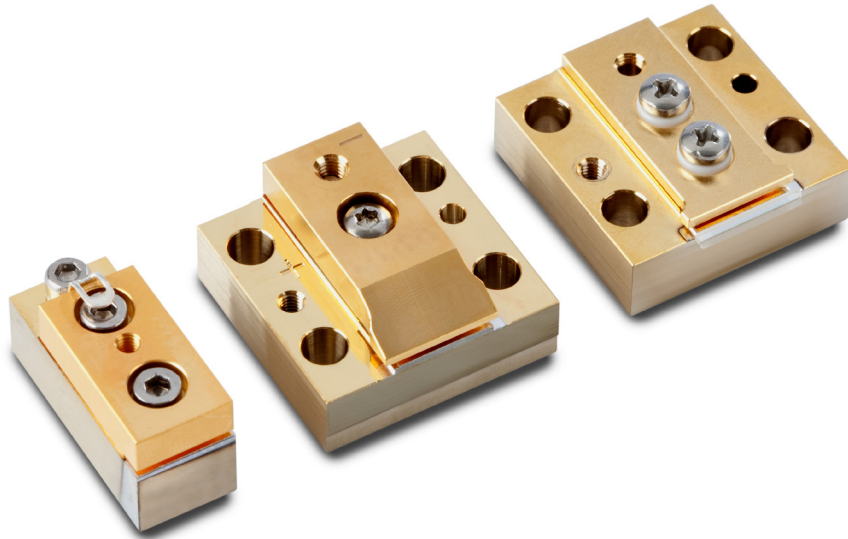


SINGLE BAR

1550 nm, Conduction-Cooled

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)	1550	1550
Center Wavelength Tolerance ³ (nm)	±20	±20
Output Power ² (W)	20	70
Number of Emitters	20	20
Emitter Size (μm)	100	100
Fill Factor (%)	20	20
Operating Condition	CW	QCW
Spectral Width (FWHM) (nm)	≤12	≤18
Slope Efficiency (W/A)	≥0.38	≥0.40
Fast-Axis Divergence without Optics (degree)	~25	~25
Fast-Axis Divergence with Fast-Axis Collimation (mrad)	≤8	≤8
Slow-Axis Divergence (degree)	~8	~8
Wavelength Temp. Coefficient (nm/°C)	~0.62	~0.62
Beam Geometry after FAC Lens (mm x mm)	~0.8 x 10	~0.8 x 10
Electrical Parameters ¹		
Power Conversion Efficiency (%)	≥24	≥21
Threshold Current (I_{TH}) (A)	≤11	≤12
Operating Current (I_{OP}) (A)	≤65	≤165
Operating Voltage (V_{OP}) (V)	≤1.40	≤2.10
Duty Cycle ⁵ (%)	100	≤2
Pulse Length ⁵ (μsec)	-	≤500
Thermal Parameters ¹		
Operating Temperature Range ^{3,4} (°C)	+20 to +30	+20 to +30
Storage Temperature Range ⁴ (°C)	0 to +55	0 to +55
Recommended Heat Sink Capacity (W)	≥80	≥20

Notes:

1. Data at 25°C cold plate temperature.

2. Reduced lifetime if used above nominal operating conditions.

3. Others available upon request.

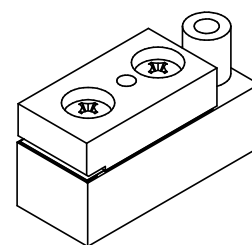
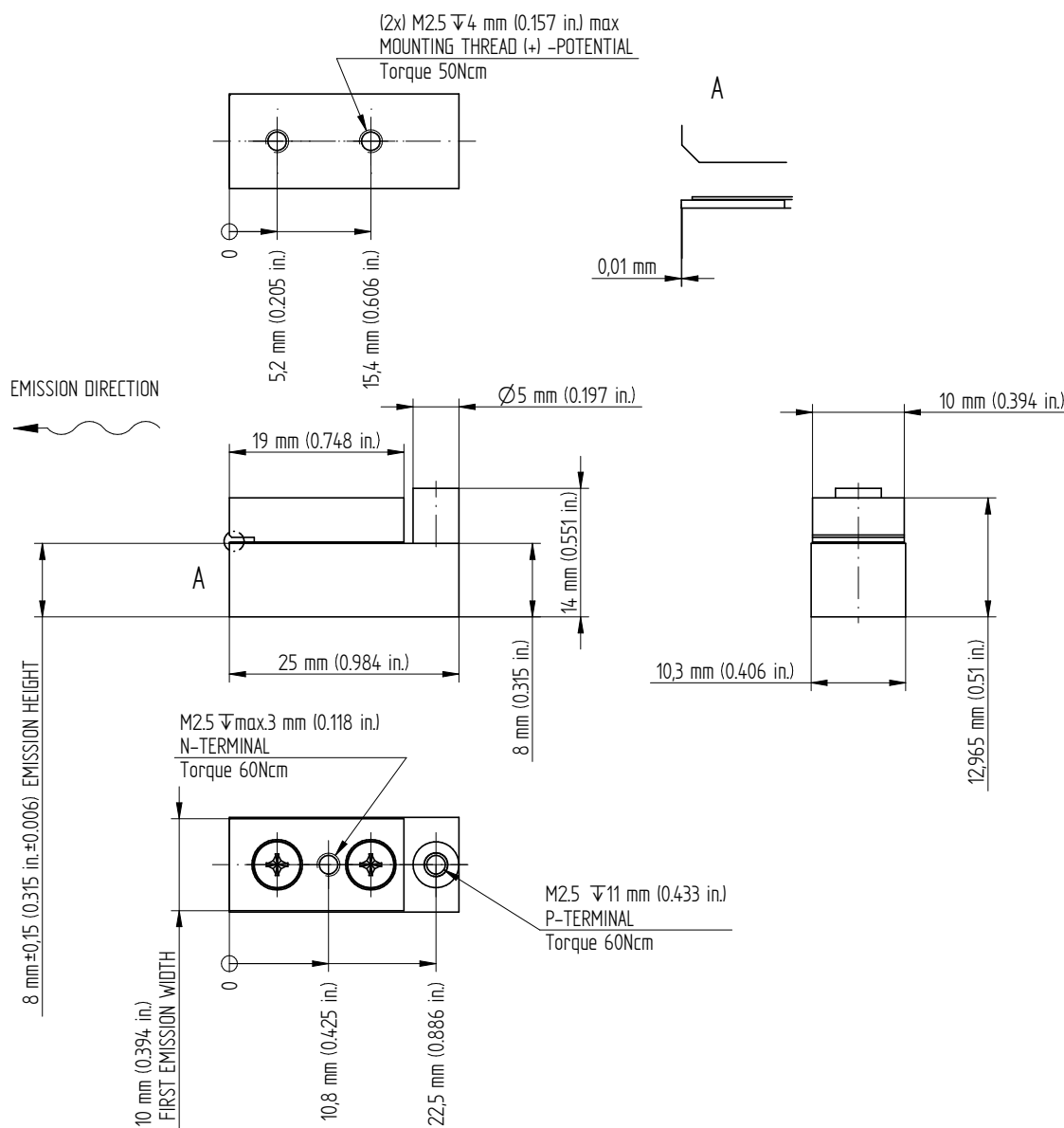
4. A non-condensing environment is required for storage and operation below the ambient dew point.

5. Custom pulse length / duty cycles on request.

Mechanical specifications

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

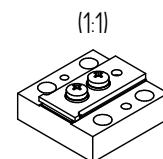
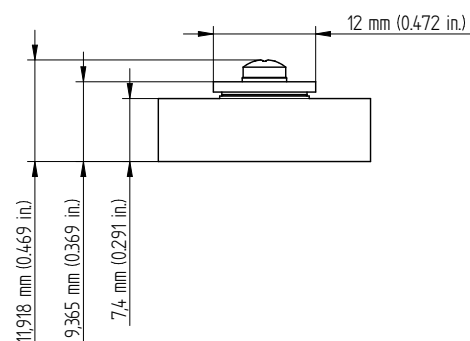
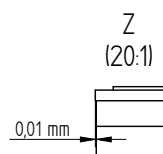
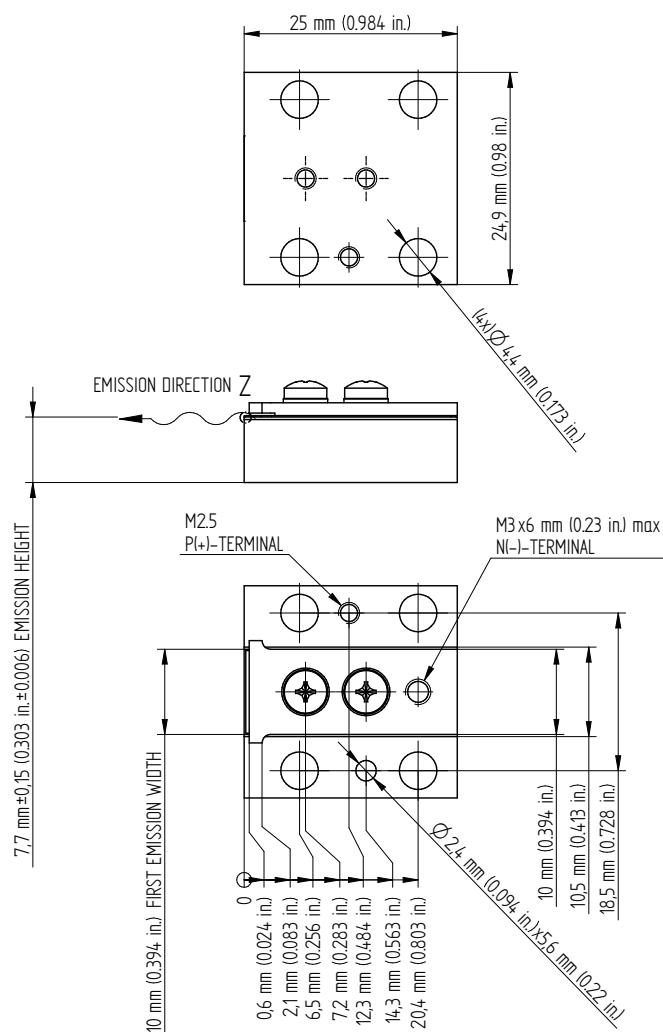
M8N



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

