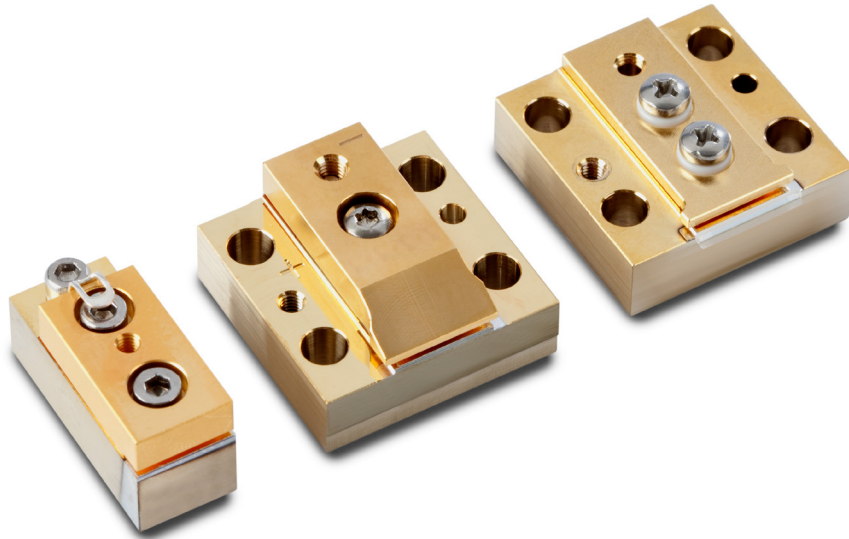


# SINGLE BAR DIODE LASER MODULE

## 88x nm, 60 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 <sup>1</sup>                        |            | M-Type |  |
|--------------------------------------------------------|------------|--------|--|
| Center Wavelength Range <sup>3</sup> (nm)              | 88x        |        |  |
| Center Wavelength Tolerance <sup>3</sup> (nm)          | ±3         |        |  |
| Output Power <sup>2</sup> (W)                          | 40         | 60     |  |
| Number of Emitters                                     | 19         |        |  |
| Emitter Size (μm)                                      | 150        |        |  |
| Fill Factor (%)                                        | 30         |        |  |
| Operating Condition                                    | CW         |        |  |
| Spectral Width (FWHM) (nm)                             | <4.0       |        |  |
| Slope Efficiency (W/A)                                 | ≥1.0       | ≥1.9   |  |
| Fast-Axis Divergence without Optics (degree)           | ≤60        | ≤58    |  |
| Fast-Axis Divergence with Fast-Axis Collimation (mrad) | ≤8         |        |  |
| Slow-Axis Divergence (degree)                          | ≤9         | ≤7.5   |  |
| Wavelength Temp. Coefficient (nm/°C)                   | ~0.30      |        |  |
| Beam Geometry after FAC Lens (mm x mm)                 | ~0.8 x 10  |        |  |
| Electrical Parameters <sup>1</sup>                     |            |        |  |
| Power Conversion Efficiency (%)                        | ≥50        | ≥55    |  |
| Threshold Current (I <sub>TH</sub> ) (A)               | ≤10        | ≤14    |  |
| Operating Current (I <sub>OP</sub> ) (A)               | 46         | ≤67    |  |
| Operating Voltage (V <sub>OP</sub> ) (V)               | ≤1.80      | ≤1.70  |  |
| Thermal Parameters <sup>1</sup>                        |            |        |  |
| Operating Temperature Range <sup>3,4</sup> (°C)        | +20 to +30 |        |  |
| Storage Temperature Range <sup>4</sup> (°C)            | 0 to +55   |        |  |
| Recommended Heat Sink Capacity (W)                     | ≥70        |        |  |

## Notes:

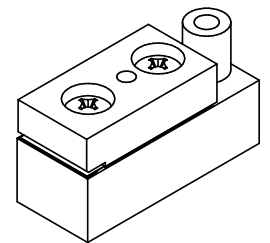
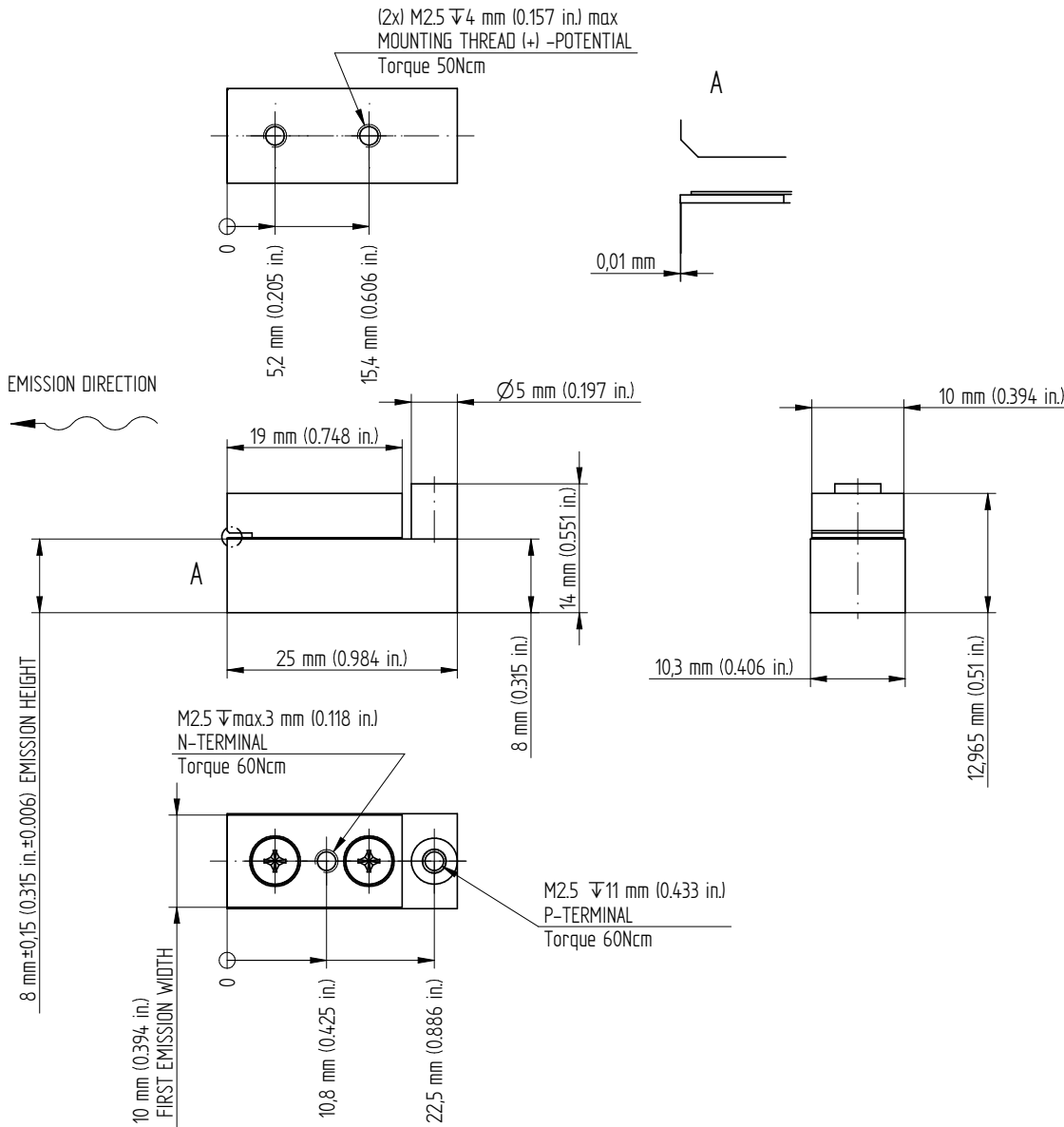
1. Data at 25°C cold plate temperature.
2. Reduced lifetime if used above nominal operating conditions.
3. Others available upon request.
4. A non-condensing environment is required for storage and operation below the ambient dew point.

# SINGLE BAR DIODE LASER MODULE

## Mechanical specifications

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

M8N

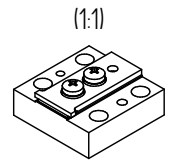
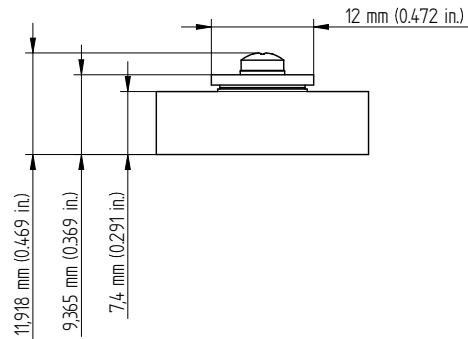
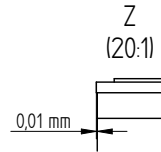
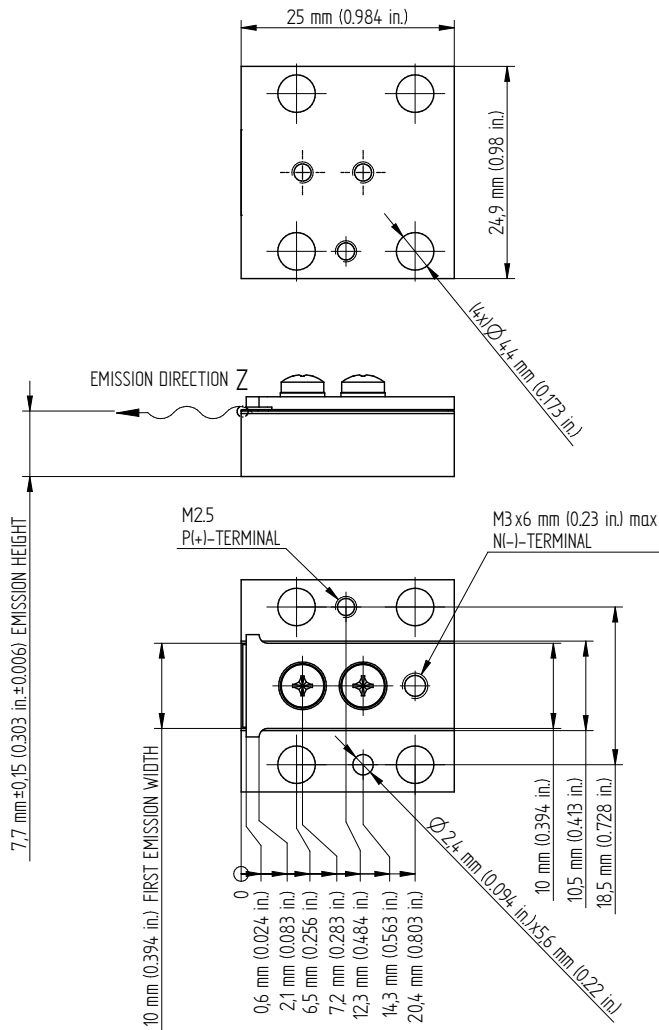


# SINGLE BAR DIODE LASER MODULE

## 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

