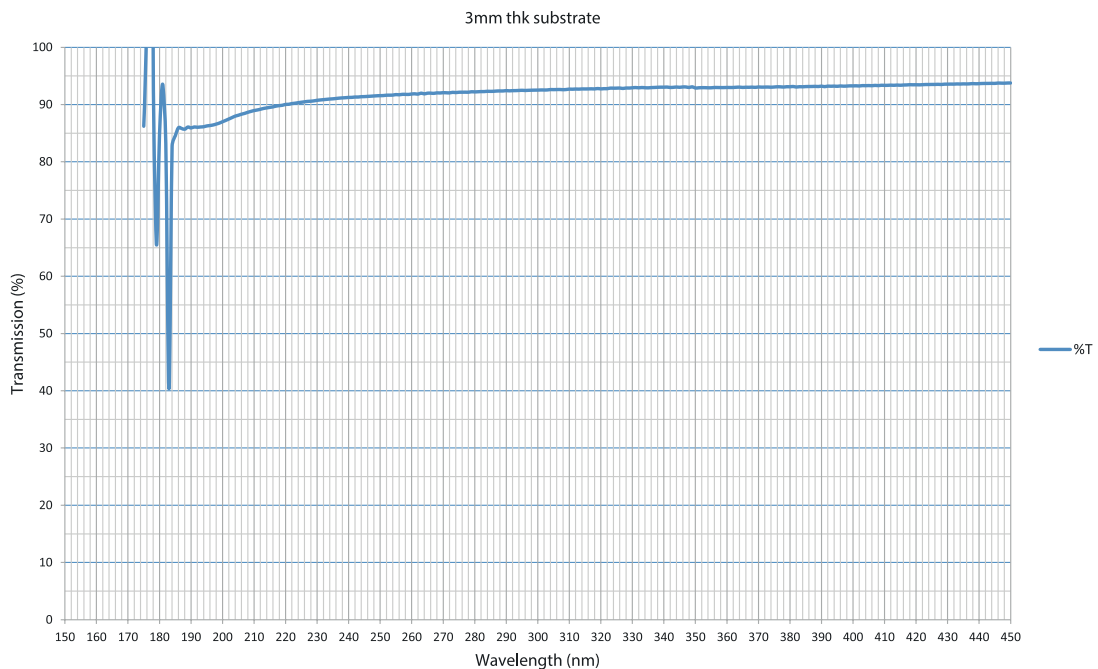
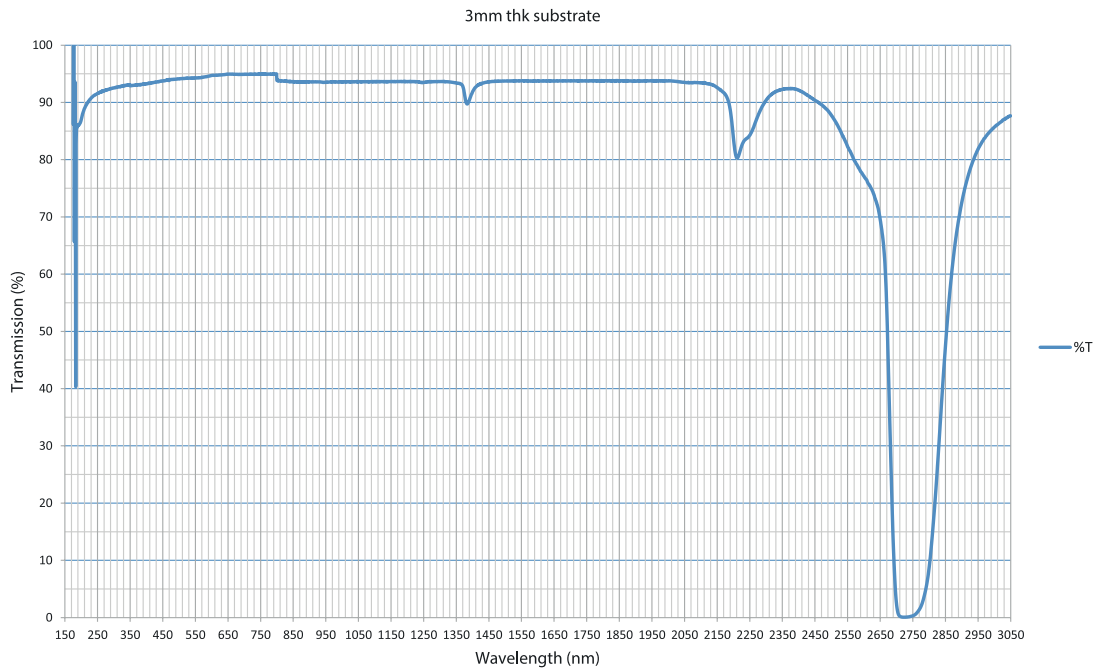


## Optical material / crystals (Ultraviolet)

**Material / Specification:** Fused quartz, Heraeus for 260-2500nm transmission

**Range / Description:** OPMU-QUARTZ



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Optical fused quartz is manufactured of naturally occurring high-purity quartz crystal by various companies under different trade names, **Vitreosil® UV/VIS** is one such product which along with others we supply has a useful transmission range from <266nm in the near UV through the visible to >2000nm in the infrared.

## Optical Properties

Vitreosil® Grade	UV/VIS
<b>Bubbles</b>	
Bubble class (DIN 58927)	0..1
Sum of CSA (mm <sup>2</sup> / 100 cm <sup>3</sup> )	< 0.1
Maximum bubble diameter (mm)	0.5
<b>Maximum number of inclusions</b> (0.1 - 0.2 mm per 100 cm <sup>3</sup> ) (Bubbles and inclusions <0.1 mm are not counted)	2
<b>Striae</b> (MIL- G -174A) in functional direction (i.e. direction of view) (The direction of view should be specified at time of enquiry / order)	
	B
<b>Residual strain</b> (nm/cm)	< 5
<b>Fluorescence</b> (254 nm excitation)	Blue / Violet
<b>Radiation resistance</b>	Slight darkening after prolonged exposure Darkens after 10 <sup>7</sup> RAD
X-Ray & Gamma Ray	

## Typical Chemical Analysis

Vitreosil® UV/VIS	
Typical trace elements in ppm†	
Al	15
Ca	0.5
Cr	< 0.01
Cu	< 0.01
Fe	0.1
K	0.2
Li	0.2
Mn	0.01
Na	0.1
Nd	0.01
Ti	1.3
Y	< 0.1
Zr	1.3
OH	170

† Chemical analysis can vary slightly between individual batches of material

## Thermal Data

Strain Point ‡ 1085°C  
 Annealing Point ‡ 1195°C  
 Softening Point ‡ 1730°C

Thermal Expansion  
 Coefficient (Average) 0.54 x 10<sup>-6</sup>

‡ Note that these values may vary depending on the thermal history of the glass



## Transmission

Typical external transmission of Vitreosil® UV/VIS fused quartz (including Fresnel reflection losses for 10 mm pathlength)

