# OG550 Data Sheet

## Optical properties

### Reflection factor
- \( P_d = 0.917 \)

### Spectral values guaranteed (d = 3 mm)
- \( \lambda_c \) (\( t_i = 0.5 \)) = 550 nm ± 6 nm
- \( \lambda_c \) (\( t_{i,U} = 1E-05 \)) = 480 nm
- \( \lambda_p \) (\( t_{i,L} = 0.93 \)) = 620 nm

### Spectral values guaranteed (d = 3 mm)
- \( P_d = 3.00 \) mm x 0.521
- \( d = 52.3 \) mm x 0.547
- \( d = 55.7 \) mm x 0.557

## Mechanical properties

### Reference thickness
- \( d = 3.00 \) mm

### Density
- \( \rho = 2.56 \) g/cm³

### Knoop hardness
- \( HK_{0.1/20} = 462 \)

### Transformation temperature
- \( T_g = 507 \) °C

### Thermal expansion in \( 10^6/K \)
- \( \alpha_{(30°C/70°C)} = 7.9 \)
- \( \alpha_{(20°C/300°C)} = 9.0 \)

### Temperature coefficient
- \( T_k = 0.12 \) nm/K

## Colormetric properties

### Colorimetric properties

<table>
<thead>
<tr>
<th>1 mm</th>
<th>2 mm</th>
<th>3 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>( x )</td>
<td>0.521</td>
<td>0.547</td>
</tr>
<tr>
<td>( y )</td>
<td>0.459</td>
<td>0.451</td>
</tr>
<tr>
<td>( Y )</td>
<td>58.3</td>
<td>52.3</td>
</tr>
<tr>
<td>( \lambda_d )</td>
<td>583 nm</td>
<td>586 nm</td>
</tr>
<tr>
<td>( P_e )</td>
<td>0.948</td>
<td>0.996</td>
</tr>
<tr>
<td>( x )</td>
<td>0.565</td>
<td>0.580</td>
</tr>
<tr>
<td>( y )</td>
<td>0.429</td>
<td>0.419</td>
</tr>
<tr>
<td>( Y )</td>
<td>69.8</td>
<td>64.8</td>
</tr>
<tr>
<td>( \lambda_d )</td>
<td>589 nm</td>
<td>591 nm</td>
</tr>
<tr>
<td>( P_e )</td>
<td>0.963</td>
<td>0.995</td>
</tr>
</tbody>
</table>

## Chemical properties

### Chemical resistance
- FR class = 0
- SR class = 1
- AR class = 1

## Notes

- Stricking glass
- Longpass filter
- DIN 58131

## Disclaimer

All data without tolerances are to be understood to be reference values

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**Status** 03.12.2018

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![Graph of internal transmittance vs. wavelength](image_url)
The internal transmittance values, tabulated and graphically represented, are reference values only.

### Internal transmittance $t_i$ at reference thickness

- **wavelength in nm**: $\lambda$
- **internal transmittance**: $t_i$  
- **Data Sheet**: OG550

<table>
<thead>
<tr>
<th>$\lambda$ (nm)</th>
<th>$t_i$</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>210</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>220</td>
<td>&lt; 0.001</td>
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<tr>
<td>230</td>
<td>&lt; 0.001</td>
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<tr>
<td>240</td>
<td>&lt; 0.001</td>
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<tr>
<td>250</td>
<td>&lt; 0.001</td>
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<tr>
<td>260</td>
<td>&lt; 0.001</td>
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<tr>
<td>270</td>
<td>&lt; 0.001</td>
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<tr>
<td>280</td>
<td>&lt; 0.001</td>
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<tr>
<td>290</td>
<td>&lt; 0.001</td>
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<tr>
<td>300</td>
<td>&lt; 0.001</td>
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<tr>
<td>310</td>
<td>&lt; 0.001</td>
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<tr>
<td>320</td>
<td>&lt; 0.001</td>
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<tr>
<td>330</td>
<td>&lt; 0.001</td>
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<tr>
<td>340</td>
<td>&lt; 0.001</td>
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<tr>
<td>350</td>
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<tr>
<td>360</td>
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<tr>
<td>370</td>
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<tr>
<td>380</td>
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<td>390</td>
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<tr>
<td>400</td>
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<tr>
<td>410</td>
<td>&lt; 0.001</td>
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<tr>
<td>420</td>
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<tr>
<td>430</td>
<td>&lt; 0.001</td>
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<tr>
<td>440</td>
<td>&lt; 0.001</td>
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<tr>
<td>450</td>
<td>&lt; 0.001</td>
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<tr>
<td>460</td>
<td>&lt; 0.001</td>
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<tr>
<td>470</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>480</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>490</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

### Graphical Representation

- **Internal transmittance** $t_i$ at reference thickness
- **Data Sheet**: OG550

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