



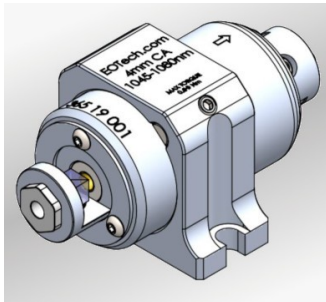
Electro-Optics Technology, Inc.

Innovative High Quality Laser Solutions

4 mm PAVOS+ Ultra Faraday Rotators & Isolators 1010 nm to 1080 nm

NEW!

****PRELIMINARY****



The PAVOS+ Ultra line of Faraday devices offers roughly 1/10th the absorption and thermal lens focal shift^a and can theoretically provide ten times lower non-linear refractive index compared to the standard PAVOS+ rotators and isolators. This results in less Kerr Lens focal shift and a lower B-integral protecting against catastrophic whole beam self-focusing. The PAVOS+ Ultra line has been specifically designed to meet the needs of the high power and high energy 1 μm (1010 nm to 1080 nm) laser market with stable performance up through 150 W of average power compared to 80 W for the standard PAVOS+.

For laser systems having large distances between amplification stages, the reduced thermal lens focal shift of the PAVOS+ Ultra results in greater coupling efficiency and simpler optical design.

Our PAVOS+ Ultra rotators and isolators deliver industry-best laser reliability and performance. The PAVOS+ Ultra family of Faraday devices provide superior isolation, especially at higher average power levels, while maintaining very high transmission values.

EOT's PAVOS+ Ultra products rely on the Faraday effect from high Verdet constant, low absorption materials to rotate the plane of linearly polarized light in the forward direction and an additional 45° of non-reciprocal rotation in the reverse direction. The PAVOS+ Ultra is available as a rotator or an isolator.

FEATURES

- 1/10th the absorption and thermal lens focal shift compared to standard PAVOS^a
- Theoretically ten times lower non-linear refractive index
- Completely passive; no tuning required
- Specified performance to 150 W
- Available with polarizing beam splitting cubes or EOT's high performance thin film polarizers
- EOT's most compact and shortest optical pathlength version of the PAVOS Ultra

OPTIONS

- Input/Output waveplates available
- Precision mounting capability
- Customization available

APPLICATIONS

- High average power applications
- Ultrafast R&D
- Microelectronics
- Medical Systems & Device Manufacturing
- Micromachining
- Particle Acceleration



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SPECIFICATIONS

	Rotator		Isolator	
	Minimum	Typical	Minimum	Typical
Clear Aperture	4 mm		4 mm	
Max. Rated Power Handling ^b	≥ 125 W	≥ 150 W	≥ 125 W	≥ 150 W
Peak Transmission ^c	≥98%		≥93%	≥95%
Peak Isolation ^c	N/A		≥ 30 dB ^d ≥ 27 dB ^e	≥ 33 dB ^d ≥ 30 dB ^e
Peak Extinction ^c	≥ 30 dB ^d ≥ 27 dB ^e	≥ 36 dB ^d ≥ 33 dB ^e	N/A	
Rotation	45° ± 2°	45° ± 1°	45° ± 2°	45° ± 1°
Storage Temperature Range	-20 °C to 60 °C		-20 °C to 60 °C	
Damage Threshold ^f	≥6 J/cm ² at 10 ns ≥0.6 J/cm ² at 8 ps	≥10 J/cm ² at 10 ns ≥1 J/cm ² at 8 ps	≥6 J/cm ² at 10 ns ≥0.6 J/cm ² at 8 ps	≥10 J/cm ² at 10 ns ≥1 J/cm ² at 8 ps

Product specifications are subject to change. All products are RoHS compliant.

^a See technical bulletin, *Advantages of the PAVOS Product Line*

^b Specification performance guaranteed to max. power rating, but device has been tested to >400 W without failure.

^c At customer-specified wavelength and temperature

^d With 1/e² beam diameter ≤ clear aperture/2 (50% encroachment), ≤ 5 mW power

^e With 1/e² beam diameter ≤ clear aperture/2 (50% encroachment), max. power

NOTE: For operating conditions not specified, contact EOT.

^f Limited by KTF crystal. Polarizers qualified to ≥ 10 J/cm² at 10 ns.