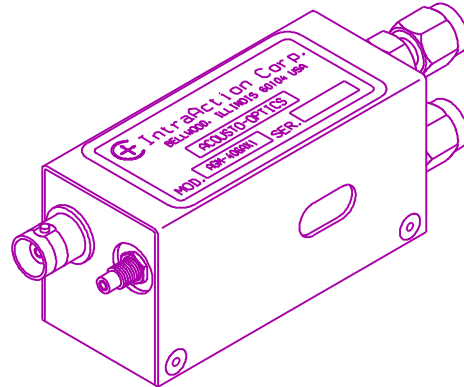


FREQUENCY SHIFTER

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MODEL AGM-A1 HIGH FREQUENCY SERIES IR ACOUSTO-OPTIC MODULATOR / FREQUENCY SHIFTER

- OPTICAL FREQUENCY SHIFTING
- INTENSITY MODULATION
- LASER BEAM DEFLECTION
- HIGH RELIABILITY



SPECIFICATIONS

Spectral Wavelength ¹	10.6 μm
Acousto-optic Material	Optical Single Crystal Geranium
Acoustic Velocity	5.5 mm / μsec
Active Aperture Height	3 mm
Modulation Bandwidth (-3db)	1.6 MHz (2.5 mm beam diameter)
Optical Rise Time	290 nsec (2.5 mm beam diameter)
RF Input Impedance	50 ohms
Optical Insertion Loss	<7 percent
Optical Power Capability	25 watts full aperture
Laser Polarization	Linear, parallel to mounting surface
Water Cooling	250 ml / min, 20°C
Thermal Interlock Switch	NC, opens at 45°C
Size (less connectors)	3.00 D x 1.50 H x 1.30 W inches 76.2 D x 3.81 H x 33.0 W mm

MODEL	<u>AGM-903A1</u>	<u>AGM-1003A1</u>	<u>AGM-1103A1</u>
Center Frequency ²	90 MHz	100 MHz	110 MHz
Frequency Shift Range ²	"(80 to 100) MHz	"(90 to 110) MHz	"(100 to 120) MHz
Beam Separation	173 mrad (90 MHz)	192 mrad (100 MHz)	212 mrad (110 MHz)
Bragg Angle	86.7 mrad (90 MHz)	96 mrad (100 MHz)	106 mrad (110 MHz)
Diffraction Efficiency	60 percent	60 percent	50 percent
RF Drive Power	20 watts	20 watts	20 watts

¹ Narrow and broadband A/R coatings in the range of 2.2 μm to 11 μm are available.

² Other frequencies available.

NOTE: Operating specifications change with optical wavelength.

