AOM740-H
High Power AO Modulator

APPLICATIONS

- Material Processing
- Via Hole Drilling
- Surface texturing
- Hole Perforation

The AOM740 series have been designed to minimize thermal lensing and reduce beam degradation at high optical powers.

FEATURES

- Low loss
- High Optical Power
- All Solid-State

SPECIFICATIONS (TYPICAL)

- Operating Wavelength: 9.4um or 10.6um (specify)*
- Interaction Material: Germanium
- Active Aperture:
  - H=6: 6mmH x 30mmW
  - H=7: 7mmH x 30mmW
  - H=8: 8mmH x 30mmW
  - H=9: 9mmH x 30mmW (9.3um)
- Centre Frequency (x=fc):
  - AOM740-H 40MHz
- RF Bandwidth: 10MHz
- Diffraction Efficiency at fc: > 85%, 90% typical
- RF Power for Max. D/E: < 180 Watts total (-7)
- Static Insertion Loss: < 4%
- Maximum Optical Power: 600 Watts, 7mm dia. Gaussian beam
- Bragg Angle: 33.9 mrad 38.6 mrad
- Separation Angle: 67.7 mrad 77.1 mrad
- Laser Polarization: Linear, Horizontal
- Water Cooling (Minimum): > 2 Liter/Min. @ < 20ºC
- Modulator performance:
  - Optical Rise Time: 0.12usec / mm beam diameter
  - Diffraction Efficiency: > 85%
  - Modulator Drive Electronics: RFA641 (40MHz)
- Options:
  - BR: Brass case parts
  - P: Air purge inlets
  - *: other wavelengths in the 2.5µm - 11.2µm range.
AOM740-H
High Power AO Modulator

OUTLINE DRAWING

Dimensions: mm

Notes:
1. This device requires water cooling to prevent thermal runaway. The integral NC thermal interlock switch opens at 35 degrees centigrade.
2. The water cooled case parts are aluminium, it is recommended that a corrosion inhibitor be added to the cooling system.

Refer application note AN0901 regarding Coolant Specification

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.
Tel: (703) 321 8301       Fax: (703) 321 8546
E-mail: ISOMET@ISOMET.COM  Web Page: WWW.ISOMET.COM

Quality Assured.
In-house: Crystal Growth,
Optical Polishing,
A/R coating, Vacuum Bonding