



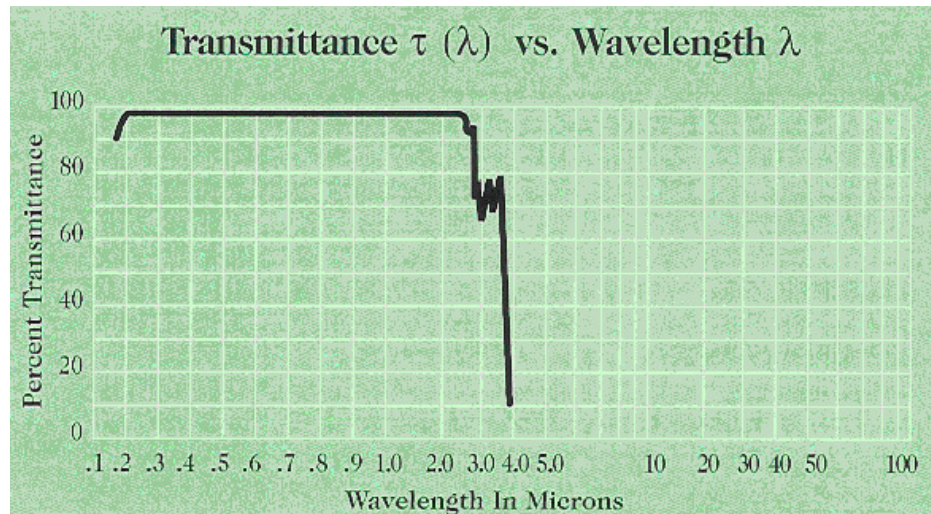
Quartz Substrate
Quartz Slide
Quartz Wafer
Quartz Window

UP TO ϕ 1000mm
Or 1000mm x 1000mm
AVAILABLE

Formed by chemical combination of silicon and oxygen, fused quartz (SiO_2) has many advantages:

- Excellent UV and IR transmission;
- Low coefficient in thermal expansion;
- Super stability and resistance to thermal shock over large temperature excursions, with wide thermal operation range and high laser damage threshold.

Typical Optical Transmission Range:	185nm ~ 3500nm:
Special range:	150nm ~ 3300nm(deep UV)
Refractive Index:	1.46
Melting Point:	1900°C max
Thermal Conductivity (@20°C):	1.35 W/(m • C°)
Thermal Linear Expansion (@ ± 50°C):	4.0×10^{-6}



Applications

Application in Laser Optics & Fiber Optics

Optical components, e.g. optical windows lenses, prisms and other laser and infrared optics, or phase masks etc.

Application in Bio Medical Imaging/Microscopy

Excellent substrate slides with high transmission from UV to near infrared spectrum;

Application in Microelectronics

High stability substrates or large-area wafer-type discs for R&D or production to many devices;

*Other glass substrates/wafers/optics, and various crystal products are available.
Contact us for more information!*



PHOTONIK (SINGAPORE) PTE LTD

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Selections of Fused Quartz Products

Quartz Substrate, Slide or Wafer

Standard Specifications

Diameter, Length or Width	2.0 ~ 300.0 \pm 0.05mm typ. or per request
Thickness	330 \pm 50 μ m up
Polish Type: Front/Back Surface	Single/double surface fine polished, per request
Back Side	Lapped or fine polished
Flatness	< 5 μ m typ; Special request for < λ /10 or better per 25mm
Roughness (Ra)	< 0.5 μ m typ. 1~10nm or <1nm when for special processing
Primary Flat Location	Pre request
Secondary Flat Location	Pre request
Package	Basic, or with 25-wafer cassette - special

Quartz Windows & Mirrors

Standard Specifications

Diameter Tolerance	+ 0.00, - 0.10mm
Thickness Tolerance	\pm 0.02mm
Flatness	better than λ /10 per 25mm @633nm; Or per special request
Parallelism	better than 20"
Surface Quality	10 - 5 scratch and dig per MIL-O-13830A
Bevel Processing	0.05mm x 45 $^{\circ}$
Wavefront Distortion	< λ /4 per inch (λ @ 633nm); Or per special request

Custom Quartz Disc/Washer/Wafer & Optics

Special high precision quartz windows, and other AR or HR coated quartz optics are available upon request.

For Crystal Quartz, kindly specify

- crystal orientation;
- crystal dimension, and
- surface quality,

call us for quotation!

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