	72.4	72.5	72.7	73.1	71.2	43.0	28.0	25.9	26.9	29.3
λnm	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700	3750	3800	3850	3900	3950
T	32.3	35.2	38.2	40.8	41.6	39.2	31.2	19.3	8.6	3.0	1.0	0.3	0.1	0.1	0.1	0.3	0.7	0.8	0.5	0.3
λnm	4000	4050	4100	4150	4200	4250	4300	4350	4400	4450	4500	4550	4600	4650	4700	4750	4800	4850	4900	4950
T	0.2	0.2	0.3	0.4	0.5	0.4	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
λnm	5000																			
T	0.0																			



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