



Wire Grid Polarizers



- **Very low transmission loss**
- **High parallel isolation**
- **Working bandwidth from DC up to 2 THz**
- **Rotating frame with angular scale**
- **Ultra-low loss flexible and low dielectric constant substrate material**

Description

The Polarizers consist of one layers of patterned Cr-Cu-Au micro grid array of strips. The micro grid array is patterned via photolithography process on very thin (100 μm) 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. Anteral offers an 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.

Specifications

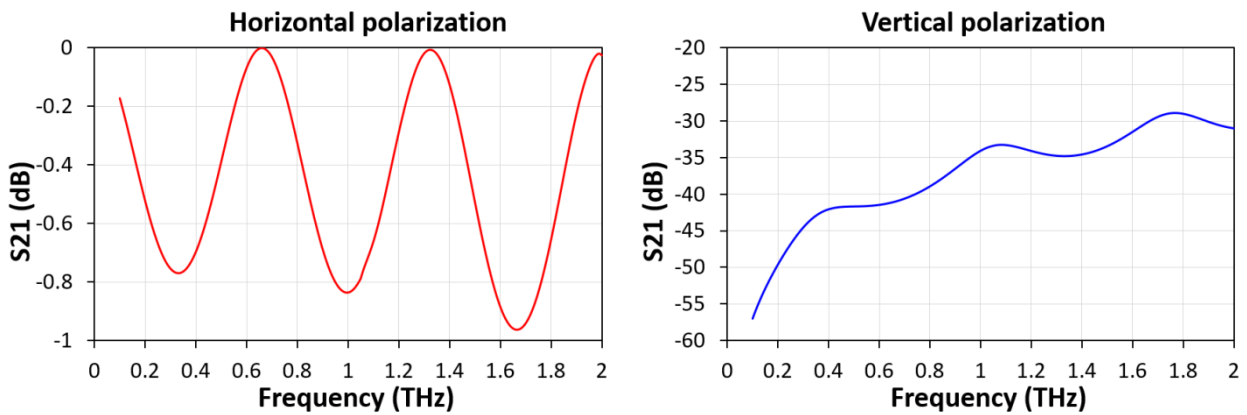
Model	Gap Width (μm)	Strip Width (μm)	Clear Aperture d (mm)	Layers	Typical Transmission Loss* (dB)	Typical Parallel Isolation* (dB)	Frequency Band (GHz)
WGP-25-40	5	10	23.9	1	< 1.0	> 40	0 – 2000
WGP-50-40	5	10	48.3	1	< 1.0	> 40	0 – 2000

* Measured in the WR2.2 frequency band.

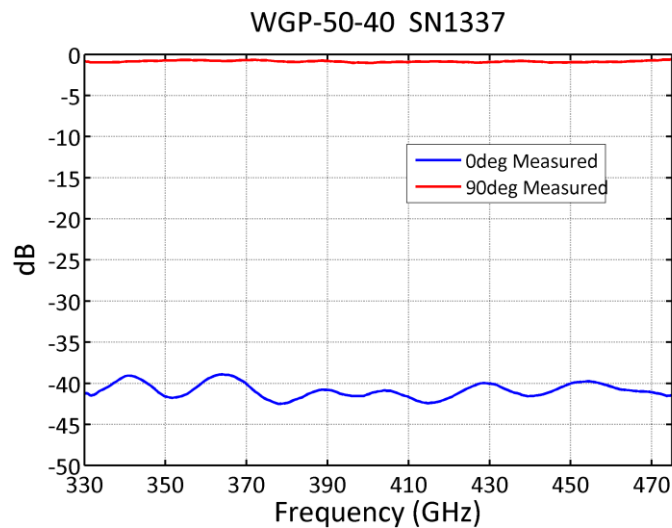
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Simulated Polarizer Performance



Measured Polarizer Performance



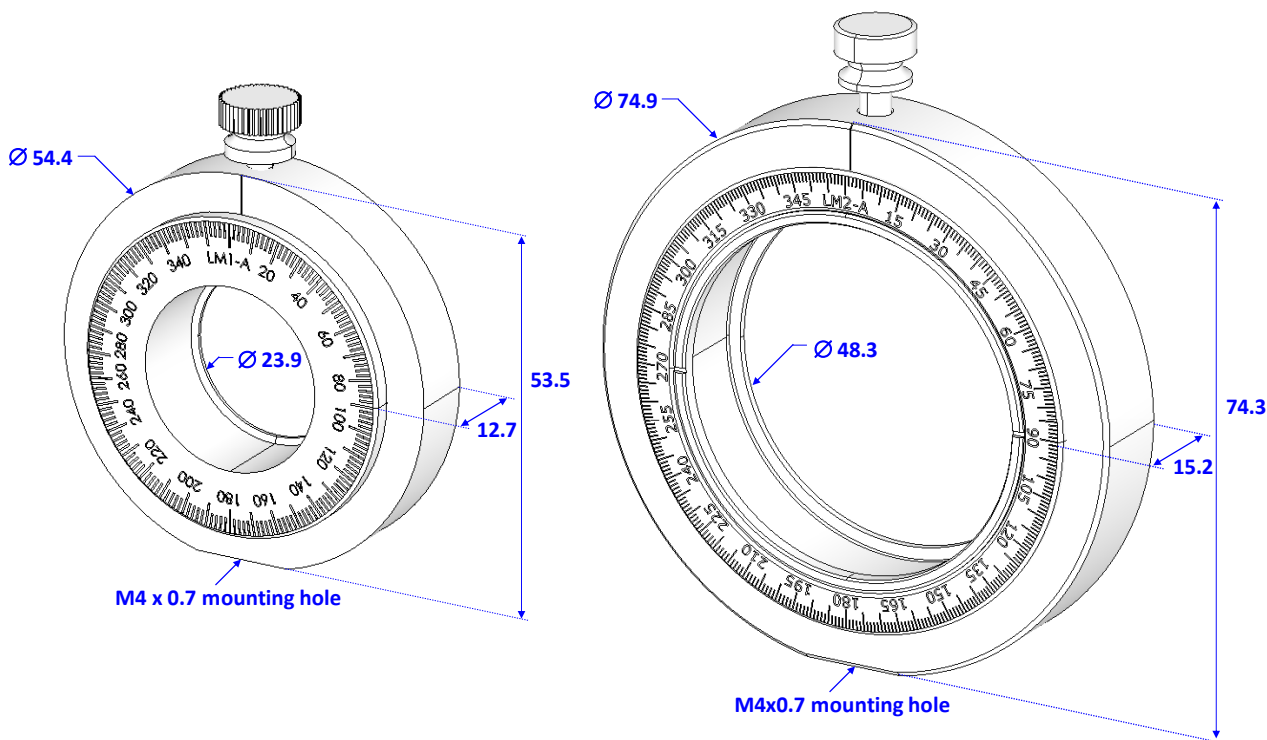
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ANTERAL

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Mounting Frames



Units are in mm.

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.

Different sizes (up to 70 mm) can be provided according to customer requirements.

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.

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