

# OAM1059B-T10S-1p5

## 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 TeO<sub>2</sub> (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.

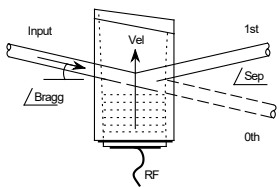
### SPECIFICATIONS

Interaction Material:	TeO <sub>2</sub> , 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)

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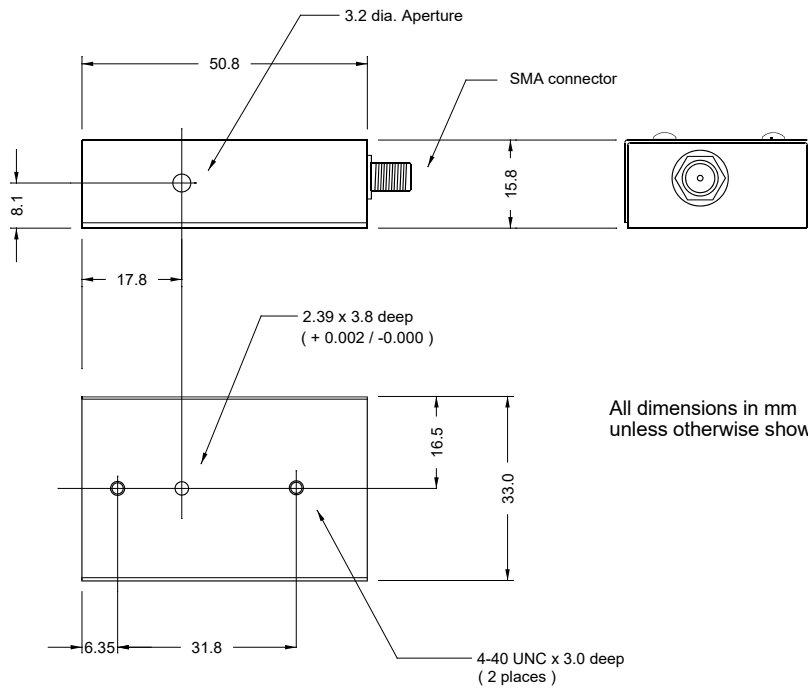
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### OUTLINE DRAWING



All dimensions in mm  
unless otherwise shown

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