INFRARED (IR) LONGPASS
filter glass data sheets

IR ABSORBING / VISIBLE TRANSMITTING GLASS COMPOSITIONS

Click glass product number to jump to data sheet.

3961
3962
3965
3966
7050
7060
7062
7064

PLEASE NOTE: The transmission curves in this catalog should be understood as typical curves for reference only. Data listed without tolerances are to be understood as reference values.
**OPTICAL PROPERTIES**

Transmission for Total Radiation (CIE Illuminant A): 1.6 ± 0.5%

Minimum Value for Luminous Transmittance (CIE Illuminant A): 18.6%

**PHYSICAL PROPERTIES**

Nominal Thickness Range 2.15-2.85 mm

Refractive Index 1.50

Density 2.41 g/cc

Thermal Expansion 48 E⁻⁸°C⁻¹ (30-300 °C)

Strain Temperature 533 °C

Annealing Temperature 569 °C

Deformation Temperature 766 °C
IR LONGPASS | 3962

OPTICAL PROPERTIES
Transmission for Total Radiation (CIE Illuminant A): 7.0 ± 0.7%
Minimum Value for Luminous Transmittance (CIE Illuminant A): 47.9%

PHYSICAL PROPERTIES
Nominal Thickness Range  2.15-2.85 mm
Refractive Index  1.50
Density  2.41 g/cc
Thermal Expansion  48 E³C⁻¹ (30-300 °C)
Strain Temperature  533 °C
Annealing Temperature  569 °C
Deformation Temperature  766 °C
**IR LONGPASS | 3965**

### OPTICAL PROPERTIES

- Transmission for Total Radiation (CIE Illuminant A): 17.0 ± 1.0%
- Minimum Value for Luminous Transmittance (CIE Illuminant A): 64.8%

### PHYSICAL PROPERTIES

- **Nominal Thickness Range**: 2.15-2.85 mm
- **Refractive Index**: 1.50
- **Density**: 2.41 g/cc
- **Thermal Expansion**: $48 \text{ E}^\circ \text{C}^{-1}$ (30-300 °C)
- **Strain Temperature**: 533 °C
- **Annealing Temperature**: 569 °C
- **Deformation Temperature**: 766 °C
IR LONGPASS | 3966

**OPTICAL PROPERTIES**
Transmission for Total Radiation (CIE Illuminant A): 32.0 ± 2.0%
Minimum Value for Luminous Transmittance (CIE Illuminant A): 75%

**PHYSICAL PROPERTIES**
- **Nominal Thickness Range**: 2.15-2.85 mm
- **Refractive Index**: 1.50
- **Density**: 2.41 g/cc
- **Thermal Expansion**: $48 \times \text{E}^{-7} \text{C}^{-1}$ (30-300 °C)
- **Strain Temperature**: 533 °C
- **Annealing Temperature**: 569 °C
- **Deformation Temperature**: 766 °C
**OPTICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Wavelength (nm)</th>
<th>400</th>
<th>500</th>
<th>600</th>
<th>700</th>
<th>800</th>
<th>900</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission (%)</td>
<td>≥ 60</td>
<td>≥ 68</td>
<td>≥ 48</td>
<td>≤ 26</td>
<td>≤ 9</td>
<td>≤ 3</td>
</tr>
</tbody>
</table>

**PHYSICAL PROPERTIES**

- **Nominal Thickness Range**: 4.4-6.0 mm
- **Refractive Index**: 1.51
- **Density**: 2.49 g/cc
- **Thermal Expansion**: 61 E⁻⁷°C⁻¹ (30-300 °C)
- **Strain Temperature**: 542 °C
- **Annealing Temperature**: 560 °C
- **Deformation Temperature**: 612 °C
IR LONGPASS | 7060

![Graph showing transmission percentage vs. wavelength (nm)]

### OPTICAL PROPERTIES

<table>
<thead>
<tr>
<th>Wavelength (nm)</th>
<th>400</th>
<th>500</th>
<th>600</th>
<th>700</th>
<th>800</th>
<th>900</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission (%)</td>
<td>≥ 48</td>
<td>≥ 60</td>
<td>≥ 40</td>
<td>≤ 15</td>
<td>≤ 3</td>
<td>≤ 1</td>
</tr>
</tbody>
</table>

### PHYSICAL PROPERTIES

- **Nominal Thickness Range**: 3.0 mm
- **Refractive Index**: 1.52
- **Density**: 2.50 g/cc
- **Thermal Expansion**: 63 E⁻³°C⁻¹ (30-300 °C)
- **Strain Temperature**: 503 °C
- **Annealing Temperature**: 575 °C
- **Deformation Temperature**: 605 °C
IR LONGPASS | 7062

**OPTICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Wavelength (nm)</th>
<th>400</th>
<th>500</th>
<th>600</th>
<th>700</th>
<th>800</th>
<th>900</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission (%)</td>
<td>≥ 65</td>
<td>≥ 70</td>
<td>≥ 57</td>
<td>≤ 30</td>
<td>≤ 10</td>
<td>≤ 5</td>
</tr>
</tbody>
</table>

**PHYSICAL PROPERTIES**

- Nominal Thickness Range: 4.0-5.0 mm
- Refractive Index: 1.51
- Density: 2.50 g/cc
- Thermal Expansion: 66 E⁻⁹C⁻¹ (30-300 °C)
- Strain Temperature: 525 °C
- Annealing Temperature: 588 °C
- Deformation Temperature: 619 °C
**IR Longpass | 7064**

![Graph showing transmission (% against wavelength (nm))](image)

**Optical Properties**

<table>
<thead>
<tr>
<th>Wavelength (nm)</th>
<th>400</th>
<th>500</th>
<th>600</th>
<th>700</th>
<th>800</th>
<th>900</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission (%)</td>
<td>≥ 70</td>
<td>≥ 78</td>
<td>≥ 58</td>
<td>≤ 30</td>
<td>≤ 10</td>
<td>≤ 5</td>
</tr>
</tbody>
</table>

**Physical Properties**

- **Nominal Thickness Range**: 4.5-6.0 mm
- **Refractive Index**: 1.51
- **Density**: 2.48 g/cc
- **Thermal Expansion**: 66 E⁻⁶°C⁻¹ (30-300 °C)
- **Strain Temperature**: 526 °C
- **Annealing Temperature**: 587 °C
- **Deformation Temperature**: 628 °C
HIGH-PERFORMANCE CUSTOM GLASS
for mission-critical applications

MATERIAL SCIENCE EXPERTISE
Founded over 90 years ago, Kopp Glass began with a deep understanding of glass chemistry and how it can be used to innovate. Today, our portfolio includes more than 200 different glasses. Depending on your need, our engineers and scientists are also able to create new compositions to meet tough design challenges.

APPLICATIONS ENGINEERING EXPERTISE
We refine product designs alongside customers to help them reduce costs and increase yields. While our solutions are crafted to perform in some of the harshest environments on Earth, they’re also designed to help the performance of our customers’ bottom lines.

RESPONSIVENESS
Kopp Glass is a small manufacturer, but the design and production challenges we face every working day are huge. Our customers see the difference in how we respond to them and in how our team responds to each other.

ON-TIME IN-SPEC DELIVERY
Kopp Glass works to ensure the mission-critical, molded glass components we ship meet your standards—the first time.

WORK WITH US
www.koppglass.com

| Year Founded | 1926 |
| Ownership    | Closely Held |
| Location     | Pittsburgh, PA USA |
| No. of Employees | 110 |
| Mfg. Sq. Ft. | 127,000 |