

M1418-aQ150L-1



Acousto-Optic Low GVD Modulator

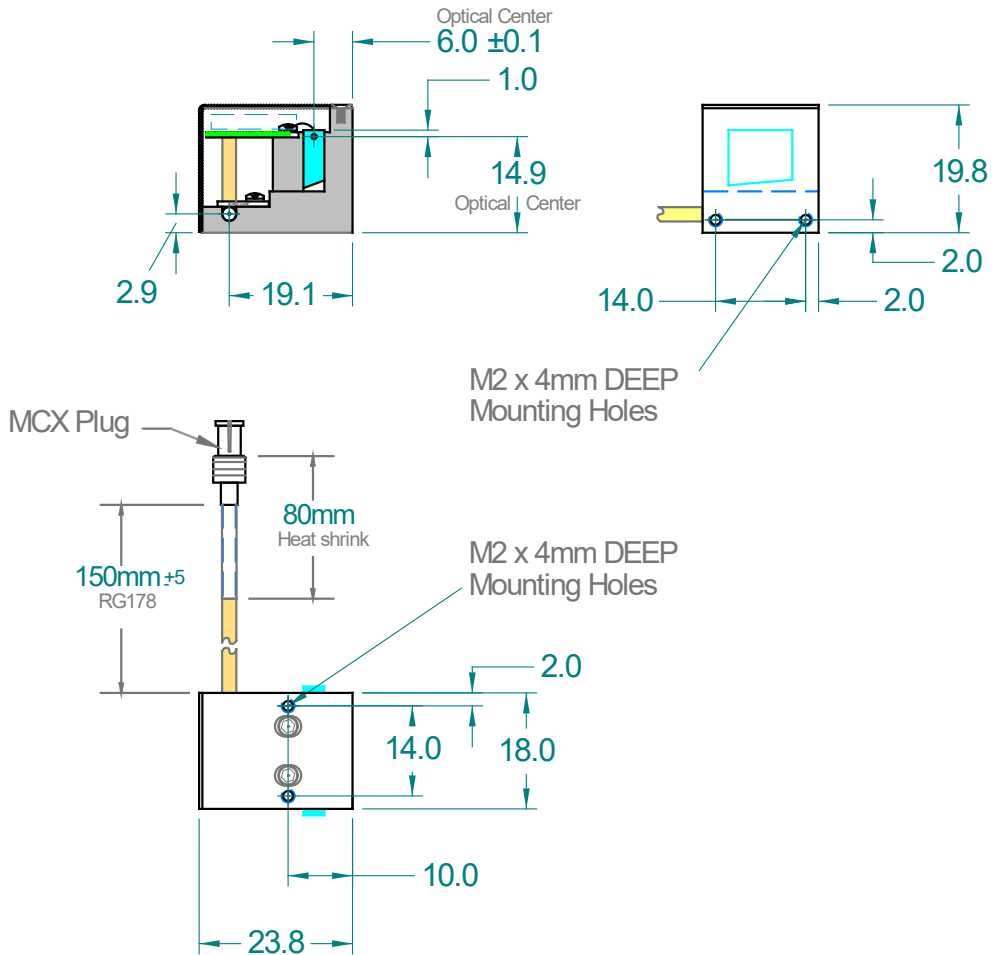
(Preliminary)

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APPLICATIONS

- Compact Modulator
- Frequency Shifter

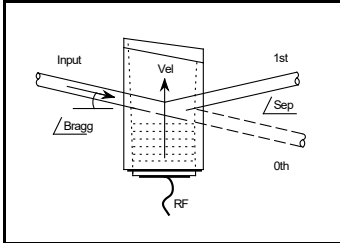
OUTLINE DRAWING



Note: Mount device to heat conducting surface

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
 ISOMET CORP, 10342 Battlevue Parkway, Manassas, VA 20109, 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



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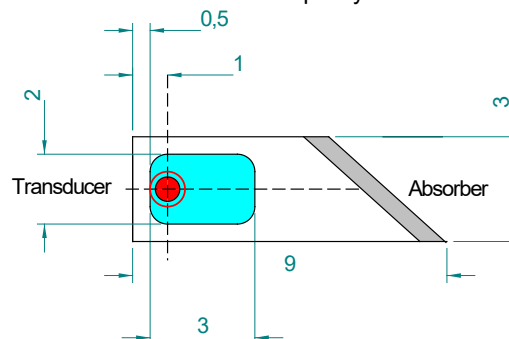
SPECIFICATIONS

A/R Operating Wavelengths:	470-800nm
Interaction Medium:	Quartz, 11mm optical path length
Input polarization:	Vertical
Acoustic Velocity:	5.7mm/ μ s
Active Aperture:	1.0mm
Clear Aperture **:	3.0mm
Static Insertion Loss	<3% at 633nm, 1.5% typical
Reflectivity/Surface:	< 1.0%
Centre Frequency (CF):	150MHz
RF Bandwidth (minimum):	10MHz (+/- 5MHz)
Input Impedance:	50 Ω nominal
VSWR:	<1.2:1 @ 150MHz, typical 1.13:1
DC Contrast Ratio:	>1000:1 min, typical >2000:1

RF DRIVERS

Digital / Analog modulation, >50dB On:Off 554F-4

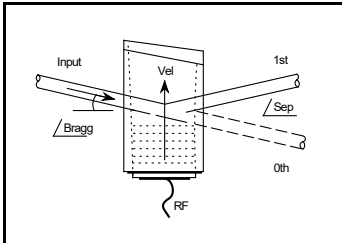
* Of which an area of 2 x 3mm has a surface quality better than 10-5 Scratch/Dig



Red dot indicates the input beam at the minimum recommended distance of 1mm from the transducer

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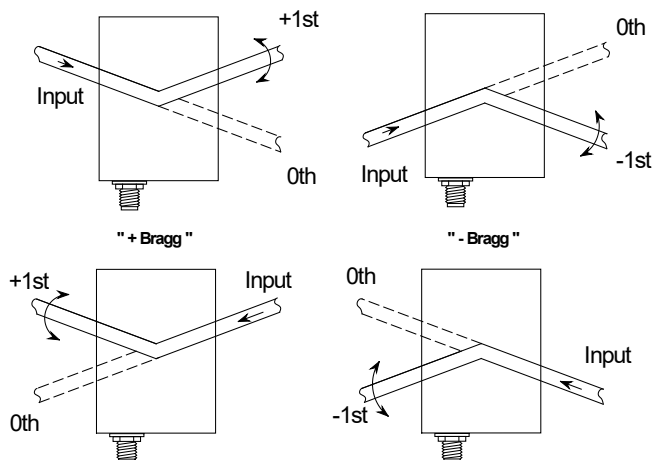
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PERFORMANCE vs. WAVELENGTH

AR Wavelength:	500nm	633nm	800nm
Peak RF drive power	12W	19W	31W
Max CW drive Power:	2W	2W	2W
Peak efficiency (duty cycle for <math><2W\text{ avg}</math>)	90%	90%	90%
Typical CW efficiency for 2W drive	30%	20%	12%
Bragg angle:	6.6 mrad	8.3mrad	10.5mrad
Beam Separation:	13.2 mrad	16.7mrad	21 mrad

PERFORMANCE vs. BEAM DIAMETER at 633nm, V-pol

Beam Diameter:	0.7mm	0.5mm
Rise Time:	107ns	77ns
Modulation Bandwidth @ MTF of 0.5:	3 MHz	4.5 MHz



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