

OAM1059-V3.1

OFF-AXIS FREQUENCY SHIFTER



This low center frequency AO device simultaneously provides dual diffracted output beams, each of which is shifted 10MHz from the input wavelength. With the input beam linearly polarized and at 45 deg., the +1 order is upshifted +10MHz, and the -1 order is downshifted -10MHz relative to the fundamental wavelength. The +1 order is horizontally polarized and the -1 order is vertically polarized. The interaction medium is TeO₂ (paratellurite) which in slow shear mode exhibits very high efficiency with modest acoustic energy. This frequency shifter is well suited for laser heads used in laser interferometer position measurement systems with applications in integrated-circuit fabrication, inspection and repair, precision machine tools, mechanical parts inspection and measurement, and mechanical vibration analysis.

SPECIFICATIONS

Interaction Material:	TeO ₂ , off-axis
RF center frequency:	10MHz
Bandwidth:	1MHz
Operating wavelength	632.8nm
Input VSWR:	<2.5:1
Laser polarization:	linear, 45°
Active aperture size:	1.5mm
Diffraction efficiency:	>85% (total)
RF power for Saturation:	<100 milliwatts (nominal)
+1 order separation from 0 order:	9.7 mrad
-1 order separation from 0 order:	9.88 mrad
+1 order polarization extinction ratio:	21 dB (nominal)
-1 order polarization extinction ratio:	18 dB (nominal)
Outline dimensions:	(see reverse)

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.

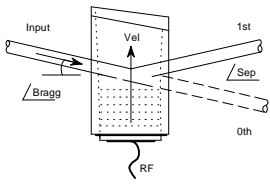
Tel: (703) 321 8301 Fax: (703) 321 8546

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Quality Assured.

In-house: Crystal Growth,
Optical Polishing,
A/R coating, Vacuum Bonding

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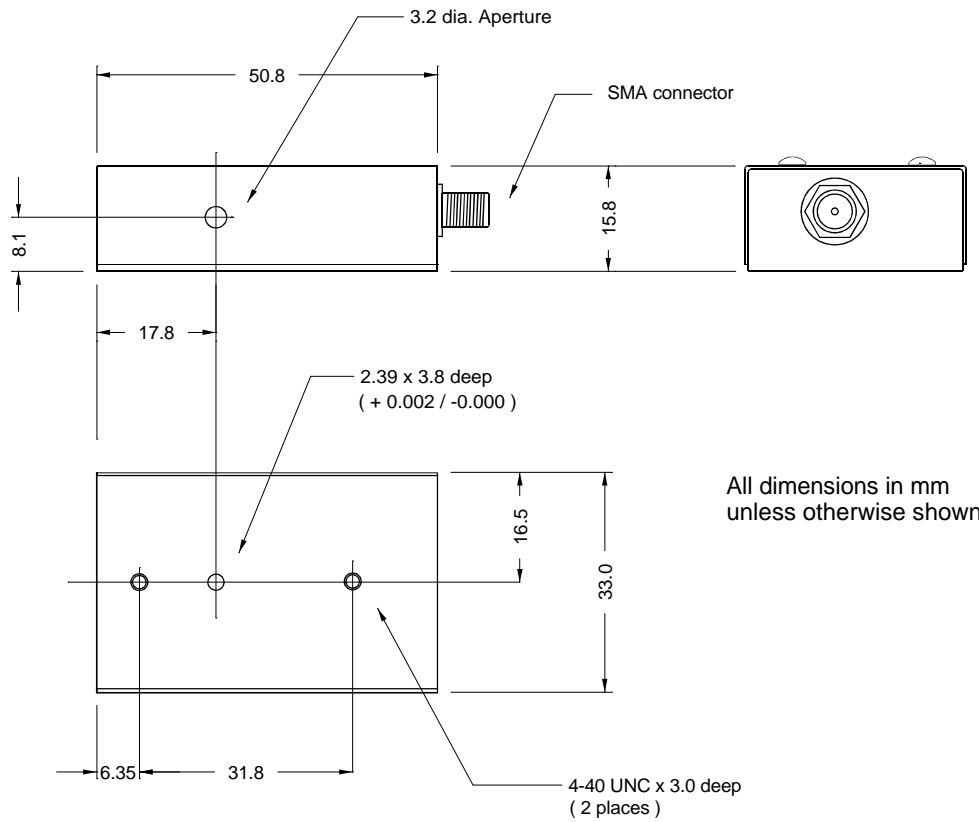
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OUTLINE DRAWING



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