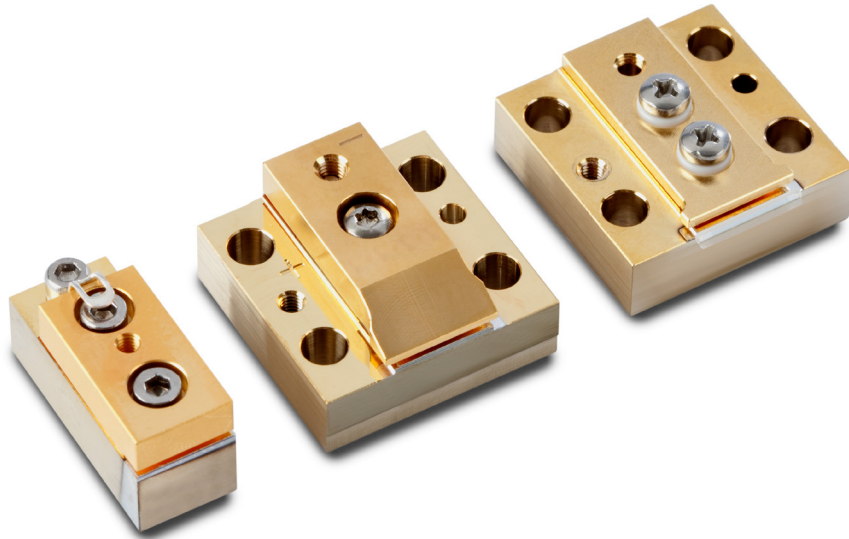


SINGLE BAR DIODE LASER MODULE

940 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)	940	940
Center Wavelength Tolerance ³ (nm)	±3	±3
Output Power ² (W)	60	300
Number of Emitters	19	40
Emitter Size (μm)	100	100
Fill Factor (%)	20	80
Operating Condition	CW	QCW
Spectral Width (FWHM) (nm)	≤5	≤8
Slope Efficiency (W/A)	≥1	≥1.14
Fast-Axis Divergence without Optics (degree)	≤48	≤65
Fast-Axis Divergence with Fast-Axis Collimation (mrad)	≤8	≤8
Slow-Axis Divergence (degree)	≤8	≤12
Wavelength Temp. Coefficient (nm/°C)	~0.34	~0.34
Beam Geometry after FAC Lens (mm x mm)	~0.8 x 10	~0.8 x 10
Electrical Parameters ¹		
Power Conversion Efficiency (%)	≥58	≥57
Threshold Current (I_{TH}) (A)	≤6	≤22
Operating Current (I_{OP}) (A)	≤70	≤285
Operating Voltage (V_{OP}) (V)	≤1.70	≤2.0
Duty Cycle ⁵ (%)	100	≤2
Pulse Length ⁵ (msec)	-	≤2
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)	≥70	≥20

Notes:

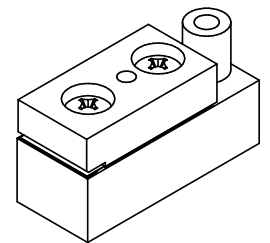
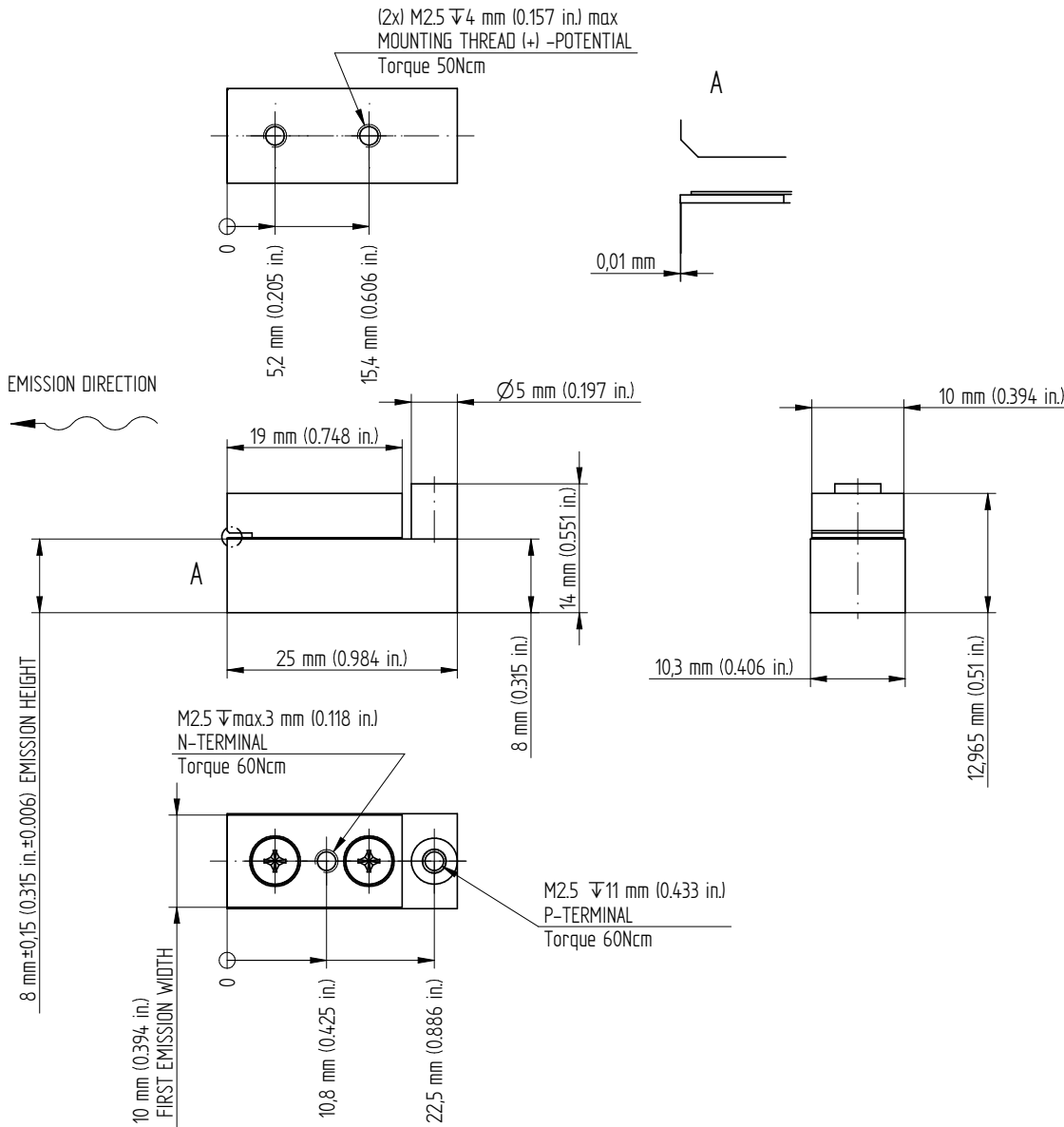
1. Data at 25°C cold plate temperature.
2. Reduced lifetime if used above nominal operating conditions.
3. Others available upon request.
4. A non-condensing environment is required for storage and operation below the ambient dew point.
5. Custom pulse length / duty cycles on request.

SINGLE BAR DIODE LASER MODULE

Mechanical specifications

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

M8N

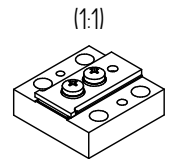
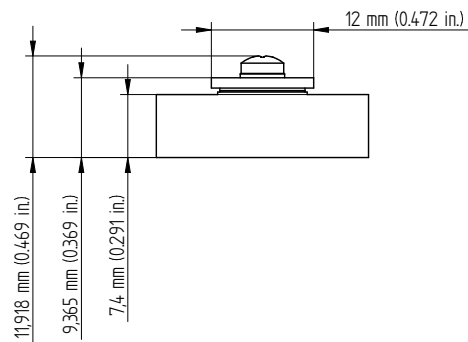
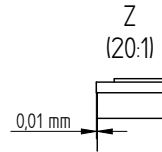
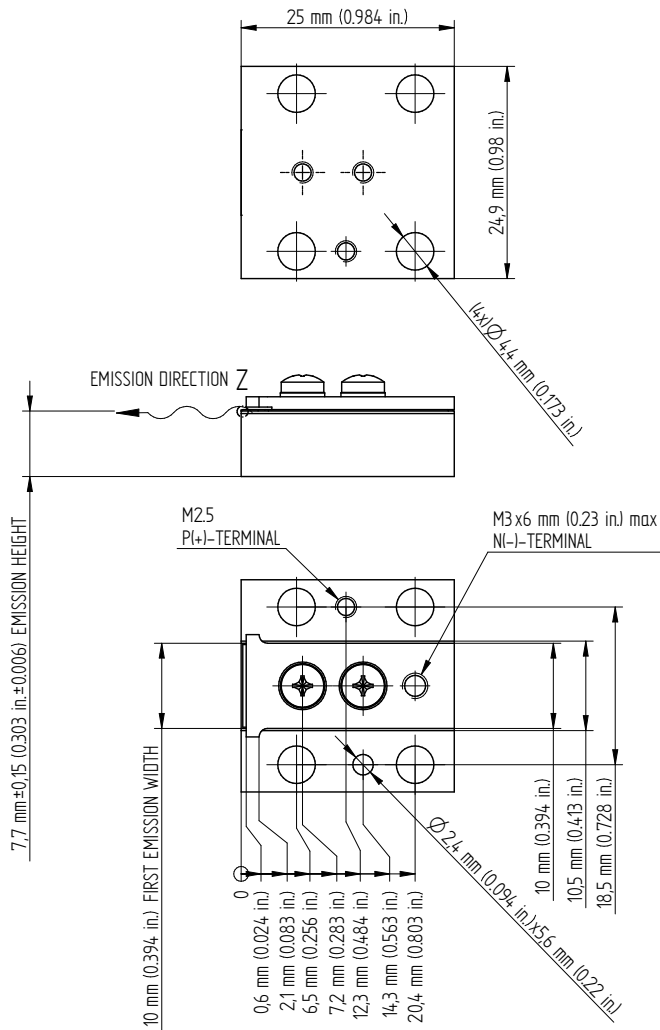


SINGLE BAR DIODE LASER MODULE

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

SINGLE BAR DIODE LASER MODULE

Mechanical specifications

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

M10N

