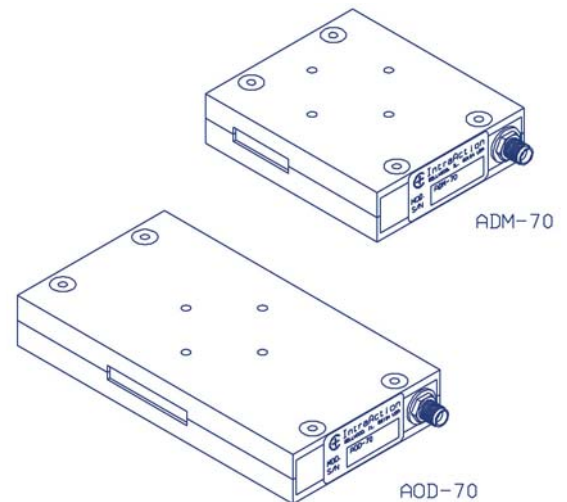


# AOD-70 ACOUSTO-OPTIC DEFLECTOR

# ADM-70 ACOUSTO-OPTIC DEFLECTOR-MODULATOR

- LASER BEAM DEFLECTION
- INTENSITY MODULATION
- MULTIPLE BEAM GENERATION
- FLAT OPTICAL SCAN RESPONSE
- ACOUSTIC PHASED-ARRAY DESIGN<sup>1</sup>
- OPTICAL SIGNAL PROCESSING
- OPTICAL FREQUENCY SHIFTING
- HIGH RELIABILITY



SPECIFICATIONS			
Design Optical Wavelength <sup>2</sup>	633 nm		
Acousto-optic Material	Dense Flint Glass		
Diffraction Efficiency (center of scan)	80%		
Diffraction Efficiency (edges of scan)	60%		
Center Frequency	70 MHz		
Deflection Bandwidth	40 MHz		
Beam Separation	11.4 mrad (70 MHz)		
Deflection Range	6.5 mrad		
RF Drive Power <sup>3</sup> (nominal)	2.5 Watts		
Input Impedance (nominal)	50 ohms		
Optical Polarization	Any		
MODEL	ADM-70	AOD-70	
Time-Bandwidth Product(resolution) <sup>4</sup>	200(spots)	400(spots)	
Access Time (full aperture width)	5 $\mu$ s	10 $\mu$ s	
Active Aperture Height	2 mm	2 mm	
Active Aperture Width	20 mm	40 mm	
Size (less connector)	2.8 L x 0.7 H x 2.4 W inches	4.5 L x 0.7 H x 2.4 W inches	
	7.1 L x 1.8 H x 6.1 W cm	11.5 L x 1.8 H x 6.1 W cm	

<sup>1</sup> These deflectors incorporate an acoustic phased-array beam steering design to produce a relatively flat first order diffraction efficiency across the deflection bandwidth. Because of this design feature, the deflectors require a single RF power amplifier to drive the multiple transducer array.

<sup>2</sup> Useful at other wavelengths with modified specifications.

<sup>3</sup> A complete line of VCO, synthesized, laboratory, and OEM drive electronics are available.

<sup>4</sup> This is resolution as defined by the Rayleigh criterion for a uniformly illuminated optical beam.