PYREX® (7740)

Precision Glass and Optics
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Description:

PYREX® 7740 glass is a borosilicate composition that is used to provide unique chemical, thermal, mechanical and optical properties. Because of its composition, PYREX resists attack by all acids except hydrofluoric and hot phosphoric. The low coefficient of thermal expansion of PYREX glass allows it to withstand higher temperatures and temperature excursions than ordinary window glass. It has higher transmission than ordinary soda-lime glass, particularly in the infrared and ultraviolet regions. These properties enable it to provide long service and fulfill requirements which common window glass cannot meet. Full sheet sizes are approximately 36" x 60", depending on thickness.

Available Thicknesses:

Rolled

3/32"	(.103"-.119")	1 1/8"	(+ 1/8" - 1/16")
3/8"	(± 1/32")	1 3/8"	(+ 1/8" - 1/16")
5/8"	(± 3/64")	1 7/8"	(± 1/8")
7/8"	(± 3/64")	2 1/4"	(± 1/4")

**PG&O has the capability to grind and polish the above rolled materials to any thickness desired in the above range or thinner, to a tolerance of ± .001".

Properties:

Refractive Index: n_d ($\lambda = 589nm$) = 1.4727

Transmission: (estimated at .125" thick)

@290nm	15%	@320nm	78%
@300nm	43%	@340-2200nm	90%+
@310nm	65%	@2800nm	30%

Mechanical and Thermal:

Density	2.23 g/cm^3
Young's Modulus	6.1 x 10^3 Kg/mm^2

Thermal Coefficient of Expansion (0-300°C) = 32.5 x 10^{-7}/°C

Chemical:

Solution	Temperature	Wt Loss (mg/cm^2)
5% HCL (24 hr.)	95°C	0.0045
N/50 Na2Co3 (6 hr.)	100°C	0.12
5% NaOH (6hr.)	100°C	1.4

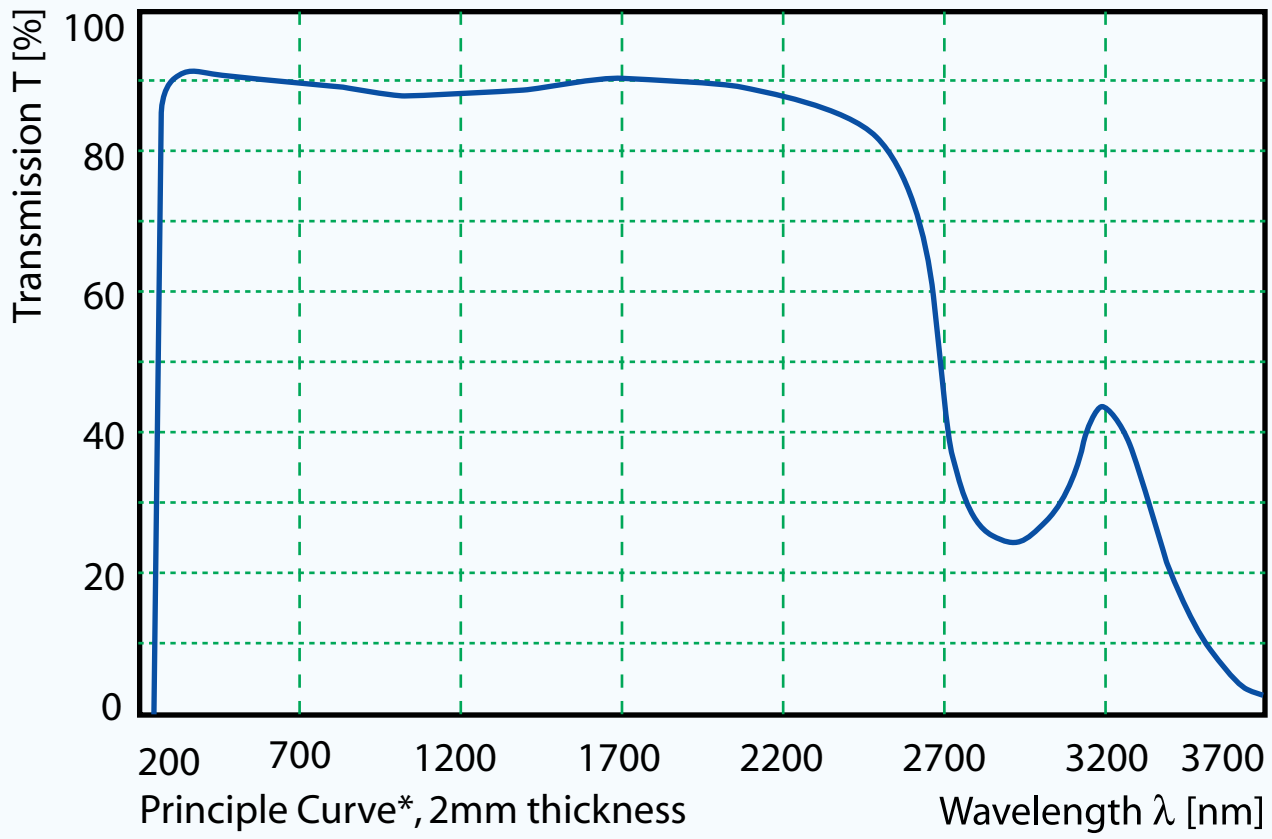
Electrical:

Dielectric Constant @ 25°C; 1 MHz	4.60
Loss Tangent @ 25°C; 1 MHz	.005

Applications:

PYREX code 7740 can be used as a neutron absorber in poison rods and raschig rings. Tempering 7740 glass enables it to withstand tension stresses of 3000 psi and increases its thermal shock resistance as well.

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.



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