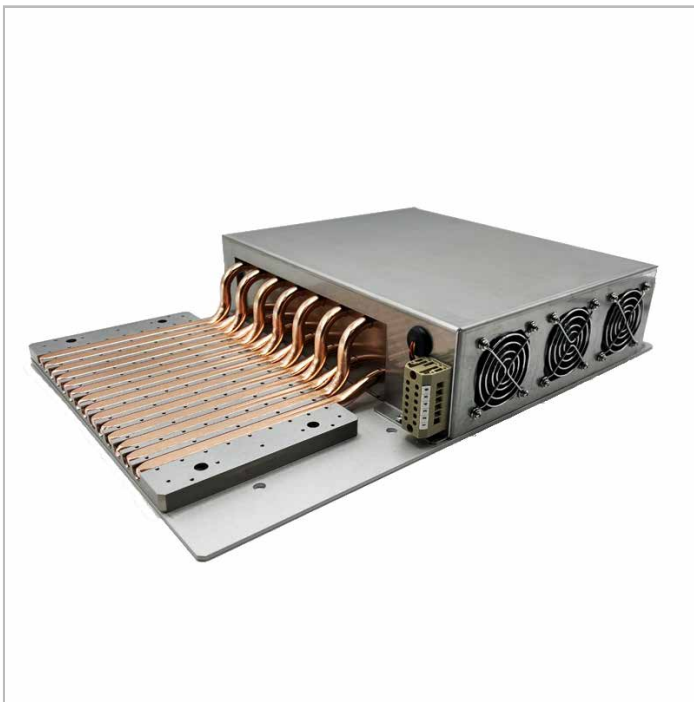


400 Watt Laser Diode Mount and Heatsink Assembly Advanced Thermal Design for High Power Heat Management

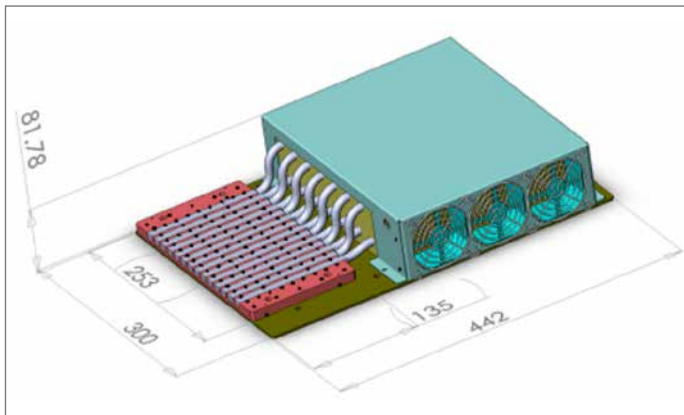


EHS-025 Heatsink

- o High Power - 400W Cooling Capacity
- o Air-Cooled Heatsink with Ducted Fans
- o Pre-Drilled Baseplate on 14.5 mm Centers
- o High Power-Density Laser Diode Mount
- o Prewired Fans; Optional PWM Fan Control

HIGH EFFICIENCY HEAT SINK

Model EHS-025 is a compact light weight heatsink module, employing the state-of-the-art LED cooling technology, designed for general cooling of high heat flux devices, such as high power IGBT modules or high power lasers. The key features include:



- Impressive 0.025°C/W thermal resistance, capable of dissipating 400 Watts in 22°C lab environment for diodes rated at 35°C case temperature
- 14 large heatpipes to transfer and spread heat to the heatsinks. Users are advised to place the diodes so that the source of the heat spans over as many heatpipes as possible.
- Fits in a 2U 19" rack mount chassis.
- Base plate acts as mini optical table with pre-tapped 4-40 threaded holes on 14.5mm x 14.5mm pattern. Optional clamps and shims enable laser package placement anywhere on the base plate.
- Removable bottom plate and fan assembly; the EHS core can be integrated into OEM systems.
- Bottom plate provides pre-drilled holes for 8-32 screws or ¼-20 screws on 1" pattern for securing the EHS-025 to optical tables
- Custom thermoelectric cold plate using EHS-025 as base provides up to 550W Q_{max} available
- Fans may be PWM controlled to reduce noise in less demanding cooling scenarios. Inquire for information about PWM fan control.

The EHS-025 is wired with a high quality terminal block with 20A rating per contact for fan wiring and high power laser wiring. The three high power fans are concealed inside of the air duct, reducing the noise significantly.

MOUNTING PLATE VERSATILITY

The cooling-core of EHS-025 consists of the mini-table base plate, 14 heatpipes and cooling fins all soldered together into a single piece. It is removable from the EHS-025, enabling users to integrated the EHS-025 heatpipe cooling core into OEM systems.

The base plate of the cooling core serves as a mini optical table. At 135mm wide x 253mm long x 12mm thick, it can accommodate all the popular high power lasers or multiple lower power lasers. The 4-40 threaded holes are on 14.5 mm x 14.5 mm grid.

DIODE MOUNTING ACCESSORIES

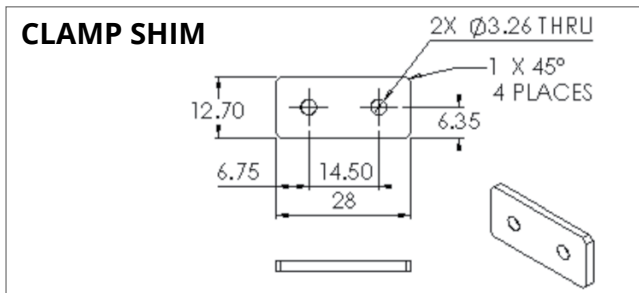
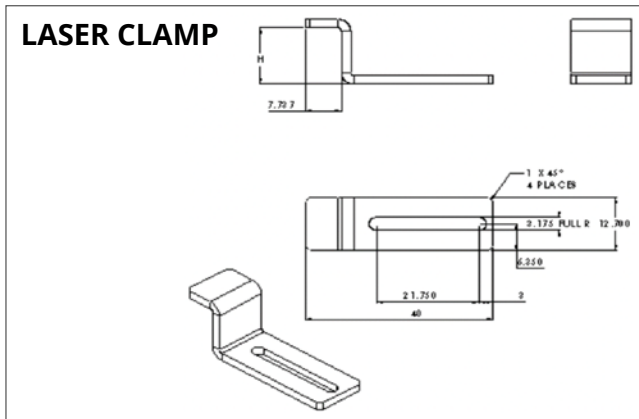
Various optional shims are also available to accommodate the range of heights of popular diodes.

Part C-14	H = 13.5mm for 14mm Tall Laser Package
Part C-17	H = 16.5mm for 17mm Tall Laser Package
Part C-21	H = 20.5mm for 21mm Tall Laser Package
Part S-0.5	0.5mm thick shim
Part S-1	1mm thick shim
Part S-2	2mm thick shim

The total height of the stack of clamp and shims should be about 0.5mm lower than the height of the diode, so that the deflection of the clamp will provide the clamping force necessary to press the diode on the base plate either directly or with thermal pad in between.

MOUNTING CLAMP VERSATILITY

The clamp mounting slot is sized to slide continuously through the entire length of the grid, always provide access to two 4-40 threaded holes, so that the diode can be clamped at almost any position.



EHS-025 SPECIFICATIONS

GENERAL SPECIFICATIONS	Heat Dissipation Capacity: 400 Watts
	PWM-Controllable Fans for Lower-Power Applications
	Baseplate Predrill: 4-40 Threaded, 14.5 mm Centers
	Fan Voltage: 10.8 - 13.2 VDC
	Rated Current: 1.1 A
	Fan Power: 13.5 W
	Noise Level per Fan: 57 dBA
	Baseplate Dimensions: 135 mm x 253 mm
	Overall Dimensions: 302 mm x 430 mm x 82 mm

BASE PLATE MOUNTING VERSATILITY

There are five 1/4"-20 clearance holes and six 8/32" clearance holes on a 1" grid to mount the EHS-025 on a standard optical table.

The carrying plate can be replaced by a larger plate with optional heat spreaders for heat sources that operate at higher temperatures higher than diodes.

The optional heat spreaders has integral vapor channels to economically minimize spreading resistance.

FAN WIRING CONNECTIONS

Pin	Function
1	n/c
2	n/cv
3	Fan +
4	Fan -
5	Fan Tachometer
6	Fan PWM Control (optional)

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.



Laser Lab Source, Inc
1820 W. Lincoln Street
Bozeman, MT 59715
contact@LaserDiodeSource.com
contact@LaserDiodeControl.com
800-877-5065