



Conduction-Cooled Bar Packages (CCPs), 1430-1470 nm

High Power Single-Bar Packages for Medical and Direct-Diode Applications

Based on Coherent's high efficiency InP epitaxy, Coherent 1430-1470 nm conduction-cooled laser bar packages (CCPs) provide industry leading efficiency, performance and reliability. Standard options include 20% fill factor bars rated to 35W, at wavelengths from 1430 nm to 1470 nm. Low smile configurations are available upon request. Specifications and options—including power, wavelength, and optical delivery—can be tailored to your demands.

Please contact Coherent to discuss your unique requirements.



Conduction-Cooled Bar Packages, 1430-1470 nm Features:

- High efficiency InP epitaxial technology
- 35W from a 20% fill factor bar
- Low smile options available
- ROHS compliant

Conduction-Cooled Bar Packages, 1430-1470 nm Applications:

- Medical
- Aesthetics
- Illumination
- Materials Processing

www.Coherent.com/CCP1430-1470

Superior Reliability & Performance

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Device Specifications^{1,2,3}

20% fill factor bars (19 x 100 μm emitters)

| | |
|---|----------------------|
| Optical Output Power (W) | 35 |
| Centroid Wavelength Available ⁴ (nm) | 1430 to 1470 |
| Centroid Wavelength, Standard Options (nm) | 1430 ±20 1470 ±20 |
| Spectral Width, Standard (nm)(FWHM) | <20 |
| Wavelength Temperature Coefficient (nm/°C) | 0.53 |
| Fill Factor (%) | 20 |
| Number of Emitters | 19 |
| Emitter Width (μm) | 100 |
| Emitter-to-Emitter Pitch (μm) | 500 |
| Fast Axis Divergence (degrees)(FWHM) | <40 |
| Slow Axis Divergence (degrees)(FWHM) | <10 |
| Polarization | TE |
| Efficiency (%) | >32 |
| Operating Current (A) | <90 |
| Operating Voltage (V) | <1.2 |
| Operating Temperature | 25°C |
| Operating Temperature Range | 15 to 30°C |
| Storage Temperature Range | -40 to +60°C |

¹ Specifications listed here are at 35W optical output power and 25°C baseplate temperature. Power-vs-current and efficiency will increase at lower temperatures and decrease at higher temperatures.

² Specifications listed here are at beginning of life. Operating current at end of life is 120% the operating current at beginning of life.

³ Please consult the factory for any needs not listed here, including the following options:

- Centroid wavelength and spectral width requirements other than listed here.
- Optical output powers other than listed here.
- Low smile options.

⁴ Contact factory for availability.

Operation Notes

Unit requires an adequate heat sink. Failure to supply an adequate heat sink will destroy the unit.

Indium foil should be used between base of diode and heatsink to ensure good thermal contact.

Torque applied to mounting screws should be controlled carefully, using a torque wrench. For 6-32 mounting screws, use 8 in-lbs (with Indium foil). For M4 mounting screws, use 9 in-lbs (with Indium foil).

ESD precautions must be taken when handling unit.

Negative current transients greater than 25 μA and/or reverse voltages >3V can destroy the unit.

A dry environment should be provided when storing or operating a device with an open diode laser facet at temperatures below the ambient dew point. Failure to do so will cause condensation on the unit and can destroy it.

Operation in excess of rated power will accelerate device aging.

Operation at higher temperatures will accelerate device aging, increase threshold current, and lower the slope efficiency.

Care should be taken to avoid back-reflections into the device. Failure to do so can destroy the unit.

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Typical 1430-1470 nm Conduction-Cooled Bar Packages P-I Plots



