

# AOTF1424-5

## AO Tuneable Filter

(Preliminary)



4321

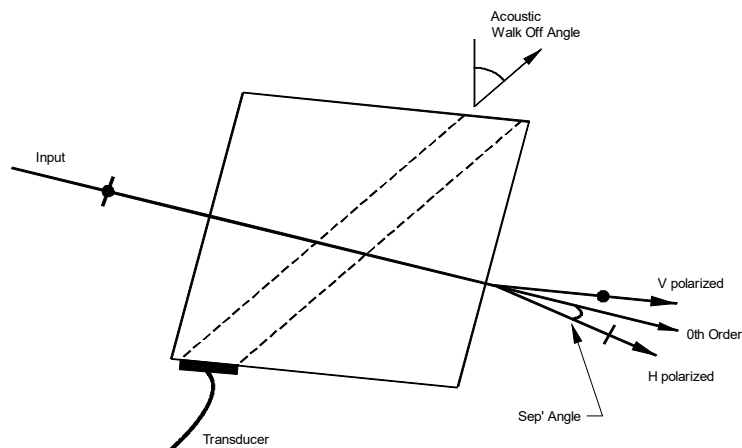
The AOTF1424 Acousto-Optic Tuneable Filter has been optimised for operation in the wavelength range of 2100 nm to 2500nm. The wavelength of the diffracted light is selected by application of a corresponding RF drive frequency. A thermal electric cooler (TEC) is fitted for applications requiring high temperature stability.

### SPECIFICATIONS

Interaction Material:	TeO <sub>2</sub> (s)
Aperture:	5mm x 5mm
Wavelength Range:	2100nm - 2500nm
Wave Number:	15.9/cm
Bandwidth *:	~ 7nm – 10nm
Acceptance Angle (V):	7.0° (nominal)
Acceptance Angle (H):	7.0° (nominal)
Input polarization:	Vertical
Output polarization:	Horizontal
Output:	Collinear with input
Separation Angle:	7.4°
Frequency:	40 - 50 MHz
Diffraction Efficiency:	>50% over filter range
RF Drive Power:	~ 3 Watts at 2.2um

\* Bandwidth = Wave Number x wavelength<sup>2</sup>  
 ( e.g. in units of nanometres, BW = 15.9x10<sup>-7</sup> x 2100<sup>2</sup> = 7nm)

### Conceptual diagram



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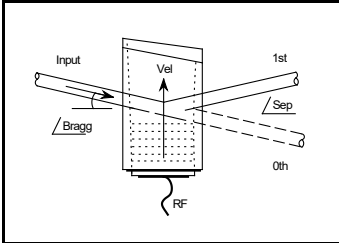
**Quality Assured.**  
**In-house: Crystal Growth,**  
**Optical Polishing,**  
**A/R coating, Vacuum Bonding**

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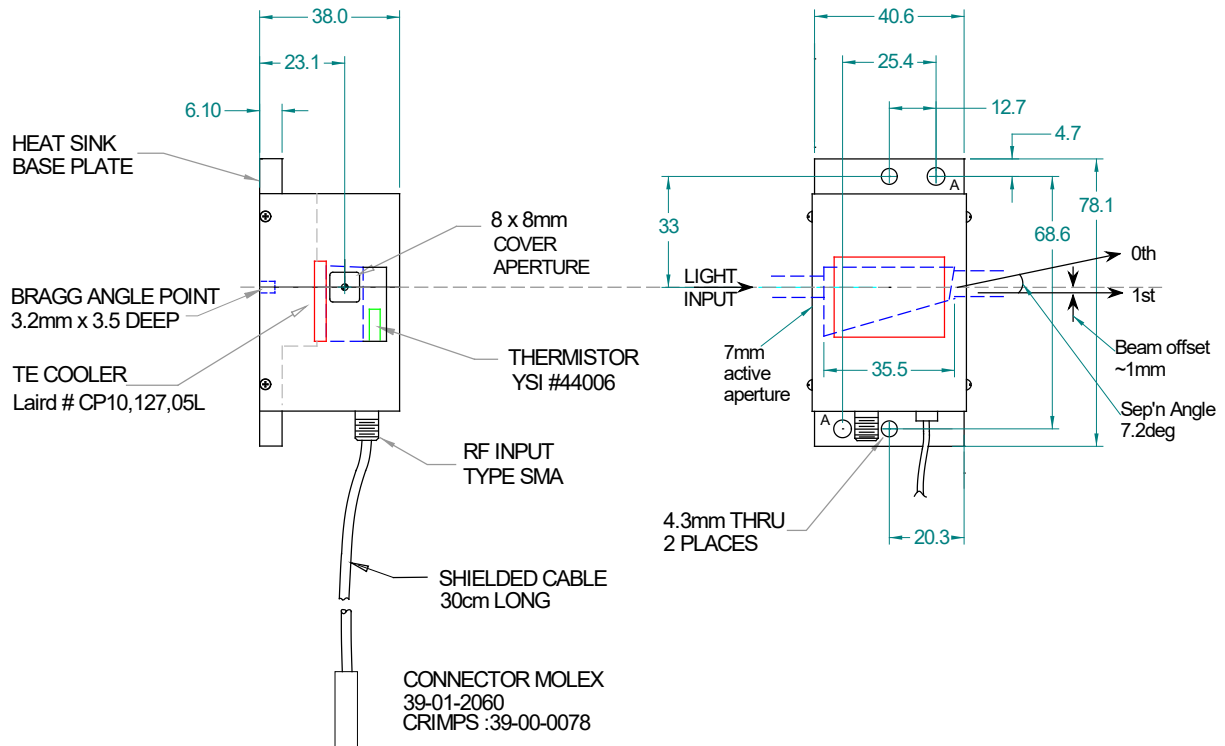
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### OUTLINE DRAWING

Dimensions: mm



### ELECTRONICS

Isomet IMS4-L synthesizer and AF0-40T-4 amplifier.

The TEC controller is not supplied.

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