ZERODUR

Precision Glass and Optics
3600 W. Moore Avenue, Santa Ana, CA 92704
714.540.0126 Fax 714.540.1482 info@pgo.com

Description:

Zerodur glass ceramic made by Schott is an inorganic, non-porous material made by a process of controlled volume crystallization. This produces a material with an extremely low coefficient of thermal expansion and of the highest homogeneity which makes it ideal for high precision applications.

Available Thicknesses:

Wide variety – per quotation.

Properties:

Refractive Index: n_d (λ = 588nm) = 1.5422

n_g (λ = 435.8nm) = 1.5544

Transmission: (estimated at 5 mm thick)

@400nm	48%	@800nm	91%
@500nm	80%	@1400nm	92%
@600nm	87%	@2857nm	50%

Mechanical and Thermal:

Density	2.53 g/cm^3
Thermal Coefficient of Expansion (0-50°C)	0 ± .10 x 10^{-6}
Young's Modulus at 20° C	90.3

Chemical:

Hydrolytic Resistance (ISO 719-HGB)	Class 1
Alkali Resistance (ISO being drafted)	Class 1
Acid Resistance (ISO 8424)	Class 1
Stain Resistance	Class 0

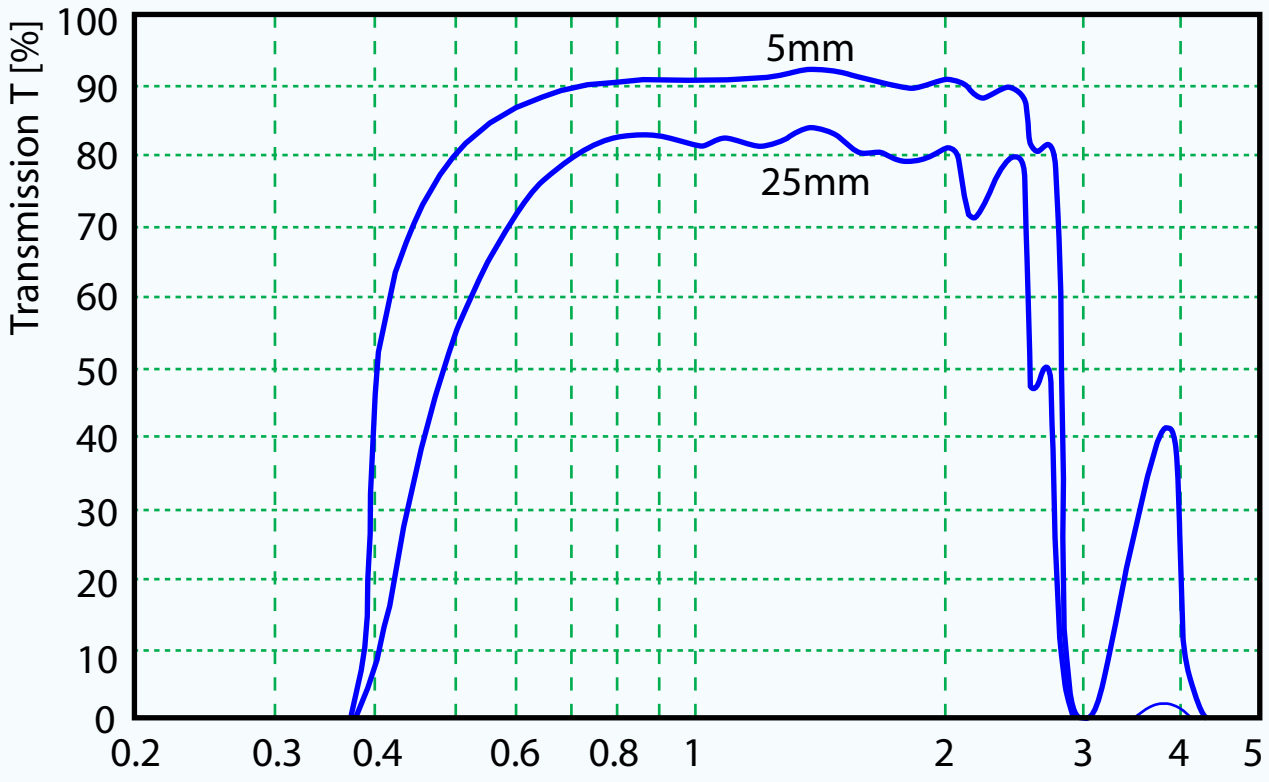
Electrical:

Dielectric Constant @1 Khz	8.0
Dielectric Loss Factor @1 Khz	29 x 10^{-3}
Specific Resistivity (cm)	2.6 x 10^{13} @20°C
	3.5 x 10^{7} @200°C
	6.6 x 10^{3} @500°C

Applications:

Precision engineering, mirror substrates for large astronomical and x-ray telescopes, optical elements for comet probes, weather satellites, microlithography, frames and mirrors for ring laser gyroscopes.

Flatness, parallelism, cutting tolerances, roughness, cosmetic defects and visual inspection all conform to the specifications to be agreed upon by Precision Glass & Optics and the customer.



Principle Curve* 5mm thickness and 25mm thickness

PG&O Precision Glass & Optics
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