



L3HARRIS®
FAST. FORWARD.

MODEL H-905 AOM

Acousto-Optic Modulator

The L3Harris Model H-905 AOM allows light from a green (532 nm) optical source to be modulated over a range of frequencies. Light from a coherent optical source is focused to a suitable beam waist within the optical medium, which is composed of low-loss, optical-grade crystalline quartz. It is proportionally directed into a primary intense diffraction order at an angle that depends on the frequency of the applied radio frequency (RF) source waveform.

Three SMA cable interface connectors are provided for optimal phase-delayed RF source connections. It is designed to be run in phase for normal operation and does not require a specialized driver. Connections for water cooling are provided to improve long-term operation and pointing stability.

In addition, the H-905 was designed to operate with a circular input beam to simplify system integration in many optical systems.

PARAMETER	SPECIFICATION
Unless otherwise noted, all specifications are at 532 nm wavelength, 1 mm circular beam size.	
Nominal RF Input Impedance	50 ohms
Center Frequency	100 MHz
Input Polarization	Vertical to base (linear vertical)
Modulation Bandwidth	70 – 120 MHz
Total Deflection Angle	5 mrad
Minimum Diffraction Efficiency	>70% at center frequency
Optical Beam Diameter	1 mm (circular) $(1/e^2) \pm 0.25$ mm
Maximum RF Drive Power	9 W (total 3 inputs)
Optical Wavelength	532 nm (nominal)
Optical Material	Crystalline quartz
Rise Time	175 ns (nominal)

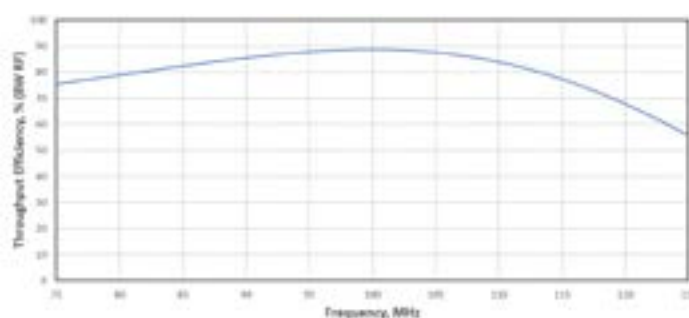
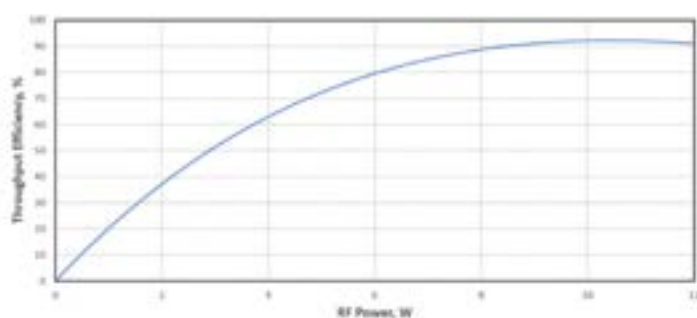
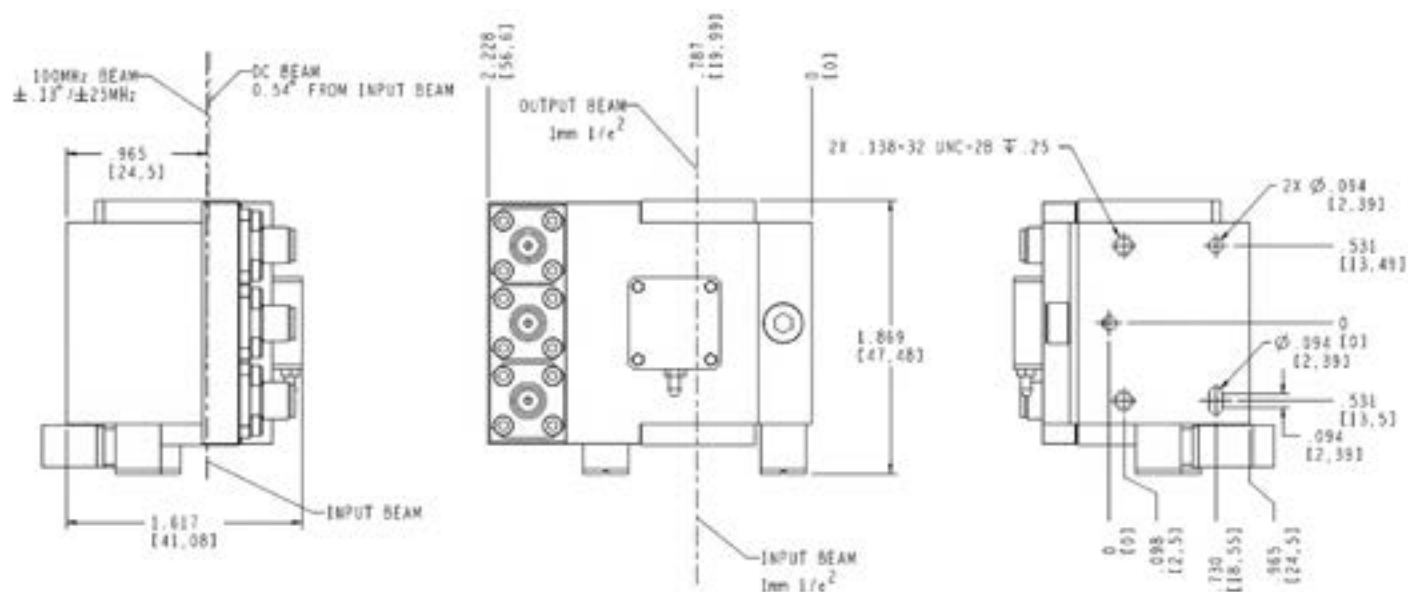


Applications

- > Optical modulation in 532 nm systems requiring the ultimate in beam-pointing stability
- > Modulation, pointing adjustment and micro machining in visible and NIR laser systems

Highlights

- > Achieves excellent performance through use of single crystal bulk wave transducers and specialized fabrication techniques
- > Assures high reliability due to high-vacuum application of alloy bonded transducers and low-loss, ion-assisted e-beam deposited antireflective coatings



H905-CQ-WL-CF-R

H-905 series AOM
model number

Material – CQ for
Crystalline Quartz

Wavelength –
532 nm nominally

R for ROHS compliant

Center frequency –
100 MHz nominally

Email Acousto-Optics@L3Harris.com or visit www.L3Harris.com/Acousto-Optics

Model H-905 Acousto-Optic Solutions

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