

M1315(A)-G40-H High Power AO Modulator



0115

APPLICATIONS

- Material Processing
- Via Hole Drilling
- Surface texturing
- Hole Perforation

FEATURES

- Low loss
- High Optical Power
- All Solid-State

The M1315-G40 series are low loss single beam modulators optimized for duty cycled applications and designed to minimize thermal lensing and reduce beam degradation at high optical powers.

SPECIFICATIONS (TYPICAL)

Operating Wavelength:	9.4um or 10.6um (specify)*
Interaction Material:	Germanium
Active Aperture:	
H=6	6mm.H x 15mm.W
H=7	7mm.H x 15mm.W
H=8	8mm.H x 15mm.W
H=9	9mm.H x 15mm.W (9.4um only)
Centre Frequency (fc):	40MHz
RF Bandwidth:	10MHz
Design duty cycle	25%,
Maximum duty cycle	100% with caution
Diffraction Efficiency at fc:	> 85%, 90% typical
RF Power for Max. D/E	< 180 Watts peak total (-8)
Static Insertion Loss:	< 5%
Maximum Optical Power:	600 Watts, 7mm dia. Gaussian beam
Laser Polarization:	Linear, Horizontal
Water Cooling (Minimum):	> 2 Liter/Min. @ < 20°C
<u>Single Beam Performance at 10.6um</u>	
Bragg Angle at 10.6um:	38.5 mrad, nominal
Separation Angle at 10.6um:	77.1 mrad (40MHz)
Optical Rise Time	0.12usec / mm beam diameter
Diffraction Efficiency	> 85%, 90% typical
RF driver	RFA641-BR
<u>Single Beam Performance at 9.4um</u>	
Bragg Angle at 9.4um:	34.2 mrad, nominal
Separation Angle at 9.4um:	68.4 mrad (40MHz)
Optical Rise Time	0.12usec / mm beam diameter
Diffraction Efficiency	> 85%, 90% typical
RF driver	RFA641-BR
Options:	M1315 : Copper case parts (standard)
	M1315A : Aluminium case parts
	* : other wavelengths in the 2.5µm - 12µm range.

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

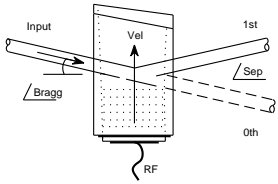
ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.

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

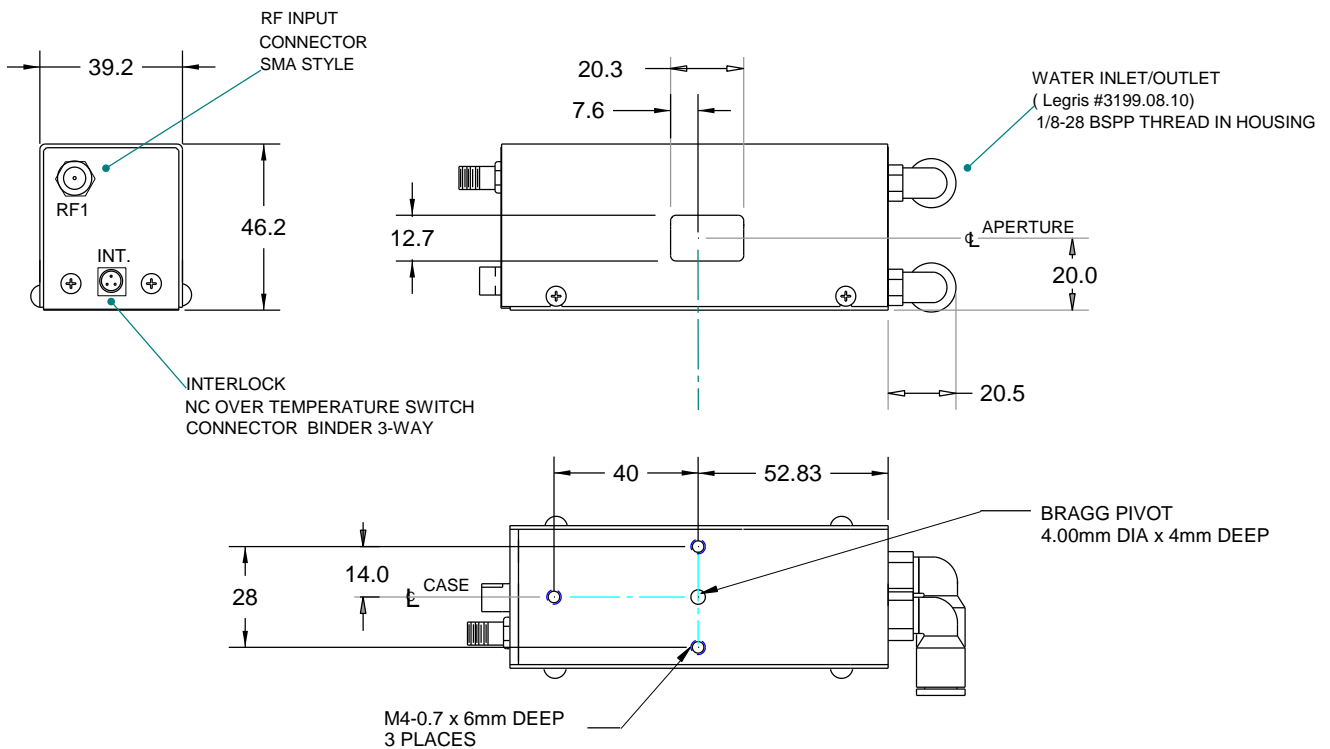
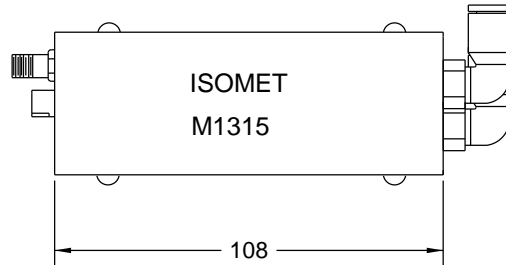


M1315(A)-G40-H High Power AO Modulator



0115

OUTLINE DRAWING



Dimensions: mm

Case parts in contact with coolant are fabricated from Te-Copper except M1315A

Refer application note AN0901 regarding Coolant Specification

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