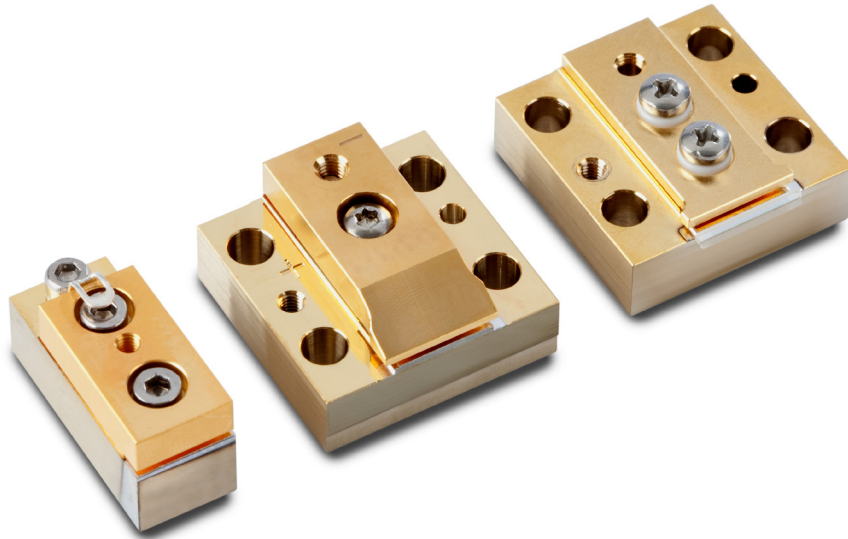


SINGLE BAR

1940 nm, 10 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		M-Type
Center Wavelength Range ³ (nm)		1940
Center Wavelength Tolerance ³ (nm)		±20
Output Power ² (W)		10
Number of Emitters		19
Emitter Size (μm)		100
Fill Factor (%)		20
Operating Condition		CW
Spectral Width (FWHM) (nm)		≤15
Slope Efficiency (W/A)		≥0.28
Fast-Axis Divergence without Optics (degree)		~84
Fast-Axis Divergence with Fast-Axis Collimation (mrad)		≤8
Slow-Axis Divergence (degree)		~14
Wavelength Temp. Coefficient (nm/°C)		~1.20
Beam Geometry after FAC Lens (mm x mm)		~0.8 x 10
Electrical Parameters ¹		
Power Conversion Efficiency (%)		≥20
Threshold Current (I_{TH}) (A)		≤6
Operating Current (I_{OP}) (A)		≤46
Operating Voltage (V_{OP}) (V)		≤1.20
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)		≥70

Notes:

1. Data at 25°C cold plate temperature.

2. Reduced lifetime if used above nominal operating conditions.

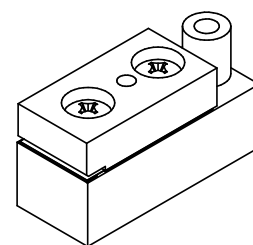
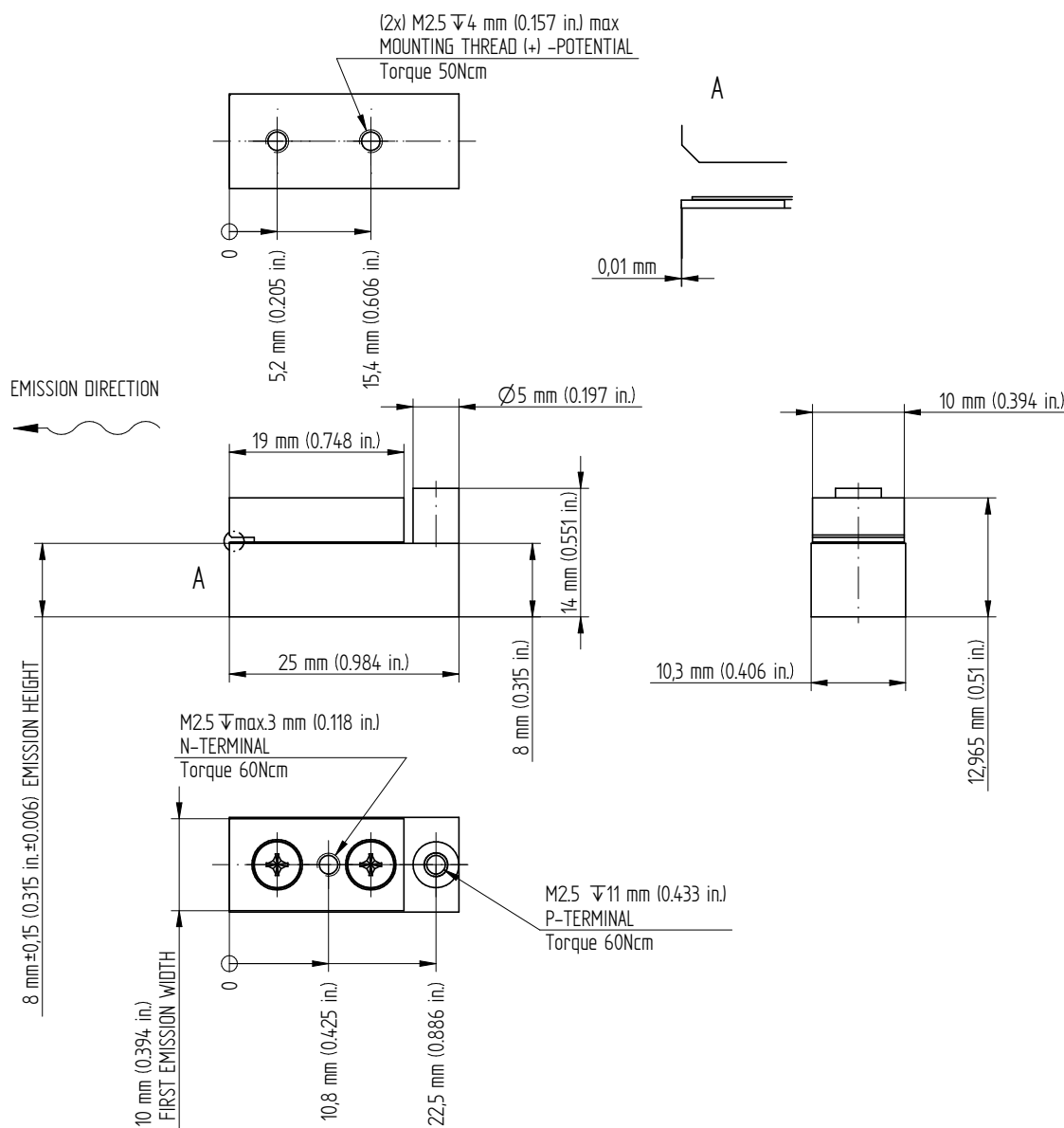
3. Others available upon request.

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

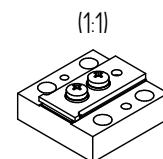
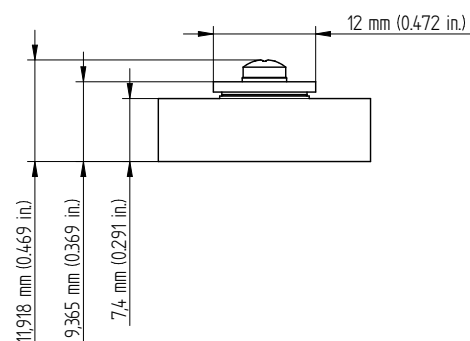
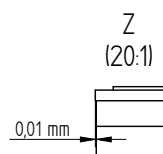
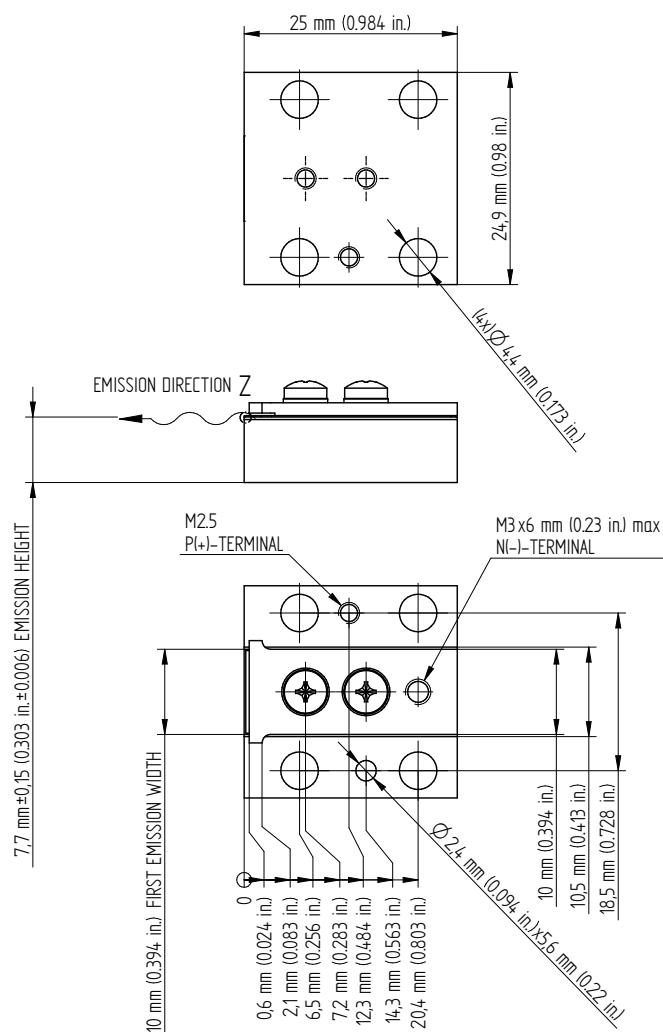
M8N



Mechanical specifications

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

M3N



AB Use Torque as follows:
For mechanical fixation: 75 Ncm
For electrical Connection: 45 Ncm

Mechanical specifications

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

M10N

