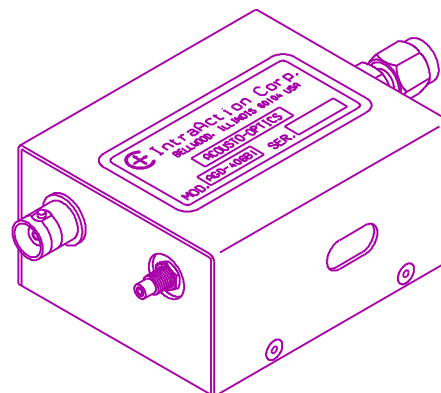


**MODEL AGD-406B1
INFRARED ACOUSTO-OPTIC DEFLECTOR**

- LASER BEAM DEFLECTION
- FLAT OPTICAL SCAN RESPONSE¹
- OPTICAL FREQUENCY SHIFTING
- INTENSITY MODULATION
- HIGH OPTICAL POWER CAPABILITY
- EXCELLENT TEMP. STABILITY & RELIABILITY



SPECIFICATIONS

Design Optical Wavelength ²	10.6 μ m
Acousto-optic Material	Optical Single Crystal Germanium
Center RF Frequency	40 MHz
Deflection RF Bandwidth	20 MHz
Optical Frequency Shift Range	" (30 to 50) MHz
Beam Separation	77 mrad
Angular Deflection	38.5 mrad
Diffraction Efficiency	80 percent
RF Drive Power	30 watts (nominal)
Active Aperture Height	6 mm
Access Time	182 nsec / mm beam width
Time-Bandwidth Product	20 (5.5 mm beam width)
Intensity Modulation Bandwidth	750 KHz (5.5 mm beam diameter)
Optical Rise Time	117 nsec / mm optical beam width
Optical Polarization	Parallel to mounting surface
Static Optical Insertion Loss	<12 percent
RF Impedance	50 ohms (nominal)
RF Connector	BNC
Size (less connector)	2.97 D x 1.50 H x 2.42 W inches 75.4 D x 38.1 H x 61.5 W mm

¹ The Model AGD-406B1 incorporates an acoustic phased-array beam steering design which produces a relatively flat first order diffraction efficiency across the deflection bandwidth. Because of this design feature, the deflector requires a single RF power amplifier to drive the multiple transducer array.

² Deflectors can be designed to operate at other wavelengths in the range of 2.5 to 11 μ m.

³ Two deflectors can be cascaded for various frequency shift ranges to produce an angular nonvariant frequency shifted optical beam.

⁴ A complete line of VCO, synthesized, and OEM drive electronics are available.