

# Infrared Chalcogenide Glasses

## IG2, IG3, IG4, IG5 and IG6

### Product Information

The excellent transmission, low thermal change in refractive index and dispersion enable the optical designers to design color corrected optical systems without thermal defocusing. The IG family of chalcogenide glasses are optimized for pairing with other IR materials in designs. These glasses encompass the common IR transmission bands: 3-5  $\mu\text{m}$  and 8-12  $\mu\text{m}$ , but can transmit as low as 0.7-0.8  $\mu\text{m}$ . The IG series of glasses offer flexibility in processing as they can be processed conventionally, diamond turned, or moulded.

### Typical Forms of Supply

IG glasses are available as custom cut blanks or SMTY as specified by customer requirements.

Available in sizes up to 100 mm diameter and 150 mm length (thickness) or up to 140 mm diameter and 30 mm length (thickness).



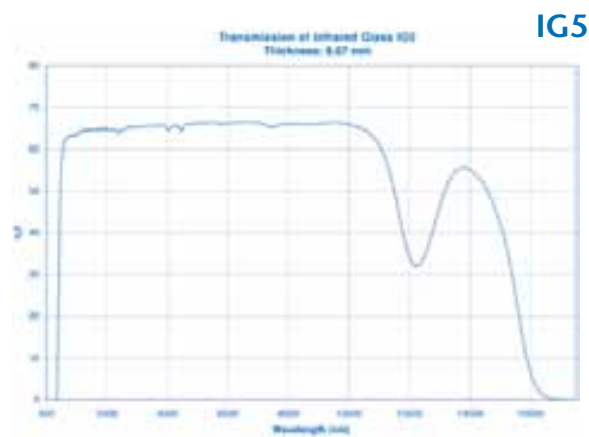
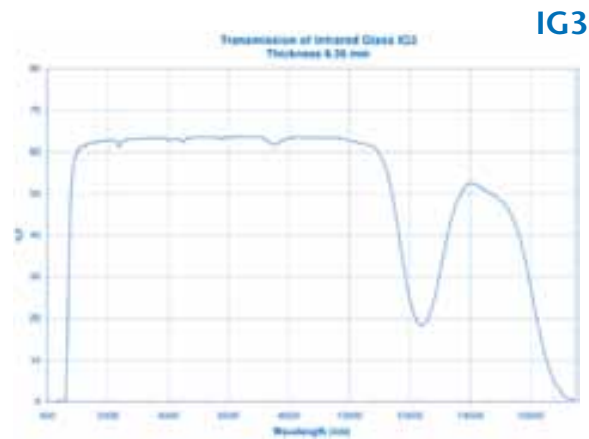
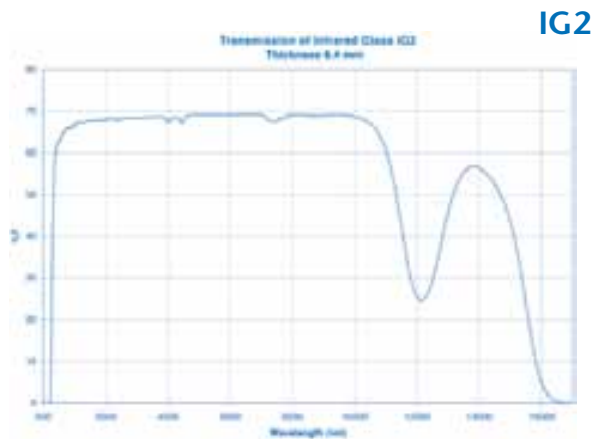
### IG Series Key Characteristic Summary

Glass	Turn on Transmission	40% Transmission	Tg	dn/dT for 20degC – 30degC
<b>IG2</b>	0.7 $\mu\text{m}$	0.79 $\mu\text{m}$	368°C	71x10 <sup>-6</sup> /K (3.39 $\mu\text{m}$ )
Ge33As12Se55				60x10 <sup>-6</sup> /K (10.6 $\mu\text{m}$ )
<b>IG3</b>	0.84 $\mu\text{m}$	1.23 $\mu\text{m}$	275°C	130x10 <sup>-6</sup> /K (3.39 $\mu\text{m}$ )
Ge30As13Se32Te25				145x10 <sup>-6</sup> /K (10.6 $\mu\text{m}$ )
<b>IG4</b>	0.75 $\mu\text{m}$	0.82 $\mu\text{m}$	225°C	30x10 <sup>-6</sup> /K (3.39 $\mu\text{m}$ )
Ge10As40Se50				36x10 <sup>-6</sup> /K (10.6 $\mu\text{m}$ )
<b>IG5</b>	0.82 $\mu\text{m}$	0.93 $\mu\text{m}$	285°C	76x10 <sup>-6</sup> /K (3.39 $\mu\text{m}$ )
Ge28Sb12Se60				91x10 <sup>-6</sup> /K (10.6 $\mu\text{m}$ )
<b>IG6</b>	0.79 $\mu\text{m}$	0.88 $\mu\text{m}$	185°C	35x10 <sup>-6</sup> /K (3.39 $\mu\text{m}$ )
As40Se60				41x10 <sup>-6</sup> /K (10.6 $\mu\text{m}$ )

NOTE: Transmission values are typical values for reference and are based on samples 6 mm - 6.4 mm in thickness.

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Transmission  
Curves  
(Typical)



Produced for SCHOTT by VITRON Spezialwerkstoffe GmbH

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