

Wire Grid Polarizer

Up to 2 THz, 40 dB isolation

DESCRIPTION

Anteral's Wire Grid Polarizers (WGP) consist of one layer of patterned Cu-Au micro grid array of strips. The micro grid array is patterned via photolithography process on very thin (135 um) and ultra-low loss substrate for THz frequencies with low dielectric constant. The electric field is transmitted if polarized perpendicularly and reflected if polarized parallel to the grid array.

WGP are mounted with protection layers made of a high-performance polymethacrylimide foam without degradation of the quality.

Anteral offers ultra-wide band Wire Grid Polarizers, working from DC up to THz frequencies.

APPLICATIONS

The Polarizer can be used from DC up to 2 THz systems for enhancement of the polarization sensitivity, beam splitting and generation of circular polarization.

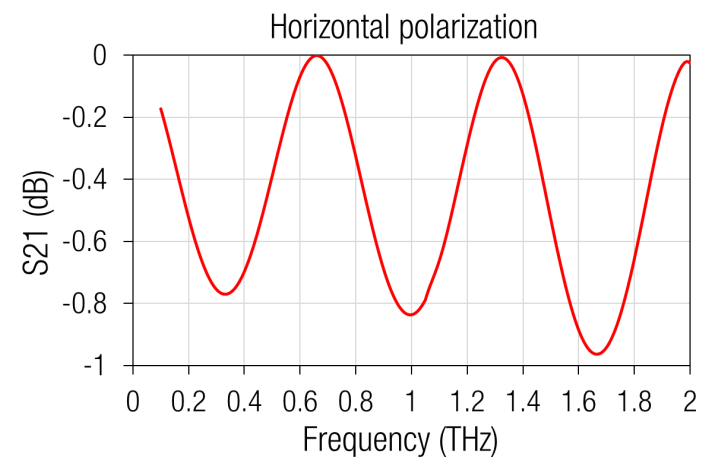
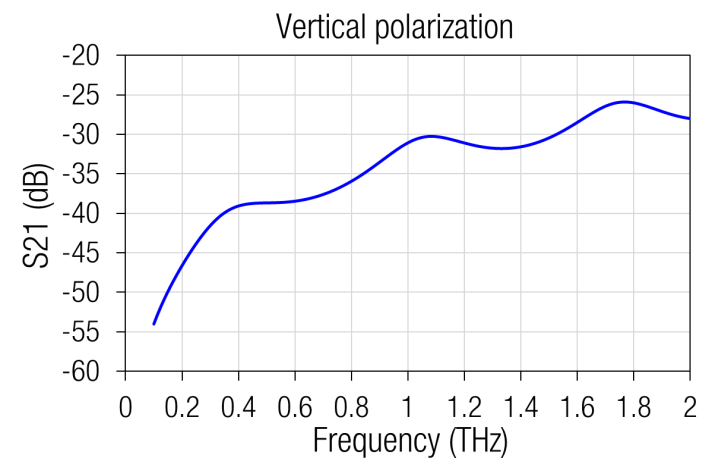
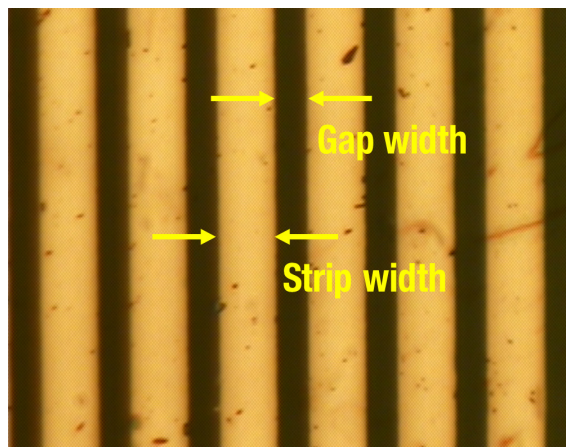
Anteral also offers their **Quarter Wave Plates** for generating reflected circularly polarized waves from linearly polarized waves.



SPECIFICATIONS

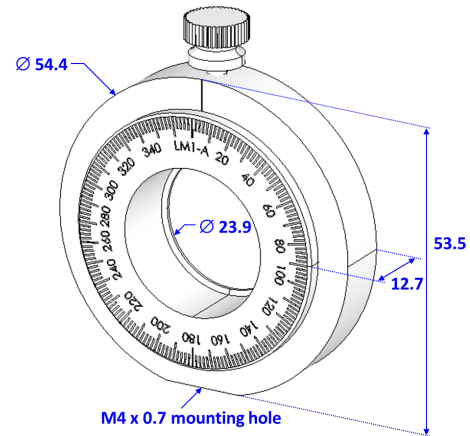
Model	Gap Width	Strip Width	Clear Aperture	Typical Transmission Loss*	Typical Parallel Isolation*
WGP-25-40	5 μm	10 μm	23.9 mm	< 1.0 dB	> 35 dB
WGP-50-40	5 μm	10 μm	48.3 mm	< 1.0 dB	> 38 dB

* Measured at the WR2.2 frequency band

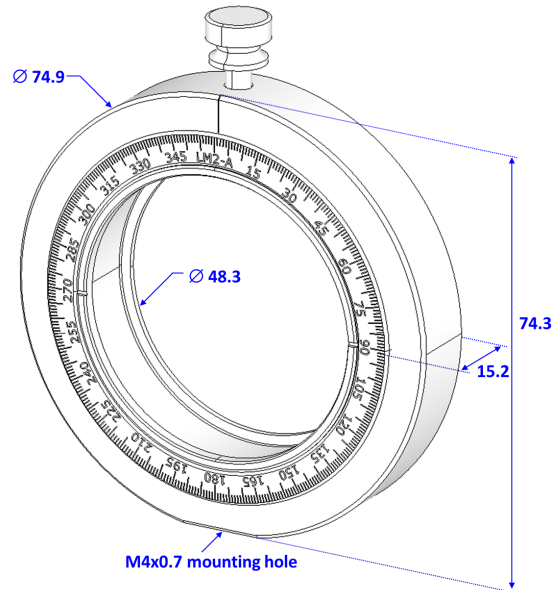


MECHANICAL OUTLINE

WGP-25-40



WGP-50-40



Additional notes

All polarizers are mounted in rotating frames with angular scale of step equal to 1 degree, clear apertures of 50 mm and 25 mm approximately and with ISO M4x0.7 connection.

Polarizers are mounted with protection layers made of high-performance polymethacrylimide foam without degradation of the quality.

The performance of all polarizers is checked before delivery.