

Polytec GmbH – Polytec-Platz 1 – 7 – 76337 Waldbronn – Germany
Tel: +49 7243 604-0 – Fax: +49 7243 69944 – E-Mail: wl@polytec.de

**MODEL AOM-40AF SERIES
ACOUSTO-OPTIC MODULATOR/FREQUENCY SHIFTER**

- INTENSITY MODULATION
- OPTICAL FREQUENCY SHIFTING
- LASER BEAM DEFLECTION
- HIGH OPTICAL POWER CAPABILITY
- HIGH RELIABILITY
- EXCELLENT TEMPERATURE STABILITY



SPECIFICATIONS

Acoustic Center Frequency ¹	40 MHz
Optical Frequency Shift Range	±(30 to 50) MHz
Acousto-optic Material	Dense Flint Glass
Acoustic Velocity	3630 m/sec
Modulation Bandwidth (-3db)	2.7 MHz (1.0 mm beam diameter) 1.8 MHz (1.5 mm beam diameter)
Optical Rise Time	177 nsec (1.0 mm beam diameter) 265 nsec (1.5 mm beam diameter)
Static Optical Insertion Loss	2 Percent (633nm)
Optical Polarization	Any
RF Input Impedance	50 Ohms (VSWR < 1.25:1 at CF)
RF Connector	BNC
Size (less connector)	0.88 H x 2.94 D x 2.46 W inches 22.4 H x 74.7 D x 62.5 W mm

MODEL	<u>AOM-402AF1</u>	<u>AOM-405AF1</u>	<u>AOM-402AF3</u>	<u>AOM-402AF4</u>
Optical Wavelength Range	440-700 nm	440-700 nm	700-1100 nm	1064 nm
Active Aperture Height ²	2 mm	5 mm	2 mm	2 mm
Diffraction Efficiency	90 Percent	90 percent	85 Percent	85 Percent
Drive Power ³	1.8 Watts (633 nm)	4 watts (633 nm)	3 Watts (780 nm)	4 Watts
Beam Separation	6.9 mrad (633 nm)	6.9 mrad (633 nm)	8.6 mrad (780 nm)	11.7 mrad

¹ Other center frequencies available.

² Other active aperture heights available.

³ A complete line of analog, digital, dual frequency, OEM, and laboratory drive electronics are available.