

M1210-G(fc)-2 , -4



Acousto-Optic Modulator, 2.05 - 5.0 um

0419

APPLICATIONS

- **Modulator**
- **Frequency Shifter**

The M1210 series are conduction cooled Germanium AO modulators/frequency shifters designed for operation in the 2.05 - 5um range. Input light must be linearly polarized, parallel to the mounting base.

SPECIFICATIONS

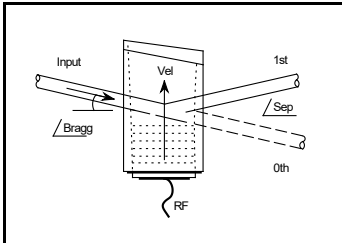
Operating Wavelength:	A/R 2.05um, or 2.5 - 5um
Interaction Material:	Single Crystal Germanium
Acoustic Velocity:	5.5mm/us
Input Impedance:	50 ohms (nominal)
Center Frequency options (fc):	
M1210-G60-H	60MHz
M1210-G80-H	80MHz
M1210-G105-H	105MHz
Active Aperture options (H):	
M1210-G(fc)-2	2mm
M1210-G(fc)-4	4mm
RF Bandwidth:	> fc +/- 5MHz
Insertion Loss:	< 5%
A/R reflectivity:	< 1% per surface
Diffraction Efficiency (DE):	> 85% at peak RF power,
Optical rise time :	118ns per mm beam diameter
Laser Polarization:	Linear/Parallel to base (essential)

λ	Fc	Bragg Angle	Separation Angle
<u>um</u>	<u>MHz</u>	<u>mrad</u>	<u>mrad</u>
2.05	80	14.9	29.8
	105	19.6	39.1
3.39	60	18.5	37.0
	80	24.6	49.3

λ	Active Aperture	Peak RF power for max' efficiency	Max' recommended CW (or average) RF power
<u>um</u>	<u>mm</u>	<u>W</u>	<u>W</u>
2.05	2	1.6	1.6
	4	3.2	3.2
3.39	2	4	4
	4	9	4, max

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



M1210-G(fc)-2 , -4

Acousto-Optic Modulator, 2.05 - 5.0 um



0419

SUGGESTED RF DRIVERS

Fixed frequency (digital / analog modulation):

60MHz: 552F-4-60

80MHz: 552FC-4

105MHz: 553F-4-105

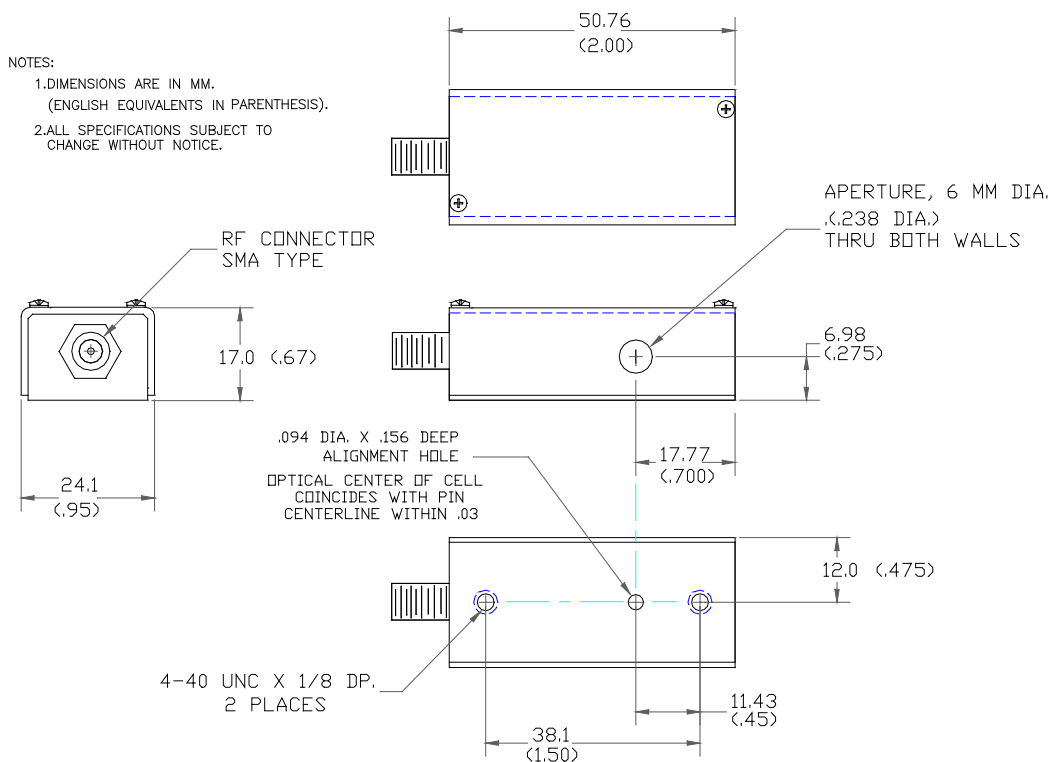
Tunable frequency (digital / analog modulation):

620C/630C-80

620C/630C-100

iSPA-SF1-b/c Synthesizer-amplifier

OUTLINE DRAWING



Ensure adequate heat sinking through mounting surface, especially at high average RF powers.

Case must not exceed 35degC

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