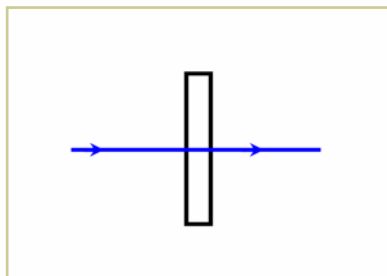


# Sapphire Windows



Sapphire is highly transparent throughout the spectrum from 170 nm to 5.3  $\mu\text{m}$ . It has very high strength, hardness and chemical stability, making it an excellent material for use as an optical window in adverse environments.



Sapphire can be cleaned frequently without scratching. It is five times stronger than glass and heat

resistant up to 2000°C. For these reasons, sapphire is often used in situations where large pressure differences occur on either side of the window.

The quality of the window can be critical. It should be of high purity and polish in order not to affect the optical system. Sapphire is an expensive material, which is difficult to polish, so it is most often used in small sizes. Normally, these windows are relatively thin. They can be supplied with a low flatness specification  $\sim 4\lambda$  per 25mm or more highly polished with a flatness of about  $\lambda/2$ .

We offer standard uncoated circular sapphire windows as follows (in mm):

<u>Diameter</u>	<u>Flatness</u>	<u>Thickness</u>
12.7	$4\lambda$	1.0
25.4	$4\lambda$	1.0
25.4	$\lambda/2$	1.5

Other sizes and configurations can be quoted on request.

<b>Typical Specifications</b>	
Substrate Material:	Sapphire
Surface flatness:	$\lambda/2$ , or $4\lambda$
Surface quality:	60/40
Parallelism:	< 3 arcmin
Diameter:	+0.0 / -0.2 mm
Thickness:	+ 0.25 mm
Clear aperture:	> 85% of diameter

**To request a quote or to order, please specify:**

Quantity — Diameter — Flatness

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For a quotation — please phone, fax or email us with details of your requirements.