

# ZMI 7705 Laser Head

P/N's <sup>(1)</sup>	BEAM POWER OUTPUT
8070-0902-01	>250 $\mu$ w power output
8070-0902-02	>350 $\mu$ w power output
8070-0902-03	>250 $\mu$ w power output
8070-0902-04	>350 $\mu$ w power output

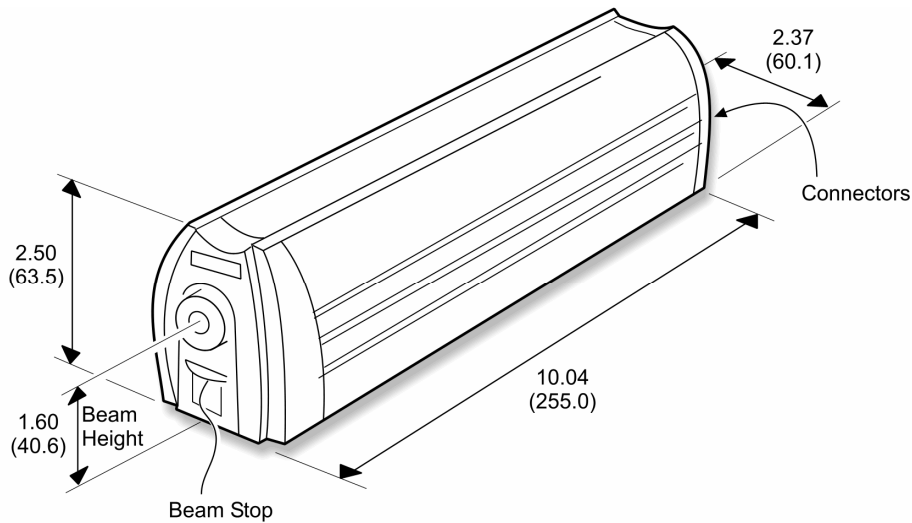
PHYSICAL CHARACTERISTICS	
Dimensions	See Figure
Weight	2.3 lb (1.0 Kg)
Materials	Aluminum, ABS
Nominal Cable Clearance	4 in. (102 mm)

LASER BEAM CHARACTERISTICS	
Type	Helium-Neon, cw, two-frequency, linearly polarized
Minimum Beam Power Output	See P/N section
Nominal Vacuum Wavelength	632.992 nm
Beam Diameter ( $1/e^2$ ):	4.1 $\pm$ 0.3 mm (0.16 in.)
Frequency Difference	3.6 MHz $\pm$ 0.3 MHz
Time from turn-on to laser light	< 30 sec typical
Beam Pointing Stability	0.2 milliradians, cold to hot
Polarization State Deviation from Orthogonality	<1°

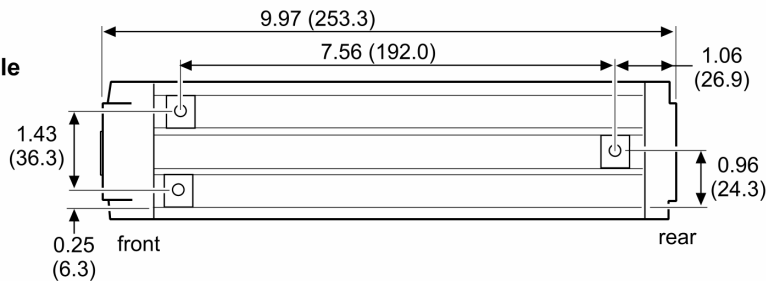
LASER BEAM CHARACTERISTICS continued	
Vacuum Wavelength Lifetime Accuracy	$\pm$ 0.2 ppm
Vacuum Wavelength Stability	0.01 ppm/1 hour 0.02 ppm/24 hr
DHHS Laser Safety Classification	Class II, conforms to NCDRH regulations

ENVIRONMENTAL	
Operating Temperature	10 to 30°C
Non-operating Temperature	-40 to 75°C
Operating Humidity	0 to 90%, noncondensing
Non-operating Humidity	0 to 90%, noncondensing
Shock (non-operational)	11 milliseconds 40 G shock on each of three orthogonal axes

ELECTRICAL	
Power Requirements (max)	+ 15 VDC $\pm$ 0.5V @ 0.6 A
Power Dissipation (max)	7 watts during operation @20°C 9 watts peak during warm-up
Wavelength Stability Time	$\leq$ 15 minutes
1. Versions -01 and -02 for ZMI 510; versions -03 and -04 for ZMI 501 or ZMI 501A.	



**Bottom View Mounting Hole Dimensions**



Dimensions shown in inches and millimeters