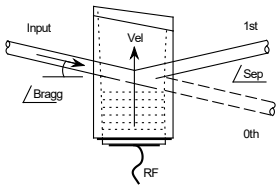


FS1446-G190L-1.2

MIR Frequency Shifter / Modulator

(PRELIMINARY)

4723

A high frequency mid-IR frequency shifter. To further minimize on-axis reflections, one optic face is polished with a 10mrad wedge, angle orthogonal to the diffraction axis.

SPECIFICATIONS

Operating Wavelengths:	2.5 - 5um (FS1446-G190L-1.2-FB) 7 - 11um (FS1446-G190L-1.2-FI)
Center Frequency, fc:	190MHz
RF Bandwidth, Δf:	70MHz
Diffraction Efficiency:	> 80% peak, (duty cycled RF drive)
Input Impedance:	50Ω (nominal)
Input VSWR:	<1.5:1 @ 190 MHz
Active Aperture:	1.2 mm high
Optical Insertion Loss:	< 3%
Reflectivity:	0.5%/surface, mid-band.
DC Contrast Ratio:	> 1000:1 min, 2000:1 typical
Laser Polarization:	Horizontal, parallel to base
Max recommended RF power:	10W (CW or average)
Cooling:	Conduction. MUST be mounted to a heatsink

PERFORMANCE vs. WAVELENGTH

Wavelength (nm):	2.5um	5um	7um	11um
Peak RF Drive Power (Watts):	3	13	26	66
Bragg Angle at fc (mrad):	40.9	81.8	114.6	180
Separation Angle at fc (mrad):	81.8	163.6	229.1	360
CW Efficiency up to 10W RF:	~85%	~75%	~50%	~20%

PERFORMANCE vs. BEAM DIAMETER at 7um, 3W RF drive power

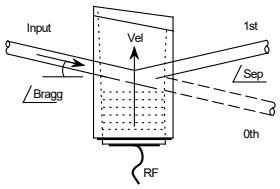
Beam Diameter (mm):	1.0	0.5
Risetime (nsec):	122	61
Video Bandwidth (MHz):	3	5
Diffraction efficiency (typ):	20%	15%

RF Drive Electronics

Synthesizer Driver / Amp: iMS2-HF with AF0-200T-1-3 (3W) or AJ0-200T-10 (>10W)

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
ISOMET CORP, 10342 Battleview 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



FS1446-G190L-1.2

MIR Frequency Shifter / Modulator

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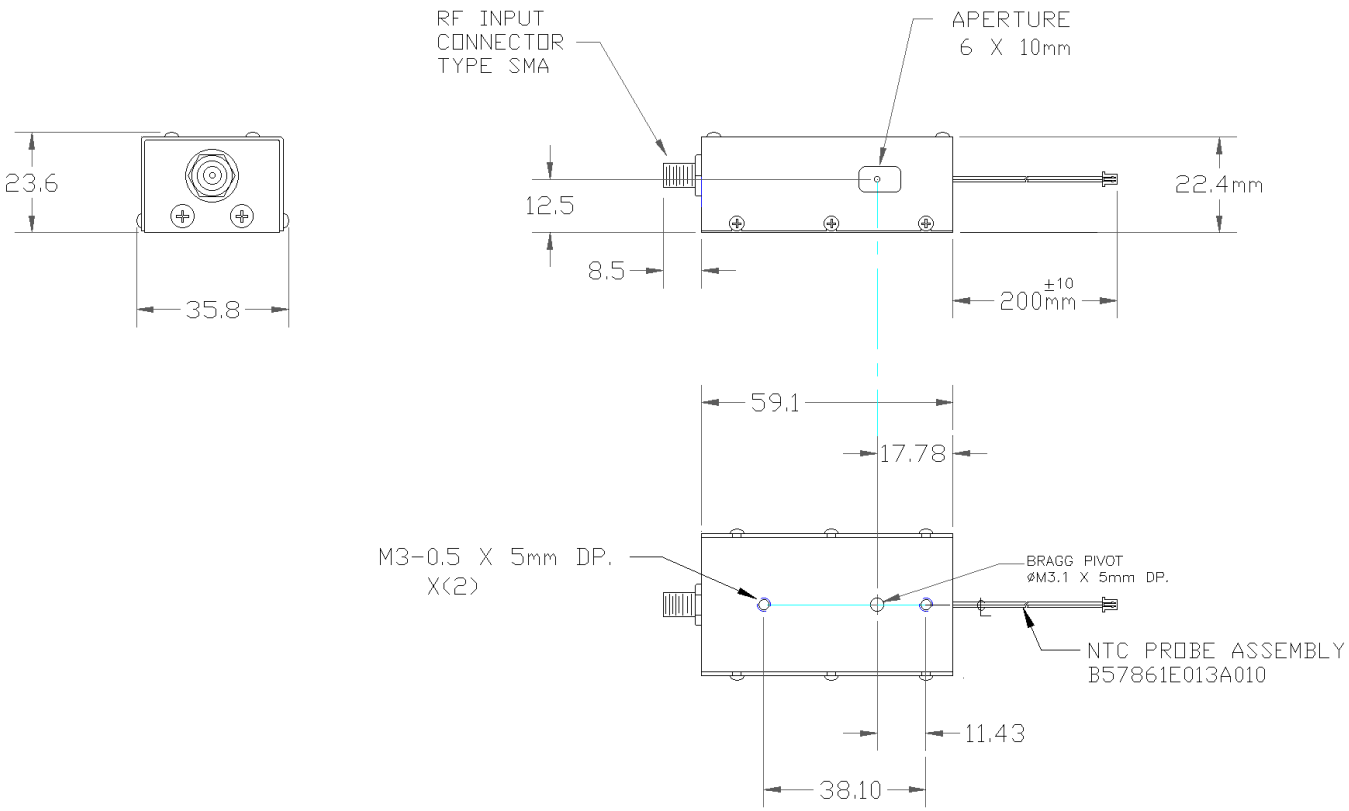
OUTLINE DRAWING

Dim'n: mm



Always mount to a heatsink.

Options:

-NT 10K NTC thermistor (probe assembly)

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