



**L3HARRIS™**  
FAST. FORWARD.

## MODEL H-500 SERIES ACOUSTO-OPTIC MODULATORS (AOMS)

### Eight-channel ultraviolet (UV) wave modulation

The L3Harris H-500 series AOMs allow eight independent beams to be modulated at data rates in excess of 20 megabytes per second. Light from a coherent optical source is focused to a beam waist within the optical medium, which is composed of low-loss, UV-grade fused silica. The light is proportionally directed into a primary intense diffraction order when an acoustic pulse is introduced by a suitable radio frequency (RF) source. Each channel is driven by an independent RF source through a standard SMA cable interface connector.

#### PERFORMANCE PARAMETERS

PARAMETER	SPECIFICATION
Unless otherwise noted, all specifications are at 364 nm wavelength	
Number of channels	8
Nominal RF input impedance	50 ohms
Center frequency	160 MHz
Channel spacing	360 $\mu\text{m}$
Rise time	<22 ns
Diffraction efficiency	>50%
Optical beam diameter	150 $\mu\text{m}$
Maximum RF drive power	0.75 W per channel
Optical wavelength	257–364 nm
Optical material	Fused silica



#### APPLICATIONS

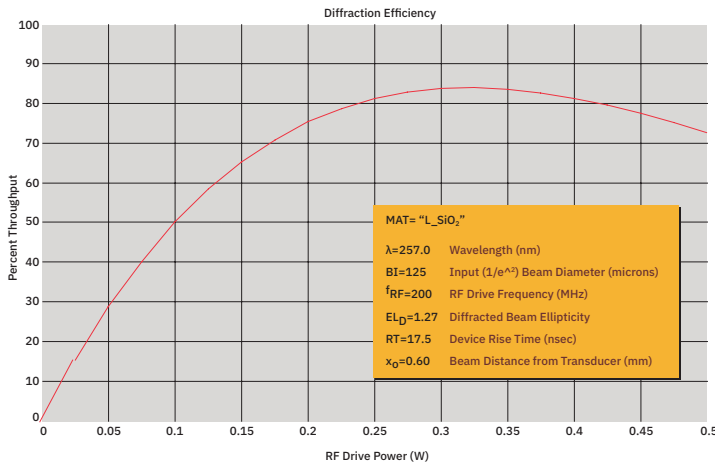
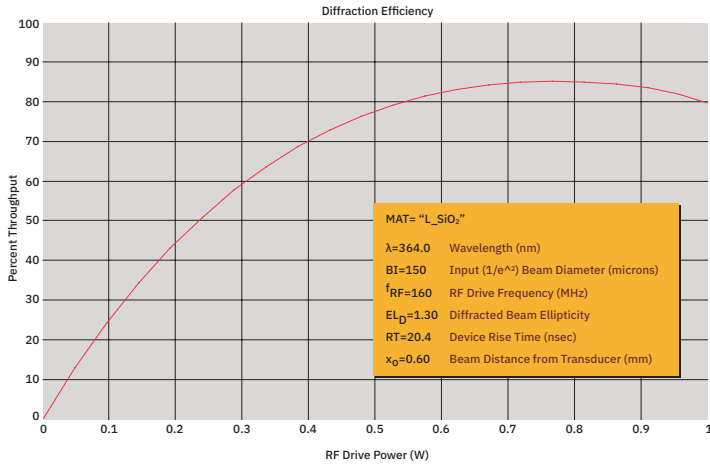
- > Independent modulation of an array of light beams for photolithographic printing, optical computing and signal processing

#### HIGHLIGHTS

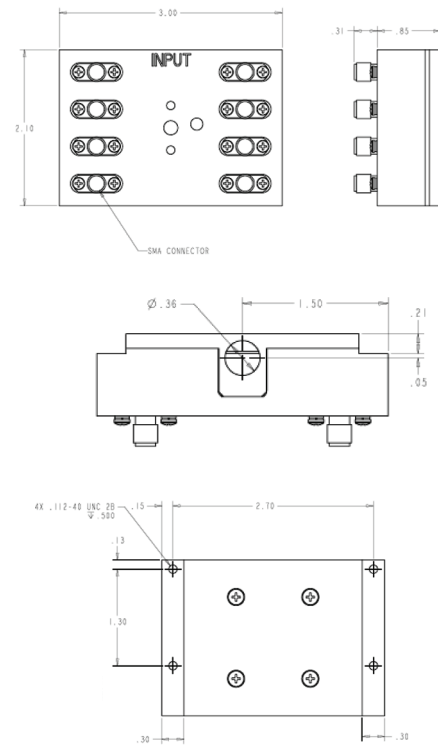
- > Achieves excellent performance through the use of high-frequency, bulk wave transducers and specialized fabrication techniques
- > Assures high reliability due to high-vacuum application of alloy-bonded transducers and low-loss, ultrahard, multilayer, UV-qualified antireflective coatings

## PREDICTED PERFORMANCE VS. WAVELENGTH

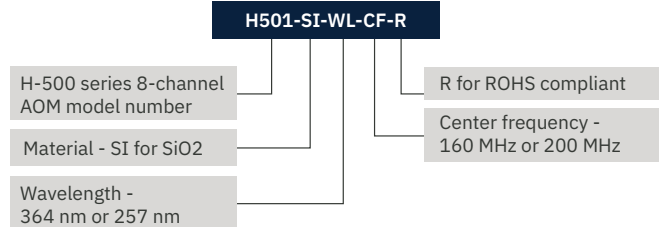
The following plots show the simulated performance for the H-501 AOM at various wavelengths and may be used as a guide for extrapolating performance at other wavelengths. See specifications for guaranteed performance characteristics and applicable wavelength.



## MECHANICAL CONFIGURATION



### Part Ordering Configuration



H501-SI-364-160-R and H501-SI-257-200-R are standard configurations. Please call the factory for additional configurations. Specifications subject to change without notice.

For additional information, email [Acousto-Optics@L3Harris.com](mailto:Acousto-Optics@L3Harris.com) or visit [www.L3Harris.com/Acousto-Optics](http://www.L3Harris.com/Acousto-Optics).

### Model H-500 Series Acousto-Optic Modulators (AOMs)

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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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