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MODEL AGM-406B1
IR ACOUSTO-OPTIC MODULATOR / FREQUENCY SHIFTER

- INTENSITY MODULATION
- OPTICAL FREQUENCY SHIFTING
- OPTICAL ISOLATION
- LASER BEAM DEFLECTION
- HIGH RELIABILITY
- HIGH OPTICAL POWER CAPABILITY



SPECIFICATIONS

Optical Wavelength ^{1, 5}	10.6 μm
Acousto-optic Material	Optical Single Crystal Germanium
Acoustic Velocity	5.5 mm/ μsec
Center RF Frequency ²	40 MHz
RF Bandwidth	20 MHz
Optical Frequency Shift Range	\pm (30 MHz to 50 MHz)
Beam Separation ⁵	77 mrad (40 MHz)
Bragg Angle ⁵	38.5 mrad (40 MHz)
Diffraction Efficiency	85 percent
RF Drive Power ^{4, 5}	30 watts
Active Aperture Height ⁶	6 mm
Modulation Bandwidth (-3db)	750 KHz (5.5 mm diameter)
Optical Rise Time	117 nsec / mm beam diameter
RF Input Impedance	50 ohms
RF Connector	BNC
Optical Insertion Loss ^{3, 5}	<12 percent
Optical Power Capability ^{3, 5}	>100 watts full aperture
Optical Polarization	Parallel to mounting surface
Water Cooling ³	500 ml / min at 20°C
Thermal Interlock Switch	NC opens at 45°C
Size (less connectors)	1.50 H x 2.97 D x 2.42 W (inches) 38.1 H x 75.5 D x 61.5 W (mm)

¹ Other wavelengths and ranges from 2.5-11.5 μm are available.

² Other frequencies are available.

³ Optical absorption in Germanium is temperature dependent – less absorption at lower temperatures.

⁴ Laboratory and OEM drive electronics are available. See GE Series product sheet.

⁵ NOTE: Operating specifications change with optical wavelength.

⁶ Active Aperture Heights up to 10 mm are available; housing configuration will be different.