

DATA SHEET

HOYA HA15

HOYA

HOYA CORPORATION OPTICS SECTION

Thickness 3.00 mm

HA15

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	<1E-6	<1E-6	<1E-6	<1E-6	<1E-6	<1E-6	<1E-6	4.32E-05	0.01	0.20	2.31	11.86	30.59	50.81	65.17	74.39	80.53	83.05	83.78	82.40	
λnm	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	
T	79.69	78.02	77.11	78.05	79.31	79.59	78.63	79.44	80.26	80.90	80.59	80.02	78.93	78.35	78.78	79.84	79.86	79.15	78.00	76.35	
λnm	600	610	620	630	640	650	660	670	680	690	700	710	720	730	740	750	760	770	780	790	
T	74.23	71.61	68.36	64.65	60.65	56.38	51.81	47.56	42.67	37.73	32.88	28.20	24.00	20.16	16.70	13.62	10.89	8.57	6.63	5.07	
λnm	800	810	820	830	840	850	860	870	880	890	900	910	920	930	940	950	960	970	980	990	
T	3.80	2.84	2.12	1.52	1.08	0.76	0.53	0.37	0.26	0.18	0.12	0.08	0.06	0.04	0.03	0.02	0.01	0.01	0.01	4.51E-03	
λnm	1000	1010	1020	1030	1040	1050	1060	1070	1080	1090	1100	1120	1140	1160	1180	1200					
T	3.28E-03	2.46E-03	1.86E-03	1.43E-03	1.12E-03	8.91E-04	7.22E-04	5.96E-04	5.05E-04	4.33E-04	3.75E-04	2.99E-04	2.53E-04	2.26E-04	2.12E-04	2.06E-04					

Refractive Index/Absorption coefficient/Reflection coefficient

λnm	400	500	600	700	800	900	1000
n	1.538	1.529	1.524	1.521	1.519	1.518	1.517
P	0.914	0.916	0.917	0.918	0.919	0.919	0.919

Classes of Bubbles and Inclusions

Bubble Class
3

Color Specification

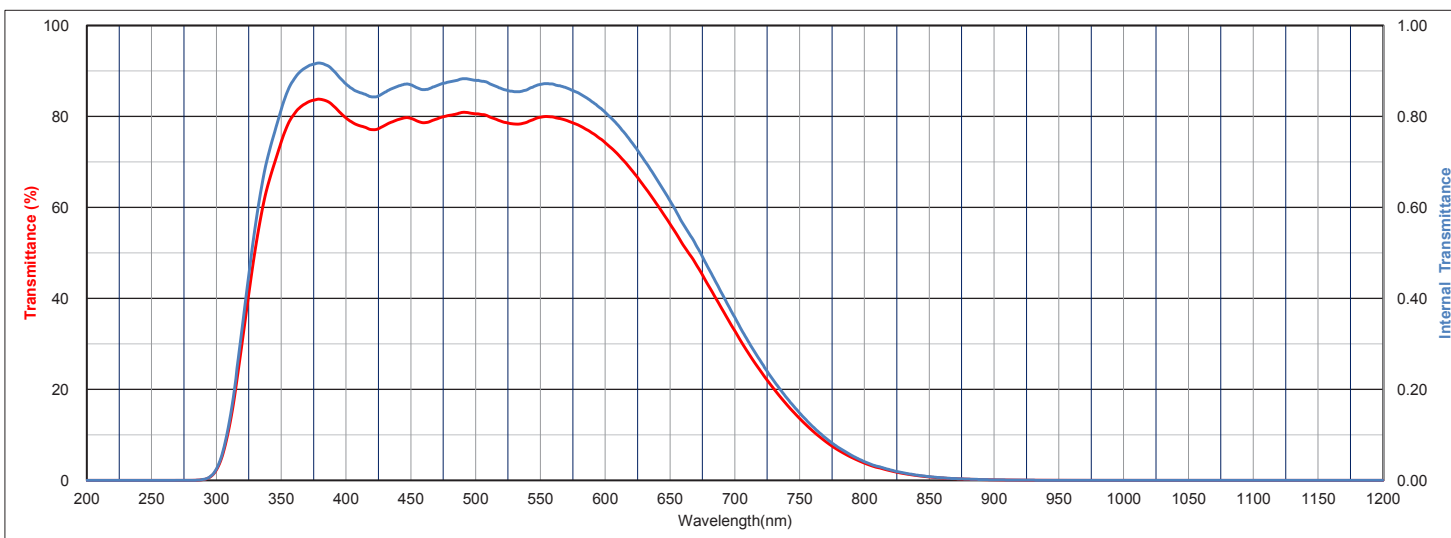
	x	y	Y	λ _d	P _e
A	0.431	0.414	75	502	4
C	0.298	0.317	77	492	4
D65	0.301	0.330	77	492	4

Properties

Chemical		Thermal				Mechanical		Others
D _W	D _A	T _g	T _s	α -30/70	α 100/300	H _k	F _A	d
1	-	597	-	-	65	502	-	2.64

Tolerance of Transmittance (T)

Wavelength for Max. Transmittance	Transmittance at 750nm	Average Transmittance at 400nm-700nm
λTmax(nm)	T750(%)	Tav(%)
380±5	<15	70±5



All data is mean values of various melts.

The content of this catalog is accurate as of October, 2020

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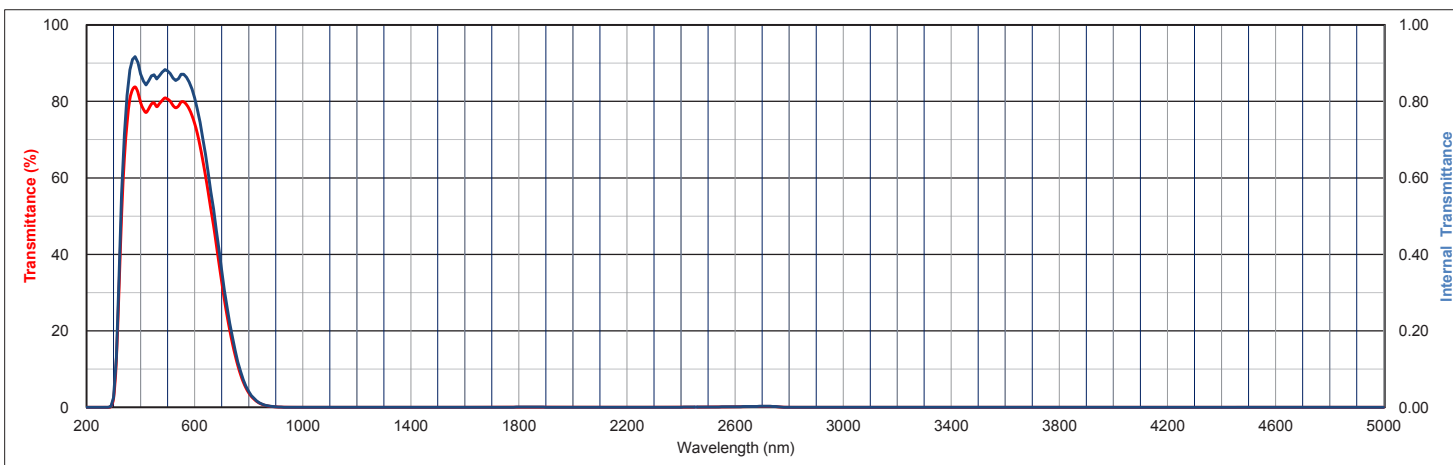
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Transmittance (T)	units: %																			
λnm	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390
T	<1E-6	<1E-6	<1E-6	<1E-6	<1E-6	<1E-6	<1E-6	4.3E-05	0.01	0.20	2.31	11.86	30.59	50.81	65.17	74.39	80.53	83.05	83.78	82.40
λnm	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590
T	79.69	78.02	77.11	78.05	79.31	79.59	78.63	79.44	80.26	80.90	80.59	80.02	78.93	78.35	78.78	79.84	79.86	79.15	78.00	76.35
λnm	600	610	620	630	640	650	660	670	680	690	700	710	720	730	740	750	760	770	780	790
T	74.23	71.61	68.36	64.65	60.65	56.38	51.81	47.56	42.67	37.73	32.88	28.20	24.00	20.16	16.70	13.62	10.89	8.57	6.63	5.07
λnm	800	810	820	830	840	850	860	870	880	890	900	910	920	930	940	950	960	970	980	990
T	3.80	2.84	2.12	1.52	1.08	0.76	0.53	0.37	0.26	0.18	0.12	0.08	0.06	0.04	0.03	0.02	0.01	0.01	0.01	0.00
λnm	1000	1010	1020	1030	1040	1050	1060	1070	1080	1090	1100	1110	1120	1130	1140	1150	1160	1170	1180	1190
T	3.3E-03	2.5E-03	1.9E-03	1.4E-03	1.1E-03	8.9E-04	7.2E-04	6.0E-04	5.0E-04	4.3E-04	3.8E-04	3.3E-04	3.0E-04	2.7E-04	2.5E-04	2.4E-04	2.3E-04	2.2E-04	2.1E-04	2.1E-04
λnm	1200	1210	1220	1230	1240	1250	1260	1270	1280	1290	1300	1310	1320	1330	1340	1350	1360	1370	1380	1390
T	2.1E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
λnm	1400	1410	1420	1430	1440	1450	1460	1470	1480	1490	1500	1510	1520	1530	1540	1550	1560	1570	1580	1590
T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
λnm	1600	1610	1620	1630	1640	1650	1660	1670	1680	1690	1700	1710	1720	1730	1740	1750	1760	1770	1780	1790
T	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04
λnm	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990
T	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03
λnm	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950
T	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.04	0.05	0.08	0.10	0.14	0.19	0.24	0.18	0.01	0.00	0.00	0.00
λnm	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700	3750	3800	3850	3900	3950
T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
λnm	4000	4050	4100	4150	4200	4250	4300	4350	4400	4450	4500	4550	4600	4650	4700	4750	4800	4850	4900	4950
T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
λnm	5000																			
T	0.00																			



All data is mean values of various melts.

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