

ZMI 7702 Laser Head

| P/N's | POWER | BEAM DIAMETER | FEET |
|--------------|--------------|---------------|--------|
| 8070-0102-01 | >400 μ W | 6 mm | narrow |
| 8070-0102-02 | >400 μ W | 3 mm | narrow |
| 8070-0102-03 | >400 μ W | 6 mm | wide |
| 8070-0102-04 | >400 μ W | 3 mm | wide |
| 8070-0102-05 | >525 μ W | 6 mm | narrow |
| 8070-0102-06 | >525 μ W | 3 mm | narrow |

| PHYSICAL CHARACTERISTICS | |
|--------------------------|--------------------------------------|
| Dimensions | See Figure |
| Weight | 12 lb (5.5 Kg) |
| Materials | Aluminum, narrow feet- Ultem 2400 |
| Nom. Cable Clearance | 5.3 in. (135 mm) |

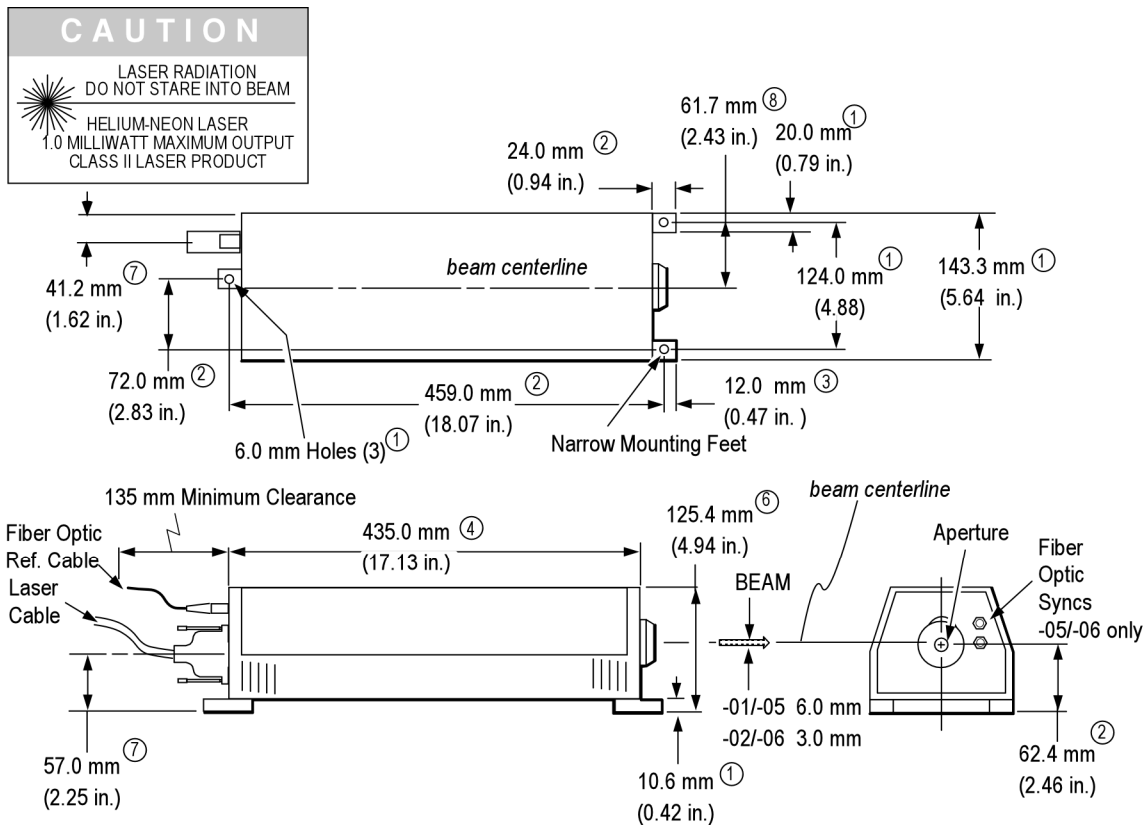
| ELECTRICAL | |
|---------------------------|--|
| Power Requirements (max) | + 15 VDC \pm 0.5V @ 2.1 A - 15 VDC \pm 0.5V @ 1.2 A |
| Power Dissipation (max) | 39 watts during operation 50 watts peak during warm-up |
| Wavelength Stability Time | <10 minutes, typical |

| LASER BEAM CHARACTERISTICS | |
|----------------------------|--|
| Type | Helium-Neon, cw, two-frequency, linearly polarized |
| Min. Power Output | See P/N section |

| LASER BEAM CHARACTERISTICS CONTINUED | |
|--------------------------------------|--|
| Nominal Vacuum Wavelength | F1: 632.991501 nm (vertical polarization) F2: 632.991528 nm (horizontal polarization) |
| Beam Diameter | See P/N section |
| Usable Beam Length | 6 mm beam: 25 m 3 mm beam: 2 m |
| Frequency Difference | 20 MHz \pm 1600 Hz |
| Time from turn-on to laser light | <10 sec typical, 70 sec maximum |
| Beam Pointing Stability | <0.1 arc sec/ $^{\circ}$ C |
| Polarization Orthogonality | 90 $^{\circ}$ \pm 0.5 $^{\circ}$ |
| Vacuum Wavelength Lifetime Accuracy | \pm 0.1 ppm |
| Vacuum Wavelength Stability | 0.01 ppm/24 hour |
| DHHS Laser Safety Classification | Class II, conforms to NCDRH regulations |

| ENVIRONMENTAL | |
|---------------------------|---|
| Operating Temperature | 10 to 30 $^{\circ}$ C |
| Non-operating Temperature | -40 to 75 $^{\circ}$ 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 |

Configurations 01/02/05/06



Dimensions shown in millimeters and inches

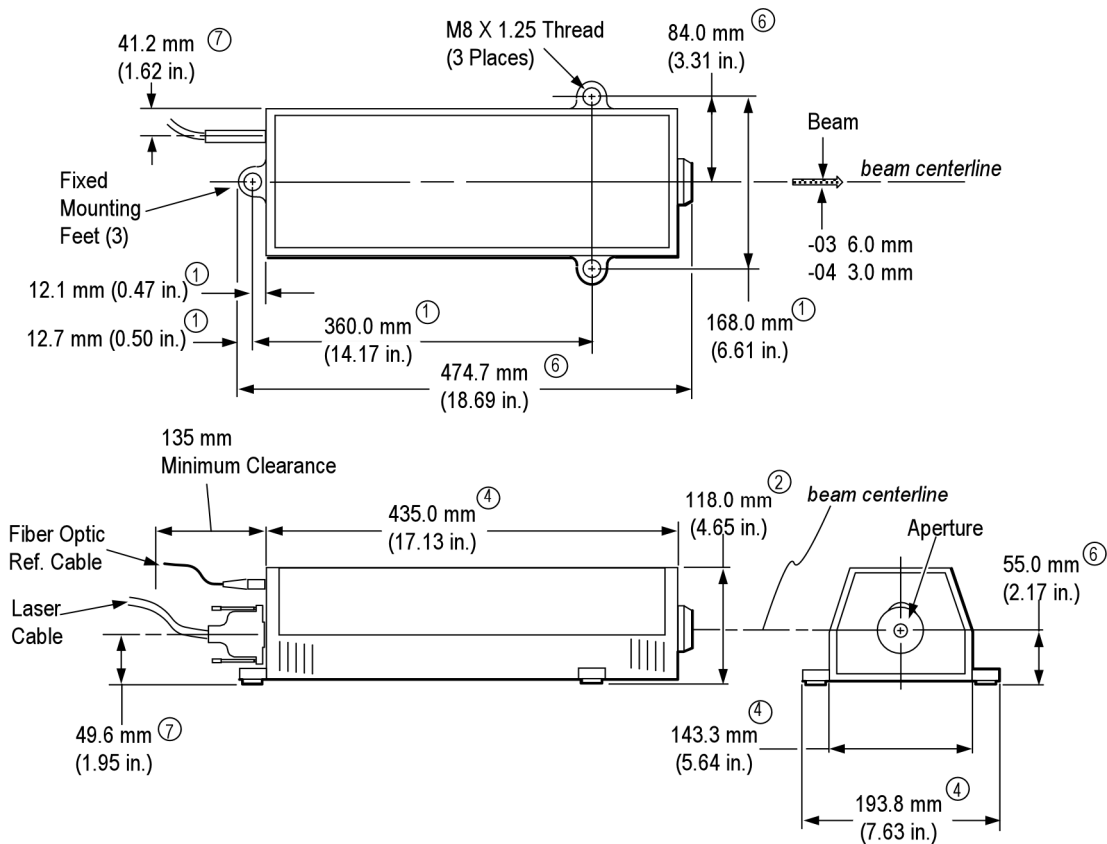
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Configurations 03/04

CAUTION

LASER RADIATION
DO NOT STARE INTO BEAM

HELIUM-NEON LASER
1.0 MILLIWATT MAXIMUM OUTPUT
CLASS II LASER PRODUCT



Dimensions shown in millimeters and inches