

## GG455

| Reflection factor |      |
|-------------------|------|
| P <sub>d</sub>    | 0.92 |

| Reference thickness |   |
|---------------------|---|
| d [mm]              | 3 |

| Spectral values guaranteed                                   |           |
|--|-----------|
| λ <sub>c</sub> (τ <sub>i</sub> = 0.50) [nm]                  | = 455 ± 6 |
| λ <sub>s</sub> (τ <sub>i</sub> s = 1·10 <sup>-5</sup> ) [nm] | = 390     |
| λ <sub>p</sub> (τ <sub>i</sub> p = 0.92) [nm]                | = 530     |

| Refractive index n |         |      |
|--------------------|---------|------|
| λ [nm]             | Element | n    |
| 546                | Hg      | 1.53 |
| 587.6              | He      | 1.52 |
| 852.1              | Cs      | 1.52 |
| 1014               | Hg      | 1.51 |

| Density                |      |
|------------------------|------|
| ρ [g/cm <sup>3</sup> ] | 2.56 |

| Bubble content |   |
|----------------|---|
| Bubble class   | 3 |

| Chemical resistance |     |
|---------------------|-----|
| FR class            | 0   |
| SR class            | 1.0 |
| AR class            | 1.0 |

| Transformation temperature |     |
|----------------------------|-----|
| T <sub>g</sub> [°C]        | 529 |

| Thermal expansion                            |     |
|--|-----|
| α <sub>-30/+70°C</sub> [10 <sup>-6</sup> /K] | 8.2 |
| α <sub>20/300°C</sub> [10 <sup>-6</sup> /K]  | 9.5 |
| α <sub>20/200°C</sub> [10 <sup>-6</sup> /K]  |     |

| Temperature coefficient |      |
|-------------------------|------|
| T <sub>k</sub> [nm/°C]  | 0.09 |

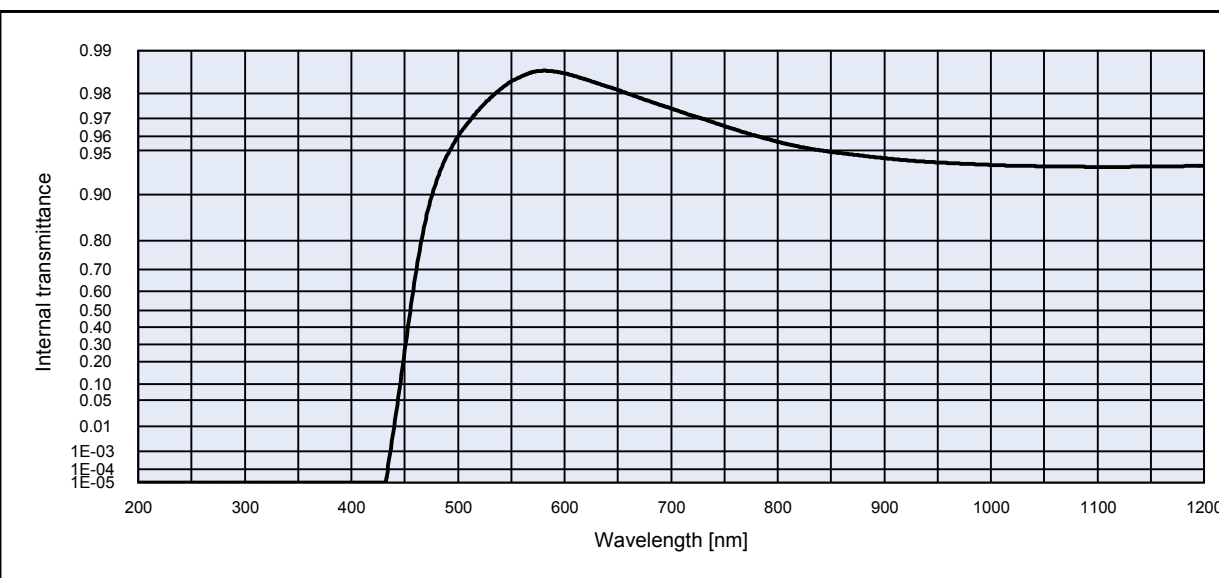
### Notes

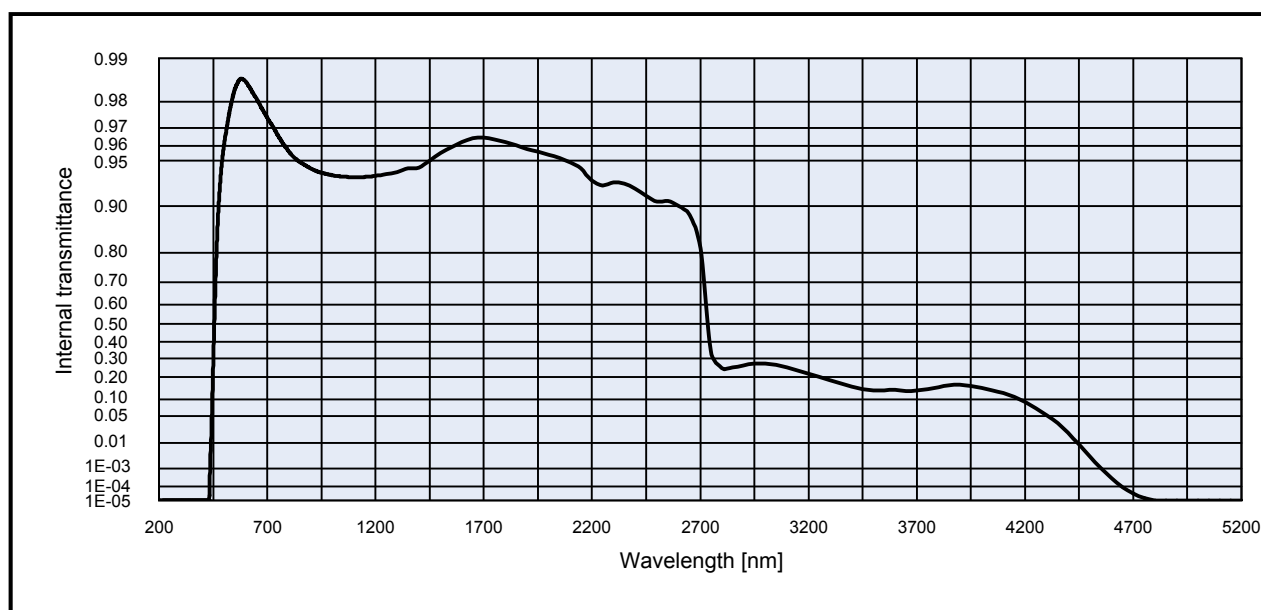
Colloidally colored glass

Long pass filter

All data without tolerances are to be understood to be reference values. Guaranteed values are only those values listed in the section "Spectral values guaranteed".

| Colorimetric evaluation |                         |       |       |                     |                   |       |       |                     |                                 |       |       |  |
|-------------------------|-------------------------|-------|-------|---------------------|-------------------|-------|-------|---------------------|---------------------------------|-------|-------|--|
| Illuminant              | A ( Planck T = 2856 K ) |       |       | Illuminant          | Planck T = 3200 K |       |       | Illuminant          | D65 ( T <sub>c</sub> = 6504 K ) |       |       |  |
| d [mm]                  | 1                       | 2     | 3     | d [mm]              | 1                 | 2     | 3     | d [mm]              | 1                               | 2     | 3     |  |
| x                       | 0.465                   | 0.470 | 0.473 | x                   | 0.444             | 0.451 | 0.455 | x                   | 0.344                           | 0.354 | 0.361 |  |
| y                       | 0.431                   | 0.437 | 0.441 | y                   | 0.429             | 0.438 | 0.443 | y                   | 0.394                           | 0.414 | 0.426 |  |
| Y                       | 91                      | 90    | 90    | Y                   | 91                | 90    | 90    | Y                   | 91                              | 90    | 89    |  |
| λ <sub>d</sub> [nm]     | 579                     | 580   | 580   | λ <sub>d</sub> [nm] | 577               | 578   | 578   | λ <sub>d</sub> [nm] | 568                             | 568   | 568   |  |
| P <sub>e</sub>          | 0.28                    | 0.36  | 0.41  | P <sub>e</sub>      | 0.29              | 0.37  | 0.42  | P <sub>e</sub>      | 0.27                            | 0.36  | 0.41  |  |





Internal transmittance  $\tau_i$  at reference thickness  $d$  [mm] = 3

The internal transmittance values, tabulated and graphically represented, are reference values only

| $\lambda$ [nm] | $\tau_i$  | $\lambda$ [nm] | $\tau_i$ | $\lambda$ [nm] | $\tau_i$ | $\lambda$ [nm] | $\tau_i$ | $\lambda$ [nm] | $\tau_i$ | $\lambda$ [nm] | $\tau_i$  |
|----------------|-----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|-----------|
| 200            | < 1.0E-05 | 500            | 9.6E-01  | 800            | 9.6E-01  | 1100           | 9.4E-01  | 2200           | 9.3E-01  | 3700           | 1.4E-01   |
| 210            | < 1.0E-05 | 510            | 9.7E-01  | 810            | 9.5E-01  | 1110           | 9.4E-01  | 2250           | 9.3E-01  | 3750           | 1.4E-01   |
| 220            | < 1.0E-05 | 520            | 9.7E-01  | 820            | 9.5E-01  | 1120           | 9.4E-01  | 2300           | 9.3E-01  | 3800           | 1.5E-01   |
| 230            | < 1.0E-05 | 530            | 9.8E-01  | 830            | 9.5E-01  | 1130           | 9.4E-01  | 2350           | 9.3E-01  | 3850           | 1.6E-01   |
| 240            | < 1.0E-05 | 540            | 9.8E-01  | 840            | 9.5E-01  | 1140           | 9.4E-01  | 2400           | 9.2E-01  | 3900           | 1.6E-01   |
| 250            | < 1.0E-05 | 550            | 9.8E-01  | 850            | 9.5E-01  | 1150           | 9.4E-01  | 2450           | 9.1E-01  | 3950           | 1.6E-01   |
| 260            | < 1.0E-05 | 560            | 9.8E-01  | 860            | 9.5E-01  | 1160           | 9.4E-01  | 2500           | 9.1E-01  | 4000           | 1.5E-01   |
| 270            | < 1.0E-05 | 570            | 9.9E-01  | 870            | 9.5E-01  | 1170           | 9.4E-01  | 2550           | 9.1E-01  | 4050           | 1.4E-01   |
| 280            | < 1.0E-05 | 580            | 9.9E-01  | 880            | 9.5E-01  | 1180           | 9.4E-01  | 2600           | 9.0E-01  | 4100           | 1.2E-01   |
| 290            | < 1.0E-05 | 590            | 9.9E-01  | 890            | 9.4E-01  | 1190           | 9.4E-01  | 2650           | 8.9E-01  | 4150           | 1.1E-01   |
| 300            | < 1.0E-05 | 600            | 9.9E-01  | 900            | 9.4E-01  | 1200           | 9.4E-01  | 2700           | 8.1E-01  | 4200           | 9.1E-02   |
| 310            | < 1.0E-05 | 610            | 9.8E-01  | 910            | 9.4E-01  | 1250           | 9.4E-01  | 2750           | 3.5E-01  | 4250           | 7.1E-02   |
| 320            | < 1.0E-05 | 620            | 9.8E-01  | 920            | 9.4E-01  | 1300           | 9.4E-01  | 2800           | 2.5E-01  | 4300           | 5.1E-02   |
| 330            | < 1.0E-05 | 630            | 9.8E-01  | 930            | 9.4E-01  | 1350           | 9.4E-01  | 2850           | 2.5E-01  | 4350           | 3.5E-02   |
| 340            | < 1.0E-05 | 640            | 9.8E-01  | 940            | 9.4E-01  | 1400           | 9.4E-01  | 2900           | 2.6E-01  | 4400           | 2.0E-02   |
| 350            | < 1.0E-05 | 650            | 9.8E-01  | 950            | 9.4E-01  | 1450           | 9.5E-01  | 2950           | 2.7E-01  | 4450           | 9.1E-03   |
| 360            | < 1.0E-05 | 660            | 9.8E-01  | 960            | 9.4E-01  | 1500           | 9.6E-01  | 3000           | 2.7E-01  | 4500           | 3.4E-03   |
| 370            | < 1.0E-05 | 670            | 9.8E-01  | 970            | 9.4E-01  | 1550           | 9.6E-01  | 3050           | 2.6E-01  | 4550           | 1.1E-03   |
| 380            | < 1.0E-05 | 680            | 9.8E-01  | 980            | 9.4E-01  | 1600           | 9.6E-01  | 3100           | 2.5E-01  | 4600           | 3.1E-04   |
| 390            | < 1.0E-05 | 690            | 9.8E-01  | 990            | 9.4E-01  | 1650           | 9.6E-01  | 3150           | 2.3E-01  | 4650           | 9.5E-05   |
| 400            | < 1.0E-05 | 700            | 9.7E-01  | 1000           | 9.4E-01  | 1700           | 9.7E-01  | 3200           | 2.2E-01  | 4700           | 3.2E-05   |
| 410            | < 1.0E-05 | 710            | 9.7E-01  | 1010           | 9.4E-01  | 1750           | 9.6E-01  | 3250           | 2.0E-01  | 4750           | 1.5E-05   |
| 420            | < 1.0E-05 | 720            | 9.7E-01  | 1020           | 9.4E-01  | 1800           | 9.6E-01  | 3300           | 1.8E-01  | 4800           | < 1.0E-05 |
| 430            | < 1.0E-05 | 730            | 9.7E-01  | 1030           | 9.4E-01  | 1850           | 9.6E-01  | 3350           | 1.7E-01  | 4850           | < 1.0E-05 |
| 440            | 9.6E-03   | 740            | 9.7E-01  | 1040           | 9.4E-01  | 1900           | 9.6E-01  | 3400           | 1.5E-01  | 4900           | < 1.0E-05 |
| 450            | 2.6E-01   | 750            | 9.7E-01  | 1050           | 9.4E-01  | 1950           | 9.6E-01  | 3450           | 1.4E-01  | 4950           | < 1.0E-05 |
| 460            | 6.7E-01   | 760            | 9.6E-01  | 1060           | 9.4E-01  | 2000           | 9.5E-01  | 3500           | 1.4E-01  | 5000           | < 1.0E-05 |
| 470            | 8.6E-01   | 770            | 9.6E-01  | 1070           | 9.4E-01  | 2050           | 9.5E-01  | 3550           | 1.4E-01  | 5050           | < 1.0E-05 |
| 480            | 9.2E-01   | 780            | 9.6E-01  | 1080           | 9.4E-01  | 2100           | 9.5E-01  | 3600           | 1.4E-01  | 5100           | < 1.0E-05 |
| 490            | 9.5E-01   | 790            | 9.6E-01  | 1090           | 9.4E-01  | 2150           | 9.4E-01  | 3650           | 1.3E-01  | 5150           | < 1.0E-05 |