

AOTF1110-VB



Variable Bandwidth AO Tuneable Filter

(Preliminary Specification)

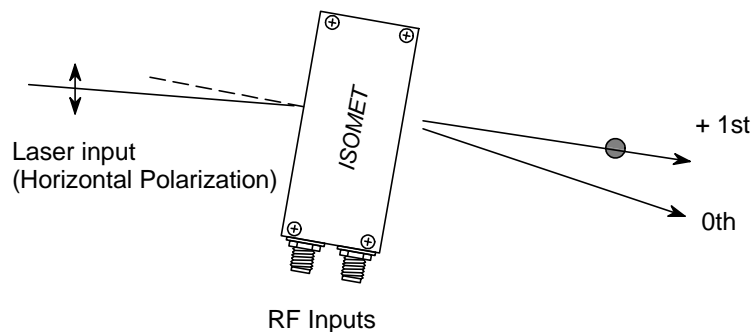
0505

SOLID STATE

FAST ACCESS TIME

MINIMAL CHROMATIC DEFLECTION

VARIABLE BANDWIDTH



(Device Orientation)

The AOTF-VB range of acousto-optic tuneable filters, are designed for use with broadband light sources and analytical imaging systems. The transmission characteristic of these solid state filters is controlled by the applied RF drive signal. The RF frequency defines the tuned wavelength of the diffracted light, whereas the signal amplitude defines the diffracted light intensity. The filter bandwidth is independently selected by enabling one or more of the four filter transducer electrodes via a compatible multi-output RF driver/amplifier.

For **horizontal** input polarization, the crystal geometry is designed to minimize chromatic beam deflection of the +1st output.

Our high quality, Isomet-grown off-axis tellurium dioxide (TeO_2) is utilised as the interaction material. The AOTF design can be customized to suit various wavelength ranges and bandwidths. A typical visible device specification is described overleaf.

Suitable drive electronics:

Isomet iDDS-1-SE Frequency Synthesizer RF driver
RFA084-4 multi output amplifier with independent amplitude control.

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

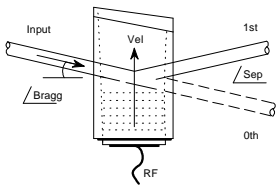
ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.

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

E-mail: ISOMET@ISOMET.COM Web Page: WWW.ISOMET.COM

Quality Assured.

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



AOTF1110-VB



Variable Bandwidth AO Tuneable Filter

(Preliminary Specification)

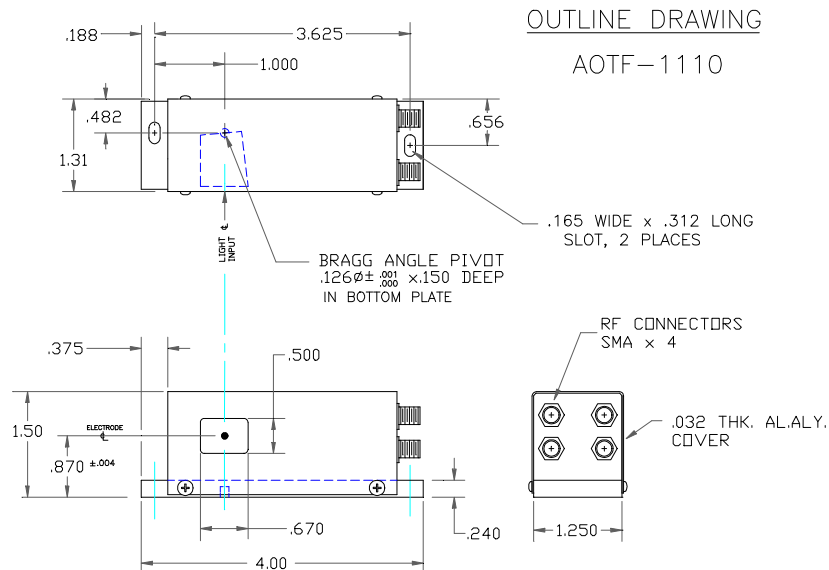
0505

Specifications

Aperture	10mm x 10mm
Operating range	400 – 700nm
Input Acceptance Cone angle	5.7° nominal
Switching speed	< 1usec per mm beam dia.
Static insertion loss	< 5%
Diffraction efficiency	> 80% / line
Separation Angle (mrad)	3° nominal

Wavelength (nm)	457				488			
Frequency (MHz)	78.5				71.5			
Channels driven	1	2	3	4	1	2	3	4
3dB Bandwidth (nm)	17.6	8.9	6.1	4.7	24.8	11.6	7.7	5.8
Drive Power per ch	510	180	100	60	690	200	110	70

Wavelength (nm)	514				633			
Frequency (MHz)	66				50.5			
Channels driven	1	2	3	4	1	2	3	4
3dB Bandwidth (nm)	29.8	14	9.4	7	64	29	19.3	15.3
Drive Power per ch	800	210	120	65	950	600	270	160



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

E-mail: ISOMET@ISOMET.COM Web Page: WWW.ISOMET.COM

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