



Conduction-Cooled Bar Packages (CCPs), 1060 nm

High Power Diode Laser Bars for Medical and Direct-Diode Applications

Coherent 1060 nm laser diode bars provide an ideal solution for customers demanding consistent quality and superior performance for medical, aesthetic, and other direct-diode applications. Standard options include 50% fill factor bars rated to 80W and 20% fill factor bars rated to 40W. Low smile and lensed configurations are available upon request. Specifications—including power, wavelength, and emitter configuration—can be tailored to your demands.

Please contact Coherent to discuss your unique requirements.



Conduction-Cooled Bar Packages, 1060 nm Features:

- High performance 1060 nm technology
- 80W from a 50% fill factor bar
- 40W from a 20% fill factor bar
- Custom configurations available

Conduction-Cooled Bar Packages, 1060 nm Applications:

- Medical
- Aesthetics
- Illumination
- Materials Processing

www.Coherent.com/CCP1060

Superior Reliability & Performance

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Device Specifications ^{1,2,3}	40W 20FF	80W 50FF
Optical Output Power (W)	40	80
Fill Factor (%)	20	50
Number of Emitters	19	49
Emitter Width (µm)	100	100
Emitter-to-Emitter Pitch (µm)	500	200
Centroid Wavelength (nm)	1060 ±20	1060 ±20
Spectral Width (nm)	<10	<10
Wavelength Temperature Coefficient (nm/°C)	0.4	0.4
Polarization	TE	TE
Fast Axis Divergence (degrees)(unlensed)(FWHM)	<35 (30 typical)	<35 (30 typical)
Fast Axis Divergence (degrees)(lensed)(FWHM)	<1	<1
Slow Axis Divergence (degrees)(FWHM)	<7	<7
Threshold Current (A)	<4 (2 typical)	<13 (10 typical)
Operating Current (A)	<49	<115
Operating Voltage (V)	<1.7	<1.7
Operating Temperature	25°C	25°C
Operating Temperature Range	15 to 35°C	15 to 35°C
Storage Temperature Range	-40 to +60°C	-40 to +60°C

¹ Specifications listed here are at beginning of life. Operating current at end of life is 120% the operating current at beginning of life.

² Operating temperature is measured at the base of the package. The recommended operating temperature range is 15-35°C.

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.

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 uA 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.

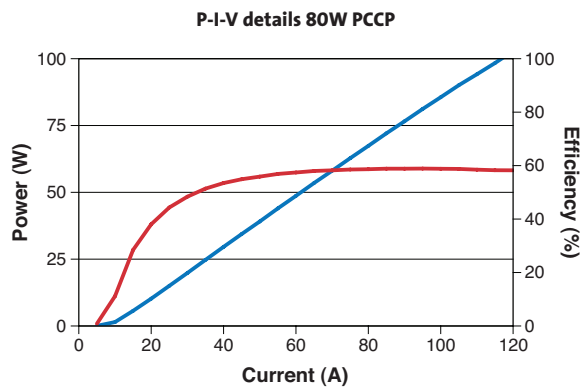
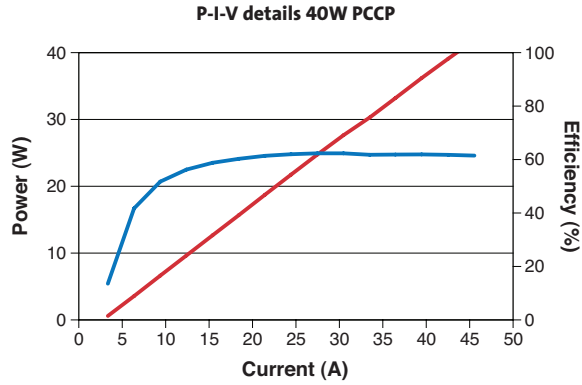
Operation at higher temperatures will accelerate device aging, increase threshold current, and lower the slope efficiency.

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

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Typical 1060 nm Conduction-Cooled Bar Packages P-I Plots

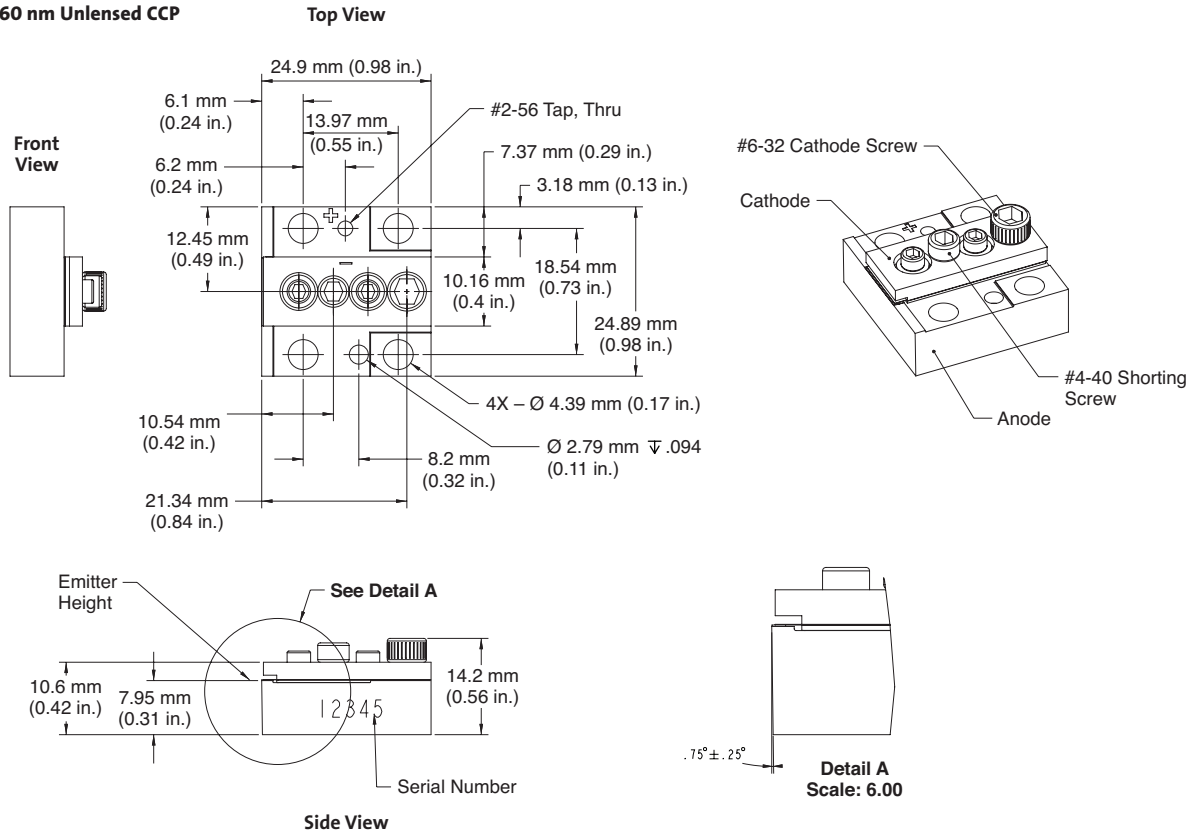


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Mechanical Specifications

1060 nm Unlensed CCP



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice.

Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all Conduction-Cooled Bar Packages. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.