

THz LENSES & WINDOWS



Polished Tsurupica Lenses focus THz and visible light

Tsurupica is highly transparent in THz and visible spectral ranges (see transmission spectra on the next page). Refractive index of Tsurupica is the same for THz and visible light ($n=1.52$).

MODEL	LENS TYPE	EXTERNAL DIAMETER/ CLEAR APERTURE	FOCAL LENGTH
PTL-1.5"-50mm-AS	Plano-convex, aspheric	1.5" / 30 mm	50 mm
PTL-1.5"-100mm-AS	Plano-convex, aspheric	1.5" / 30 mm	100 mm
PTL-2"-50mm-BC	Bi-convex, spherical	2" / 45 mm	50 mm
PTL-2"-100mm-BC	Bi-convex, spherical	2" / 45 mm	100 mm
PTL-2"-180mm	Plano-convex, spherical	2" / 45 mm	180 mm
PTL-1.5"-XXXmm	Plano-convex, spherical	1.5" / 30 mm	Any > 30 mm
PTL-2"-XXXmm	Plano-convex, spherical	2" / 45 mm	Any > 50 mm

Polyethylene Lenses

Offer the best performance at frequencies below 1 THz and above 7 THz (see transmission spectra on the next page). Polyethylene is not transparent in visible and near-IR spectral ranges, so that the lenses can be used to block light.

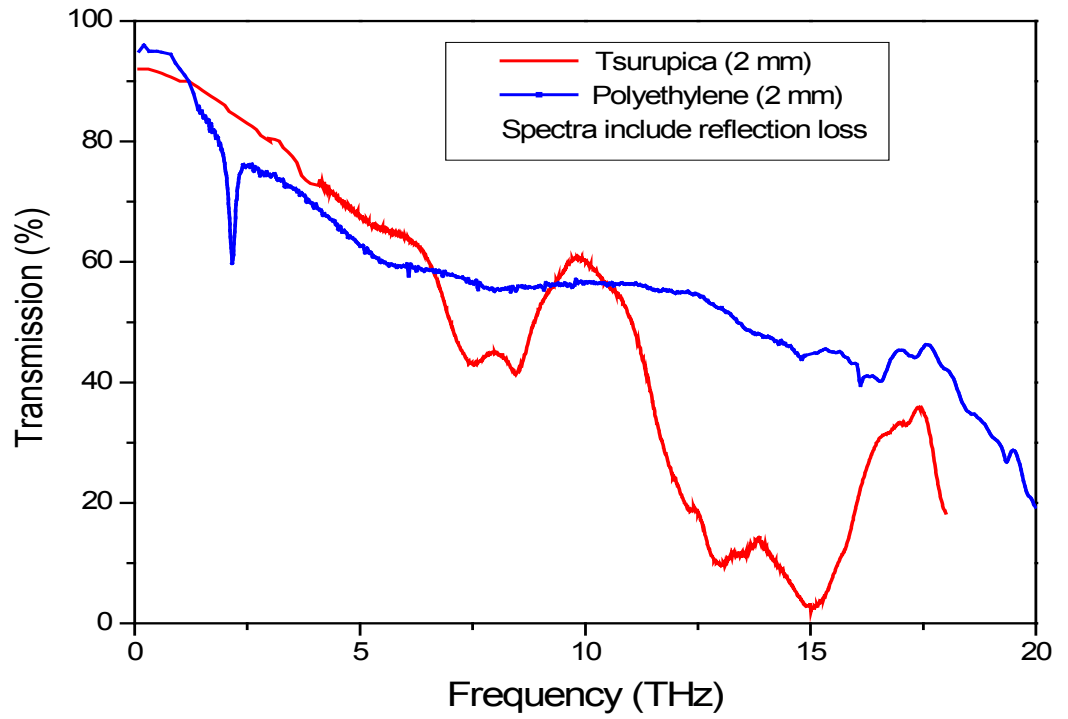
MODEL	LENS TYPE	HOLDER DIAMETER/ CLEAR APERTURE	FOCAL LENGTH
PL-2"-60mm	Bi-convex, spherical	2.75" / 2"	60 mm
PL-2"-100mm	Bi-convex, spherical	2.75" / 2"	100 mm

Polished Tsurupica Windows

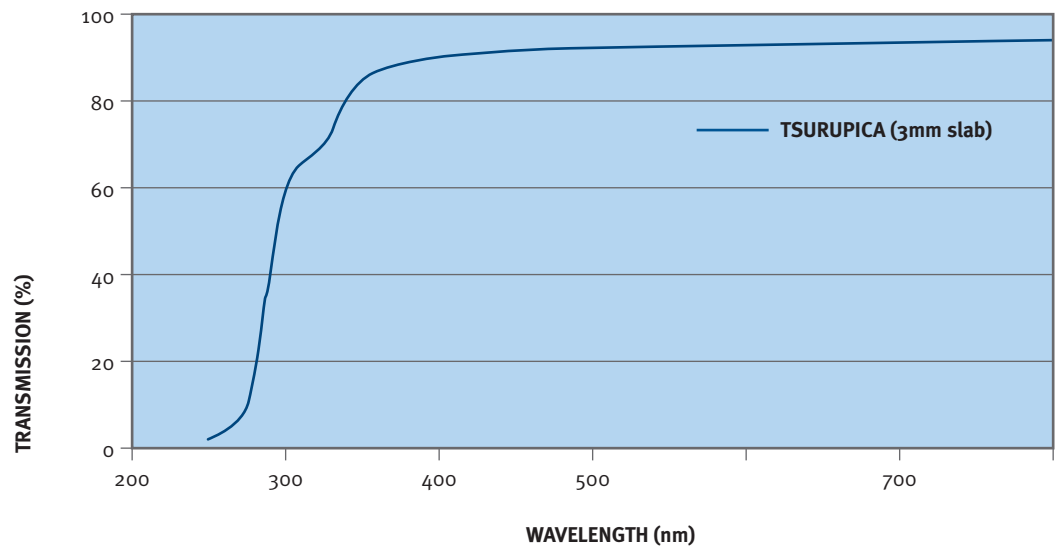
Apart from high transparency in THz and visible spectral ranges, Tsurupica is also very strong mechanically. Thin Tsurupica windows can be used in cryostats, gas cells or any other systems operating at high pressure.

MODEL	DIAMETER/THICKNESS
PTW-1"-3mm	1" (25.4 mm) / 3 mm
PTW-1.5"-4mm	1.5" (38.1 mm) / 4 mm
PTW-2"-4mm	2" (50 mm) / 4 mm

Transmission spectra of Tsurupica and Polyethylene in THz spectral range



Transmission spectrum of Tsurupica in the visible spectral range



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