SCHOTT Borofloat® 33
Thin glass sheets

Tight Thickness Tolerance
Superior Transparency
Upgraded Surface Quality

SCHOTT
glass made of ideas
We are proud to announce a further step towards satisfying our customers’ highest quality demands. With the new and improved quality of Borofloat® you can optimize your own processes and enter new areas of high-tech applications.

Borofloat® 33 borosilicate glass is SCHOTT’s globally recognized brand mark for high-quality & multi-functional float glass. Long years of experience and intensive research efforts in the Microfloat process have led to a significantly improved thin Borosilicate glass that can compete with the best of high-grade flat glasses.

Our new and improved floated Borosilicate glass is even more attractive for a higher number of applications, with a significantly enhanced technical performance in the lower thickness range. Among other technical improvements the new batch features a premium-grade surface quality, a very tight thickness tolerance, an extremely low level of defects and a superior transmittance. This is especially important for high-grade flat glass substrates that require excellent transparency together with superior flatness.

Larger formats are also available on demand.

SCHOTT Borofloat® 33 is an environmentally friendly product in accordance with the ROHS standard.

SCHOTT is DIN ISO 9001 certified.

**Improved flatness features for sheet sizes of 1,150 x 850 mm**

<table>
<thead>
<tr>
<th>Upgraded technical parameters</th>
<th>Nominal thickness 0.7 mm</th>
<th>Nominal thickness 1.1 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>thickness tolerance within one sheet</td>
<td>&lt; 40 μm</td>
<td>&lt; 50 μm</td>
</tr>
<tr>
<td>thickness variation between sheets</td>
<td>&lt; 50 μm</td>
<td>&lt; 50 μm</td>
</tr>
<tr>
<td>warp</td>
<td>&lt; 0.05%</td>
<td>&lt; 0.05%</td>
</tr>
</tbody>
</table>

waveness*<br>top < 150 nm  
bottom < 150 nm  
top < 150 nm  
bottom < 150 nm

* The data have been determined by using a cut-off-filter 0.8 mm/8 mm and a Zeiss Surfcom 1400 measurement system. The sample size was 280 mm in width.

---

**Determination of microroughness by using AFM technique**

The Borofloat® 33 glass samples had fire polished surfaces and were as-cleaned prior to measurement. Effective surface area of measurement was 2 x 2μm. Both glass surfaces (tin and air side) of Borofloat® 33 display an average microroughness Ra between 0.1 and 0.5 nm.

**Spectral Transmittance vs. Wavelength**

### Spectral Transmittance Coefficient in %

- 100
- 90
- 80
- 70
- 60
- 50
- 40
- 30
- 20
- 10
- 0

**Wavelength in nm**

- 250
- 400
- 550
- 700
- 900

### Spectral Transmittance Coefficient in %

<table>
<thead>
<tr>
<th>Wavelength in nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
</tr>
<tr>
<td>400</td>
</tr>
<tr>
<td>550</td>
</tr>
<tr>
<td>700</td>
</tr>
<tr>
<td>900</td>
</tr>
</tbody>
</table>

### Spectral Transmittance Coefficient in %

- Borofloat® 33 1.1 mm
- Borofloat® 33 0.7 mm