

# DATA SHEET

**HOYA® V30**

**HOYA**

HOYA CANDEO OPTRONICS CORPORATION

Thickness 2.50 mm

V30

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  | 0.1  | 1.1  | 2.2  | 5.2  | 7.8  | 9.5  | 11.4 | 23.2 | 30.1 | 6.7  | 24.4 | 0.0  | 0.1  | 77.5 | 78.2 | 81.8 |
| λnm | 400  | 410  | 420  | 430  | 440  | 450  | 460  | 470  | 480  | 490  | 500  | 510  | 520  | 530  | 540  | 550  | 560  | 570  | 580  | 590  |
| T   | 83.0 | 83.0 | 74.0 | 15.6 | 76.4 | 65.2 | 26.1 | 23.7 | 27.4 | 68.3 | 27.0 | 1.1  | 1.2  | 0.3  | 32.9 | 66.7 | 57.0 | 0.0  | 0.0  | 0.0  |
| λnm | 600  | 610  | 620  | 630  | 640  | 650  | 660  | 670  | 680  | 690  | 700  | 710  | 720  | 730  | 740  | 750  | 760  | 770  | 780  | 790  |
| T   | 3.0  | 63.8 | 69.4 | 61.3 | 76.0 | 83.2 | 81.4 | 52.7 | 20.8 | 40.4 | 69.4 | 75.7 | 59.4 | 2.4  | 0.0  | 0.0  | 0.4  | 20.1 | 13.3 | 0.1  |
| λnm | 800  | 810  | 820  | 830  | 840  | 850  | 860  | 870  | 880  | 890  | 900  | 910  | 920  | 930  | 940  | 950  | 960  | 970  | 980  | 990  |
| T   | 0.0  | 0.0  | 1.2  | 20.7 | 56.5 | 54.2 | 4.5  | 1.9  | 1.1  | 9.8  | 28.7 | 52.7 | 71.0 | 82.9 | 85.6 | 86.1 | 86.3 | 86.3 | 86.5 | 86.5 |
| λnm | 1000 | 1010 | 1020 | 1030 | 1040 | 1050 | 1060 | 1070 | 1080 | 1090 | 1100 | 1120 | 1140 | 1160 | 1180 | 1200 |      |      |      |      |
| T   | 86.5 | 86.5 | 86.5 | 86.6 | 86.7 | 86.6 | 86.6 | 86.7 | 86.8 | 86.8 | 86.8 | 87.0 | 86.9 | 87.0 | 87.0 | 87.1 |      |      |      |      |

Refractive Index/Absorption coefficient/Reflection coefficient

|     |         |         |         |         |         |         |         |
|-----|---------|---------|---------|---------|---------|---------|---------|
| λnm | 400     | 500     | 600     | 700     | 800     | 900     | 1000    |
| n   | 1.705   | 1.693   | 1.686   | 1.682   | 1.680   | 1.678   | 1.677   |
| K   | 6.7E-07 | 1.8E-05 | 6.1E-05 | 5.6E-06 | 2.0E-04 | 3.6E-05 | 8.5E-12 |
| P   | 0.873   | 0.876   | 0.877   | 0.878   | 0.879   | 0.880   | 0.880   |

Classes of Bubbles and Inclusions

|              |   |
|--------------|---|
| Bubble Class | 3 |
|--------------|---|

Color Specification

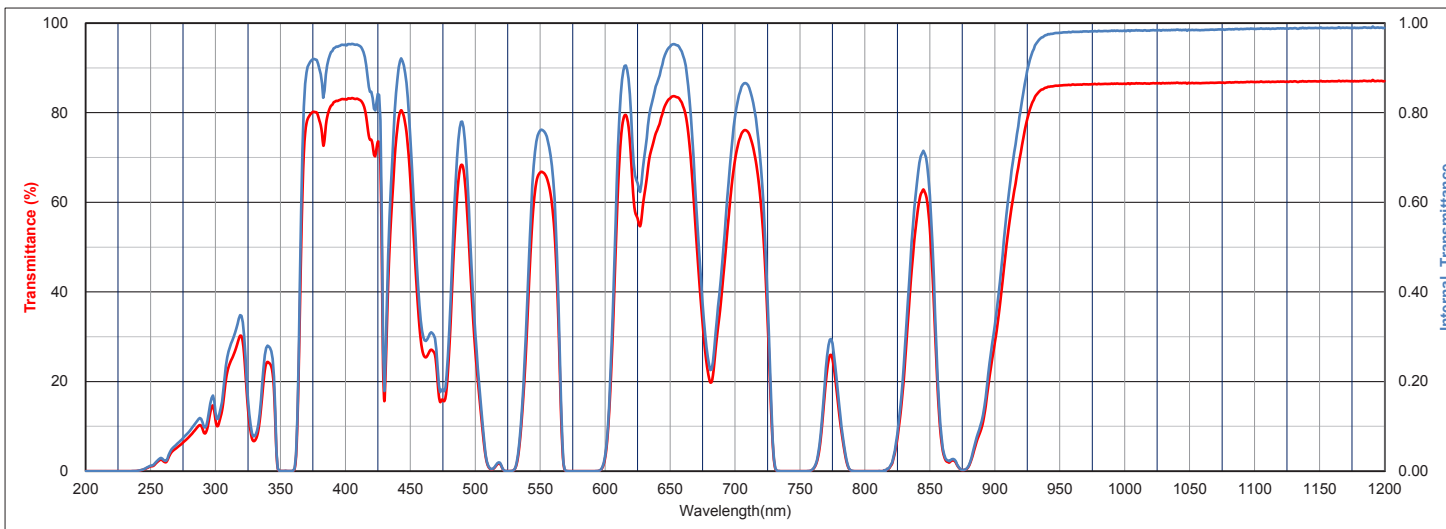
|     |       |       |    |                |                |
|-----|-------|-------|----|----------------|----------------|
|     | x     | y     | Y  | λ <sub>s</sub> | P <sub>e</sub> |
| A   | 0.486 | 0.339 | 30 | -546           | 31             |
| C   | 0.307 | 0.232 | 28 | -553           | 34             |
| D65 | 0.313 | 0.241 | 28 | -552           | 34             |

Properties

| Chemical       |                | Thermal        |                |                     |                      | Mechanical     |                | Others |
|----------------|----------------|----------------|----------------|---------------------|----------------------|----------------|----------------|--------|
| D <sub>w</sub> | D <sub>k</sub> | T <sub>g</sub> | T <sub>s</sub> | α <sub>-30/70</sub> | α <sub>100/300</sub> | H <sub>k</sub> | F <sub>k</sub> | d      |
| 1              | 4              | 615            | 650            | 60                  | 70                   | 660            | 70             | 3.64   |

Tolerance of Transmittance (T)

|                        |                        |
|------------------------|------------------------|
| Transmittance at 550nm | Transmittance at 586nm |
| T550(%)                | T586(%)                |
| 68±3                   | <1                     |



All data is mean values of various melts.

The content of this catalog is accurate as of April ,2014

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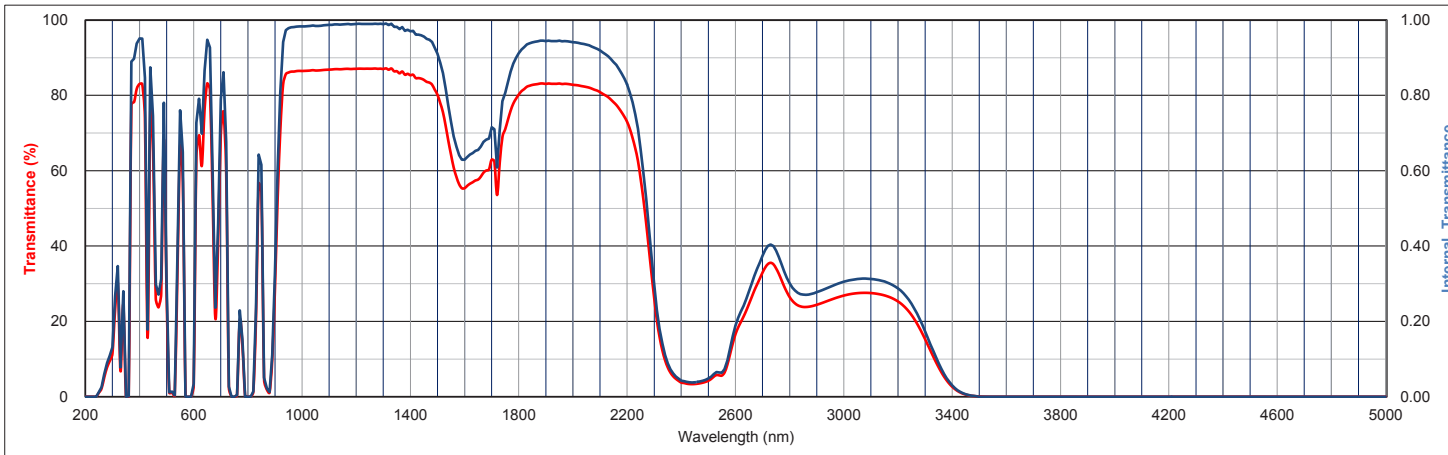
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Thickness 2.50 mm

V30

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  | 0.1  | 1.1  | 2.2  | 5.2  | 7.8  | 9.5  | 11.4 | 23.2 | 30.1 | 6.7  | 24.4 | 0.0  | 0.1  | 77.5 | 78.2 | 81.8 |
| λnm | 400  | 410  | 420  | 430  | 440  | 450  | 460  | 470  | 480  | 490  | 500  | 510  | 520  | 530  | 540  | 550  | 560  | 570  | 580  | 590  |
| T   | 83.0 | 83.0 | 74.0 | 15.6 | 76.4 | 65.2 | 26.1 | 23.7 | 27.4 | 68.3 | 27.0 | 1.1  | 1.2  | 0.3  | 32.9 | 66.7 | 57.0 | 0.0  | 0.0  | 0.0  |
| λnm | 600  | 610  | 620  | 630  | 640  | 650  | 660  | 670  | 680  | 690  | 700  | 710  | 720  | 730  | 740  | 750  | 760  | 770  | 780  | 790  |
| T   | 3.0  | 63.8 | 69.4 | 61.3 | 76.0 | 83.2 | 81.4 | 52.7 | 20.8 | 40.4 | 69.4 | 75.7 | 59.4 | 2.4  | 0.0  | 0.0  | 0.4  | 20.1 | 13.3 | 0.1  |
| λnm | 800  | 810  | 820  | 830  | 840  | 850  | 860  | 870  | 880  | 890  | 900  | 910  | 920  | 930  | 940  | 950  | 960  | 970  | 980  | 990  |
| T   | 0.0  | 0.0  | 1.2  | 20.7 | 56.5 | 54.2 | 4.5  | 1.9  | 1.1  | 9.8  | 28.7 | 52.7 | 71.0 | 82.9 | 85.6 | 86.1 | 86.3 | 86.3 | 86.5 | 86.5 |
| λnm | 1000 | 1010 | 1020 | 1030 | 1040 | 1050 | 1060 | 1070 | 1080 | 1090 | 1100 | 1110 | 1120 | 1130 | 1140 | 1150 | 1160 | 1170 | 1180 | 1190 |
| T   | 86.5 | 86.5 | 86.5 | 86.6 | 86.7 | 86.6 | 86.6 | 86.7 | 86.8 | 86.8 | 86.8 | 86.9 | 87.0 | 87.0 | 86.9 | 87.0 | 87.0 | 87.1 | 87.0 | 87.0 |
| λnm | 1200 | 1210 | 1220 | 1230 | 1240 | 1250 | 1260 | 1270 | 1280 | 1290 | 1300 | 1310 | 1320 | 1330 | 1340 | 1350 | 1360 | 1370 | 1380 | 1390 |
| T   | 87.1 | 87.1 | 87.1 | 87.1 | 87.1 | 87.1 | 87.1 | 87.1 | 87.1 | 87.1 | 87.0 | 87.2 | 86.8 | 87.1 | 86.4 | 86.4 | 85.9 | 86.3 | 85.5 | 85.7 |
| λnm | 1400 | 1410 | 1420 | 1430 | 1440 | 1450 | 1460 | 1470 | 1480 | 1490 | 1500 | 1510 | 1520 | 1530 | 1540 | 1550 | 1560 | 1570 | 1580 | 1590 |
| T   | 85.4 | 85.5 | 84.6 | 84.6 | 84.4 | 84.1 | 83.6 | 83.4 | 82.9 | 81.5 | 80.2 | 78.0 | 75.6 | 72.0 | 67.9 | 64.3 | 60.8 | 58.3 | 56.4 | 55.4 |
| λnm | 1600 | 1610 | 1620 | 1630 | 1640 | 1650 | 1660 | 1670 | 1680 | 1690 | 1700 | 1710 | 1720 | 1730 | 1740 | 1750 | 1760 | 1770 | 1780 | 1790 |
| T   | 55.4 | 56.0 | 56.5 | 56.9 | 57.4 | 57.6 | 58.4 | 59.5 | 60.0 | 60.3 | 63.0 | 62.5 | 53.5 | 62.3 | 69.0 | 71.0 | 73.5 | 75.9 | 77.8 | 79.1 |
| λnm | 1800 | 1810 | 1820 | 1830 | 1840 | 1850 | 1860 | 1870 | 1880 | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 |
| T   | 80.2 | 81.1 | 81.7 | 82.3 | 82.6 | 82.8 | 82.9 | 83.0 | 83.2 | 83.2 | 83.0 | 83.2 | 83.1 | 83.1 | 83.1 | 83.2 | 83.0 | 83.1 | 83.0 | 82.9 |
| λnm | 2000 | 2050 | 2100 | 2150 | 2200 | 2250 | 2300 | 2350 | 2400 | 2450 | 2500 | 2550 | 2600 | 2650 | 2700 | 2750 | 2800 | 2850 | 2900 | 2950 |
| T   | 82.8 | 82.2 | 80.9 | 78.2 | 73.0 | 57.8 | 26.2 | 7.8  | 3.7  | 3.4  | 4.2  | 5.6  | 16.6 | 24.6 | 33.0 | 34.1 | 26.5 | 23.8 | 24.4 | 25.7 |
| λnm | 3000 | 3050 | 3100 | 3150 | 3200 | 3250 | 3300 | 3350 | 3400 | 3450 | 3500 | 3550 | 3600 | 3650 | 3700 | 3750 | 3800 | 3850 | 3900 | 3950 |
| T   | 26.9 | 27.5 | 27.5 | 26.9 | 25.3 | 21.7 | 15.3 | 7.8  | 2.6  | 0.6  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| λnm | 4000 | 4050 | 4100 | 4150 | 4200 | 4250 | 4300 | 4350 | 4400 | 4450 | 4500 | 4550 | 4600 | 4650 | 4700 | 4750 | 4800 | 4850 | 4900 | 4950 |
| T   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 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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