

MODEL ACM SERIES ACOUSTO-OPTIC MODULATOR / FREQUENCY SHIFTER

- NEAR IR WAVELENGTH RANGE
- INTENSITY MODULATION
- OPTICAL FREQUENCY SHIFTING
- OPTICAL ISOLATION
- LOW RF DRIVE POWER
- HIGH RELIABILITY
- HIGH OPTICAL POWER CAPABILITY



SPECIFICATIONS

Acousto-optic Material	AMTIR-1 Chalcogenide Glass
Optical Wavelength ¹	1.3 to 1.6 μ m
Optical Power Capability	500 watts / cm ²
Active Aperture Height ²	2 mm
Diffraction Efficiency	85 percent
RF Drive Power ³	700 milliwatts (1.55 μ m)
RF Input Impedance	50 ohms
Modulation Bandwidth (-3db)	1.25 MHz (1.5 mm diameter)
Optical Rise Time	255 nsec / mm beam diameter
Static Optical Insertion Loss	4 percent (1.55 μ m)
Optical Polarization	any
RF Connector	SMA
Size (less connector)	2.80 L x 1.25 W x 0.70 H inches 71.2 L x 31.8 W x 17.8 H mm

MODEL	<u>ACM-402AA1</u>	<u>ACM-502AA1</u>	<u>ACM-802AA1</u>	<u>ACM-1002AA1</u>
Center Frequency ⁴	40 MHz	50 MHz	80 MHz	100 MHz
Optical Frequency Shift	± 30 to 50 MHz	± 40 to 60 MHz	± 65 to 95 MHz	± 80 to 120 MHz
Beam Separation (1.55 μ m)	24.6 mrad	30.8 mrad	49.2 mrad	61.5 mrad

¹ Wavelengths available in the range of 1.2 to 2.5 μ m with appropriate antireflection coating. Specifications vary with optical wavelength.

² Other active aperture heights available with modified specifications.

³ Fixed frequency, synthesized variable frequency, or OEM drivers are available.

⁴ Any RF frequency from 40 to 200 MHz is available. Specifications vary with RF frequency.