LaserMount™

226

USER'S MANUAL

LED/LASER

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Introduction

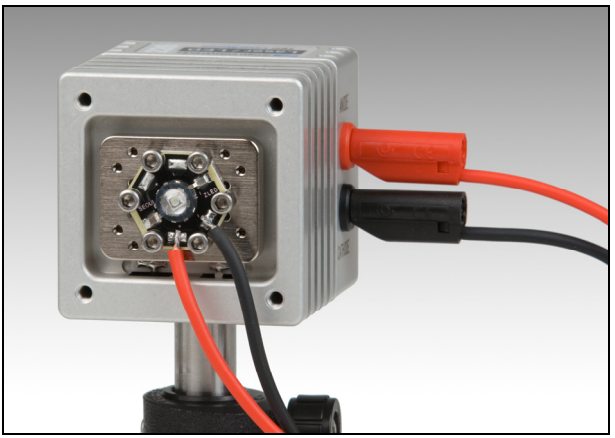
Thank you for choosing the **226 TEC LED LaserMount** from Arroyo Instruments. The **226 LaserMount** is designed for high performance and long term use.

The **226 LaserMount** integrates a Peltier cooler for precise control of the package temperature. With an operating range of +15°C to 85°C, the **226 LaserMount** covers a wide range of case temperature control needs.

The **226 LaserMount** comes with several mounting hole patterns, including the LED Star, a bread board of 2-56 holes on ¼" centers and four outside holes. The **226 LaserMount** is also finned to provide the highest heat dissipation capability, and is designed to be posted mounted (post not included).

The **226 LaserMount** also offers all the features you would expect from a modern diode fixture, including:

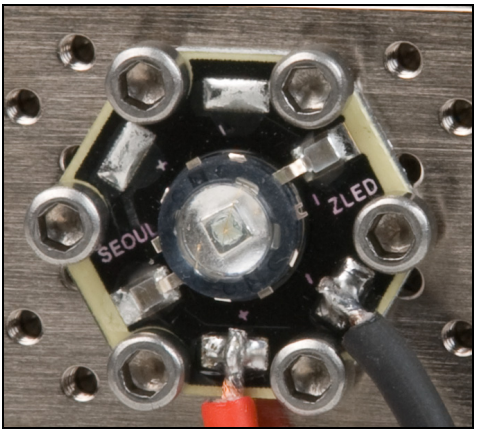
- Designed to be quickly integrated with Arroyo's **LaserSource** and **TECSource** instruments.
- Industry-standard D-sub connectors and pin-outs allow for quick integration into existing laser applications.
- Mini-banana plug interfaces for anode and cathode connections, which may for quick disconnect of your diode assembly.



Installation and Use

Making the electrical connection: The 226 has two 2mm banana jacks on the side the fixture, providing a quick-connection interface for the anode and cathode connection of your laser or LED. The 226 ships with one red and one black 8" jumper. Each has one end with the 2mm banana jack attached, while the other end is a bare wire, and can be terminated as needed for your device.

Mounting your device: mount your device as needed, depending on the mounting pattern of your 226. A Star LED with the anode and cathode leads attached is show below as an example.



Connect to Laser Diode Driver and TEC Controller: Next, connect the **226 LaserMount** to your laser diode driver and temperature controller.

NOTE

Arroyo Instruments offers Laser and TEC cables designed to connect directly between our **LaserSource** and **TECSource** products. If you use your own cables, ensure the connections are properly made between the instrument and the mount, and that proper grounding techniques are used. The pin-out of the connectors can be found later in this document.

WARNING

Be sure you are properly ESD protected before handling your laser. For additional information, read the section titled "Laser Diode Protection" later in this manual.

Your mount is now ready for use. Additional technical information can be found below.

Connector Pin-Outs

226 TEC LED LaserMount Connectors

226 TEC LED LaserMount Laser/LED Connections

DB-9 Pin	Description
4 & 5	Laser/LED cathode
8 & 9	Laser/LED anode
1 – 3, 6, 7	No connection

Laser DB-9 Connector Pin-Out

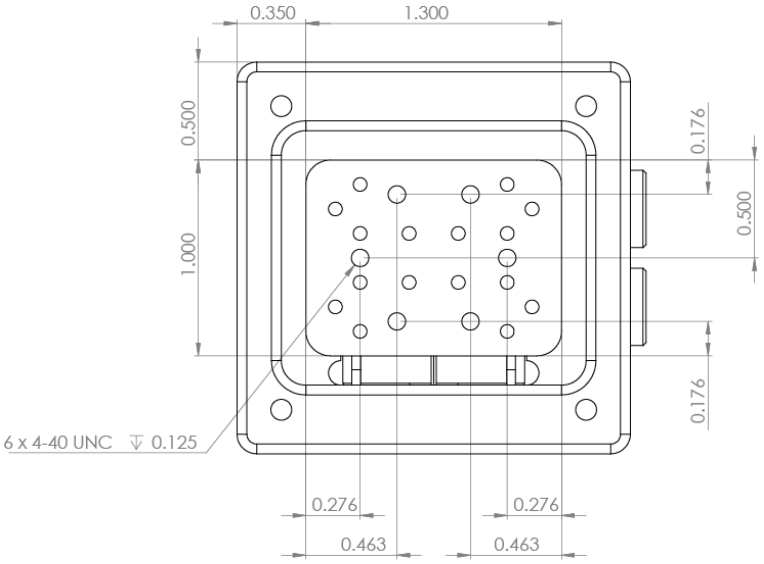
DB-15 Pin	Description
1 & 2	TE (+)
3 & 4	TE (-)
7	Thermistor
8	Thermistor
5, 6, 9-15	No connection

TEC DB-15 Connector Pin-Out

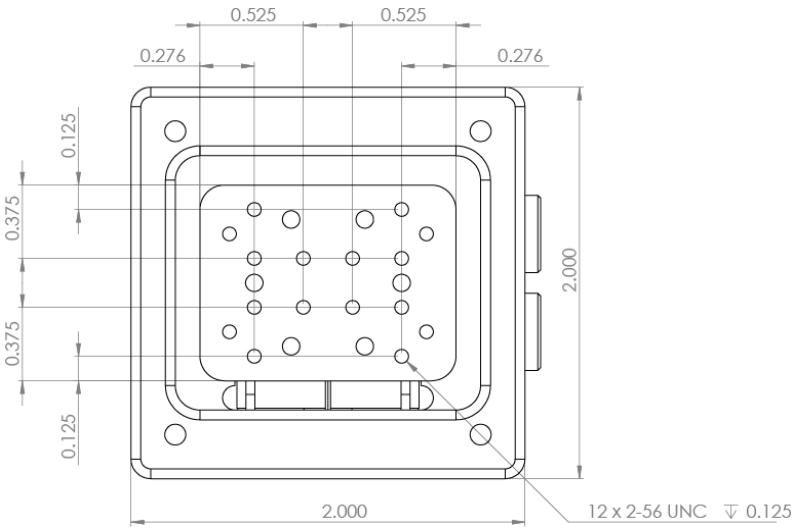
Technical Specifications

226 TEC LED LaserMount	
TEMPERATURE CONTROL	
Temperature Range (°C)	+15 to +85
Sensor Type	10kΩ Thermistor
TE Module	Imax = 3.7A Vmax = 8.2V Qmax = 20W
INPUT CONNECTOR	
Laser Diode	DB-9, male
Mount TEC	DB-15, male
LASER CONNECTOR	
Type	2mm safety shielded banana jacks
Maximum Current	5A
GENERAL	
Size (H x W x D) [in(mm)]	2.0 (50.8) x 2.0 (50.8) x 2.27 (57.7)
Mounting holes	8-32 threaded hole M4 threaded hole

Mechanical Drawings



Front View 1



Front View 2

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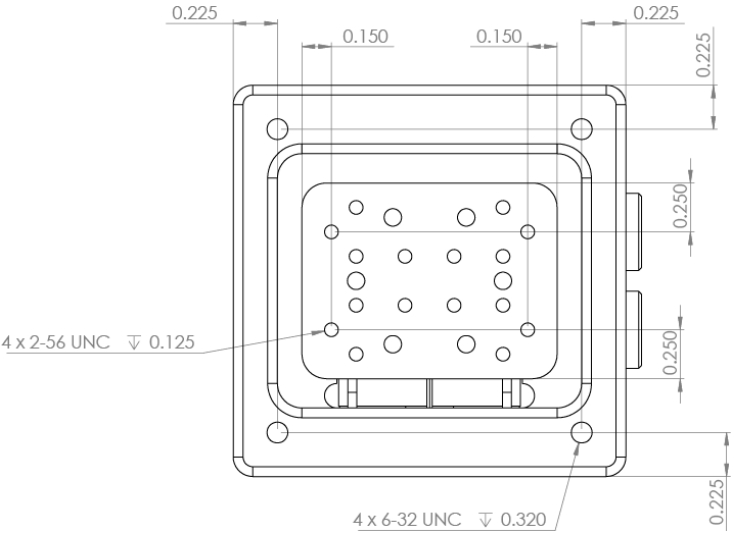
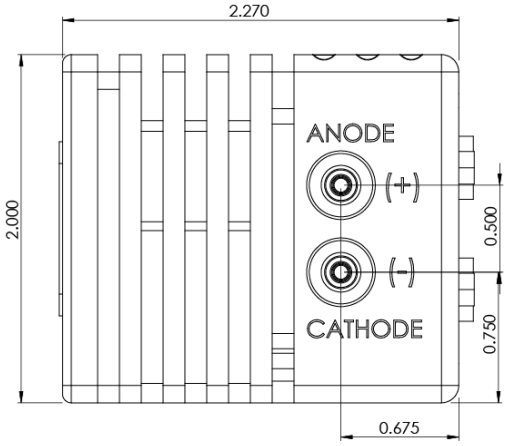
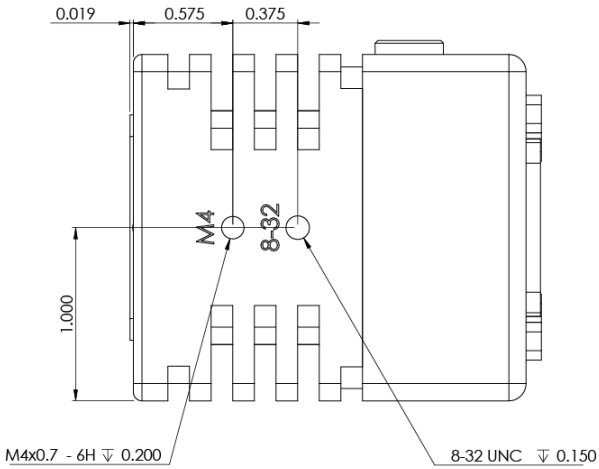


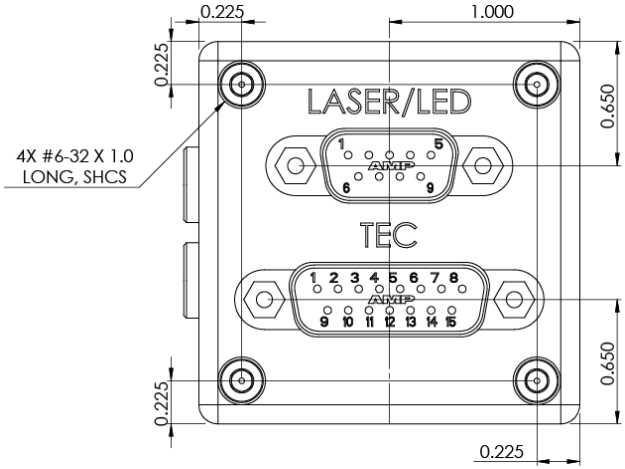
Front View 3



Side View



Bottom View



Rear View

Laser Diode Protection

Electrostatic discharge and current spikes can be a significant cause of damage to laser diodes, but when proper precautions are taken, these risks can be greatly reduced or eliminated. Arroyo Instruments' controllers offer state-of-art laser diode protection, but no instrument can fully shield the laser from damage. Please take these considerations into account when operating your laser:

1. Always set the current limit at or below the maximum current your laser can handle. This prevents the device from accidentally driving the current too high, either via the set point or from the modulation port. This also provides additional current limiting protection from ESD.
2. Always work in an ESD safe operating environment, including the use of wrist straps, ESD grounded work surfaces and floors, and ESD-safe tools.
3. Where the AC power to the laser driver to temperature controller may be noisy, use isolation transformers or uninterruptible power supplies that provide isolation.
4. Make sure all cables are securely connected and fastening screws are screwed in tight.
5. Do not route power cords or other cables in parallel with the laser or temperature controller cables, as coupling may occur between the cables and inject noise into the laser diode.
6. While it is not possible to create a ground loop through the LaserSource because of it's isolation of all inputs, it is possible when using other equipment. Ensure that any other equipment is properly isolated to avoid any ground loop problems.

Warranty

Arroyo Instruments warrants this product to be free from defects in material and workmanship under normal use and service for a period of one (1) year from date of shipment. It does not apply when the product has been misused, altered or damaged by accident or abnormal conditions of operation. If found to be defective during the warranty period, the product will either be repaired or replaced at Arroyo Instruments's option.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. ARROYO INSTRUMENTS SHALL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE PURCHASE OR USE OF ITS PRODUCTS.

Service and Support

For service and support, contact your local distributor or Arroyo Instruments.

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