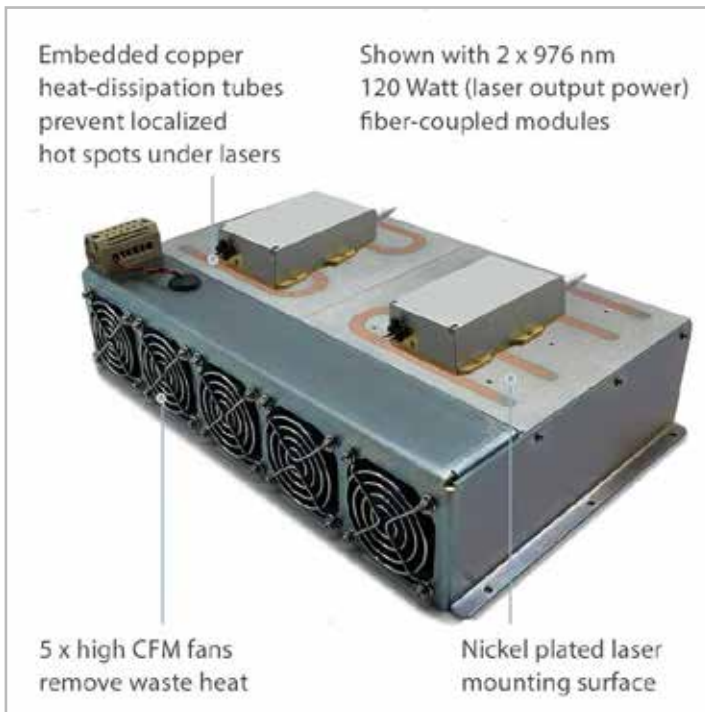


## 300 Watt Laser Diode Mount and Heatsink Assembly

### Simple and Effective Heat Removal for Very High Power Laser Diodes



### HS-004 Heatsink, 300 Watt Capacity

- o Up to 300 Watts of Laser Waste Heat Removal Capacity
- o Compact, Rugged, and Highly Effective
- o Five High-Volume Fans, Prewired to Terminal Block
- o Thermal Resistance from Mounting Plate to Ambient  $\sim 0.04^{\circ}\text{C}/\text{W}$
- o Custom Mounting Plates Available on Request

### VERSATILE AND HIGH EFFICIENCY HEATSINK

The HS-008 is an affordable, high quality, versatile The HS-004 is a high quality laser diode heat sink assembly designed for maximum flexibility across a wide range of applications.

Copper heat-dissipate tubes are soldered into the nickel-plated mounting plate to minimize thermal resistance and distribute the heat across the heatsink. The heat-dissipate tubes also minimize thermal hot spots and disseminate the heat load across the surface to increase efficiency.

Embedded copper heat-dissipation tubes minimize thermal hot spots and disseminate heat load across entire surface to maximize efficiency



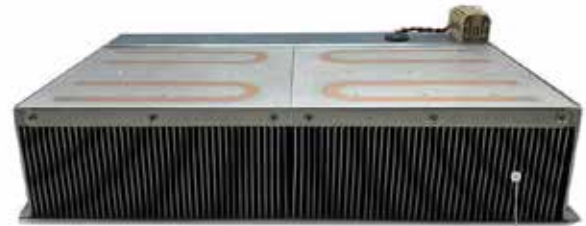
5 x embedded fans for removal of laser waste heat

Nickel plated laser diode mounting surface for low thermal resistance

### LOW THERMAL RESISTANCE

Heat-dissipation tubes are used in to maximize the conduction of heat from the load to the heat sink and improve overall efficiency by reducing localized hot-spots on the mounting plate. The heat sink fins are forged in place and are designed to break up laminar airflow, which further improves heat dissipation efficiency.

Finally, the high fin density heatsink is enclosed in a sheet metal duct to direct the entire volume of forced air over the fins, thereby providing the low thermal resistance of 0.04°C/W. This low thermal resistance means that for every 10 Watts of power input to the heat-sink mounting plate, the temperature of the heatsink surface will rise 0.4°C.



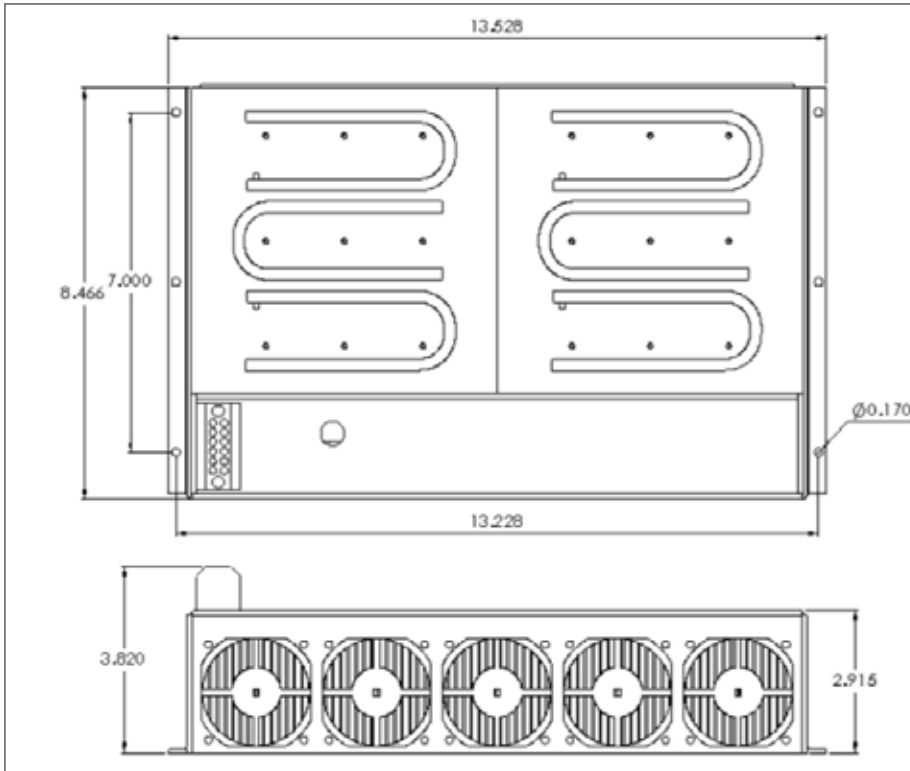
High fin density heat sink is enclosed in a sheet metal duct to direct the entire volume of forced air over the fins - this design helps provide a low thermal resistance of 0.04 °C/W

This unit is an excellent heat sink choice when high amounts of heat must be conducted away from the test device, but when precision (TEC based) temperature control of the device is not required. It provides laser heat dissipation capacity of up to 300 watts with an absolute maximum of 12°C temperature rise under full load.

### CUSTOMIZABLE FOR MAXIMUM VERSATILITY

The functional hole patterns are shown in the dimensions figure below. Custom mounting holes patterns are available upon request.

## HEATSINK DIMENSIONS



## HS-004 SPECIFICATIONS

- Low Thermal Resistance: 0.04 °C/W
- Heat Dissipation Capacity: 300 Watts
- Embedded Copper Heat Pipes: 4 x Soldered-In Copper Pipes for Heat Spreading
- Fans: 5 x High CFM Fans for Waste Heat Removal
- Fan Operating Voltage Range: 7 VDC to 13.8 VDC
- Fan Input Power (5 fans total): 50 Watts
- Fan Rated Current Draw (for all 5 fans): 4.2A (5.2A startup)
- Fan Noise: < 50 dBA
- Fan Rated Voltage: 12 VDC Input
- Heat Sink Assembly Dimensions (L x W x H): 215 mm x 343.6 mm x 97 mm

## PRODUCT SALES AND SERVICE

Unlimited phone and email support is provided for products purchased through Laser Lab Source. Orders for this product are fulfilled by Laser Lab Source in North America and select international regions.

## PRODUCT WARRANTY

This product is sold with a full one-year warranty. It is warranted to be free from defects in material and/or workmanship for a period of one year from the date of shipment. The warranty does not cover damage to the to the product due to mishandling or use of the product outside of its specified maximum ratings.



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