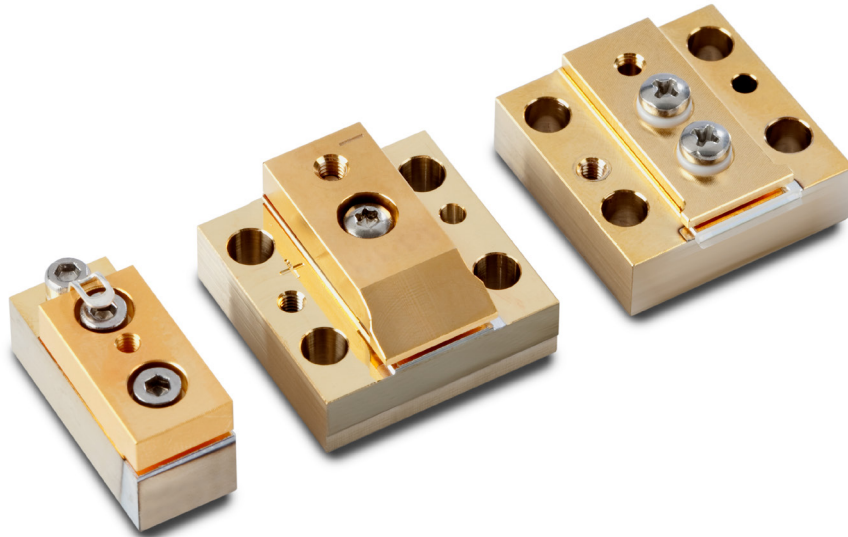


SINGLE BAR

638 nm, 16 W, Conduction-Cooled, CW

Conduction-cooled single bars are well introduced in the market and are an industry standard in terms of size and footprint. At Coherent, these laser bars are available in a very wide range of wavelengths and powers, with optional beam shaping such as fast-axis collimation, both-axis collimation, or even further focused to a defined spot size. Also available are options such as spectral locking and line narrowing, using Volume Bragg Gratings (VBG).



FEATURES

- Industry standard size and footprint
- High reliability and consistency
- Hard solder available for harsh drive conditions
- Low smile
- Optional beam shaping
- Optional spectral locking and line narrowing
- Narrow heat sink variant available for side-by-side placement
- Variants with different beam height on request

APPLICATIONS

- Pumping of solid-state lasers
- Materials processing and annealing
- Medical
- Graphic arts

Device specification

Optical Parameters ¹	M10-Type	
Center Wavelength Range ³ (nm)	638	
Center Wavelength Tolerance ³ (nm)	±3	
Output Power ² (W)	8	16
Number of Emitters	20	40
Emitter Size (μm)	40	
Fill Factor (%)	20	
Operating Condition	CW	
Spectral Width (FWHM) (nm)	≤2.0	
Slope Efficiency (W/A)	≥0.80	
Fast-Axis Divergence without Optics (degree)	≤90	
Fast-Axis Divergence with Fast-Axis Collimation (mrad)	≤8	
Slow-Axis Divergence (degree)	≤10	
Wavelength Temp. Coefficient (nm/°C)	~0.16	
Beam Geometry after FAC Lens (mm x mm)	~0.8 x 5	~0.8 x 10
Electrical Parameters ¹		
Power Conversion Efficiency (%)	≥25	
Threshold Current (I _{TH}) (A)	≤4.5	≤9
Operating Current (I _{OP}) (A)	≤14	≤28
Operating Voltage (V _{OP}) (V)	≤2.20	
Thermal Parameters ¹		
Operating Temperature Range ^{3,4} (°C)	+20 to +30	
Storage Temperature Range ⁴ (°C)	0 to +55	
Recommended Heat Sink Capacity (W)	30	

Notes:

1. Data at 20°C cold plate temperature.

2. Reduced lifetime if used above nominal operating conditions.

3. Others available upon request.

4. A non-condensing environment is required for storage and operation below the ambient dew point.

Mechanical specifications

Conduction-Cooled, CW M-Type Single Bar Diode Laser Module

M10.2N

