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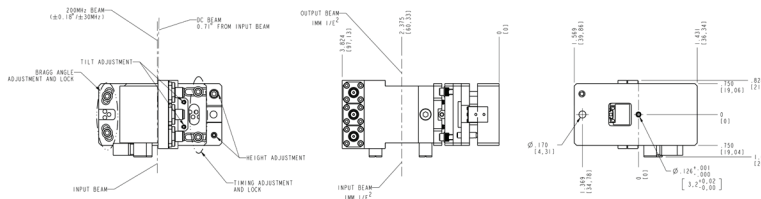
MODEL H-903 ACOUSTO-OPTIC MODULATOR (AOM)

Ultraviolet (UV) deflector

The L3Harris Model H-903 AOM allows light from a UV optical source to be deflected over a range of angles. Light from a coherent optical source is focused to a suitable beam waist within the optical medium, which is composed of low-loss, UV 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. Advanced beam-steering transducer array technology is employed to achieve exceptional throughput efficiency and bandwidth for a UV deflector. Three SMA cable interface connectors are provided for the requisite phase-delayed RF source connections.

PERFORMANCE PARAMETERS

PARAMETER	SPECIFICATION
Nominal RF input impedance	50 ohms
Center frequency	200 MHz
Input polarization	Vertical to base
Deflection bandwidth	100 MHz
Total deflection angle	6.2 mrad
Minimum diffraction efficiency	>80% at center frequency
Optical beam diameter	1.0 mm (1/e ²)+/-0.25 mm
Maximum RF drive power	9.0 W (total 3 inputs)
Optical wavelength (nom.)	355 nm
Optical material	Crystalline quartz



For additional information, email Acousto-Optics@L3Harris.com or visit www.L3Harris.com/Acousto-Optics.



APPLICATIONS

- > Predeflection
- > Beam intensity and position control
- > Pointing adjustment and micro-machining in UV laser systems
- > Ion-trap illumination

HIGHLIGHTS

- > Excellent performance achieved through the use of high-efficiency single-crystal piezoelectric transducers and specialized fabrication techniques
- > High reliability assured due to high-vacuum application of alloy-bonded transducers and low-loss, ultra-hard, multilayer and UV-qualified anti-reflection coatings

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Nonexport-controlled Information

L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.



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