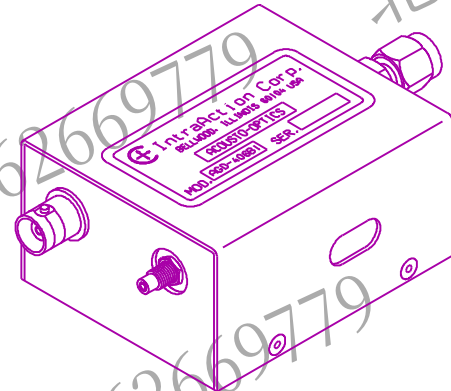


MODEL AGD-406B1
INFRARED ACOUSTO-OPTIC DEFLECTOR

- 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.