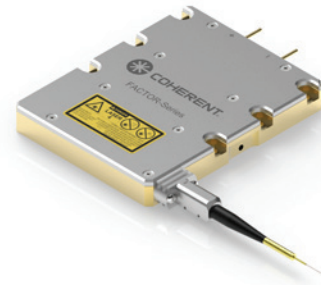


# FACTOR-Series

## Fiber-Coupled Diode Laser Module

976 nm, 400 W, VBG,  
Conduction-Cooled, Single Emitter-Based



OPTICAL PARAMETERS <sup>1</sup>	FACTOR-22   HS8
Center Wavelength Range <sup>3</sup> (nm)	976
Center Wavelength Tolerance <sup>3</sup> (nm)	±0.6
Output Power <sup>2</sup> (W)	400
Spectral Width (90% power content) (nm)	<1
Wavelength Temp. Coefficient (nm/°C)	0.01
Slope Efficiency (W/A)	>19
Numerical Aperture (NA)	>90% (typ. 93%) in 0.16
FIBER PARAMETERS <sup>5</sup>	
Fiber Core Diameter (μm)	202 ±2
Fiber Clad Diameter (μm)	242 ±2 (Modestrip)
Fiber Coating Diameter (μm)	470 ±40
Fiber Loose Tubing Diameter (mm)	3
Numerical Aperture <sup>3</sup> (NA)	0.215 ±0.005
Fiber Length (m)	>2
Fiber Termination	Pigtail
ELECTRICAL PARAMETERS <sup>1</sup>	
Power Conversion Efficiency (%)	>45% (typ. 50%)
Threshold Current (I <sub>TH</sub> ) (A)	<2
Operating Current (I <sub>OP</sub> ) (A)	<25 (typ. 21)
Operating Voltage (V <sub>OP</sub> ) (V) max.	40
THERMAL PARAMETERS	
Operating Temperature Range <sup>3,4</sup> (°C)	+20 to +30
Storage Temperature Range <sup>4</sup> (°C)	0 to +55
Recommended Heatsink Capacity (W)	500
Maximum Soldering Temperature for Electrical Leads (°C)	320
Maximum Soldering Time per Lead (s)	10

<sup>1</sup> Data at 25°C base plate temperature.

<sup>2</sup> Reduced lifetime if used above nominal operating conditions.

<sup>3</sup> Others available upon request.

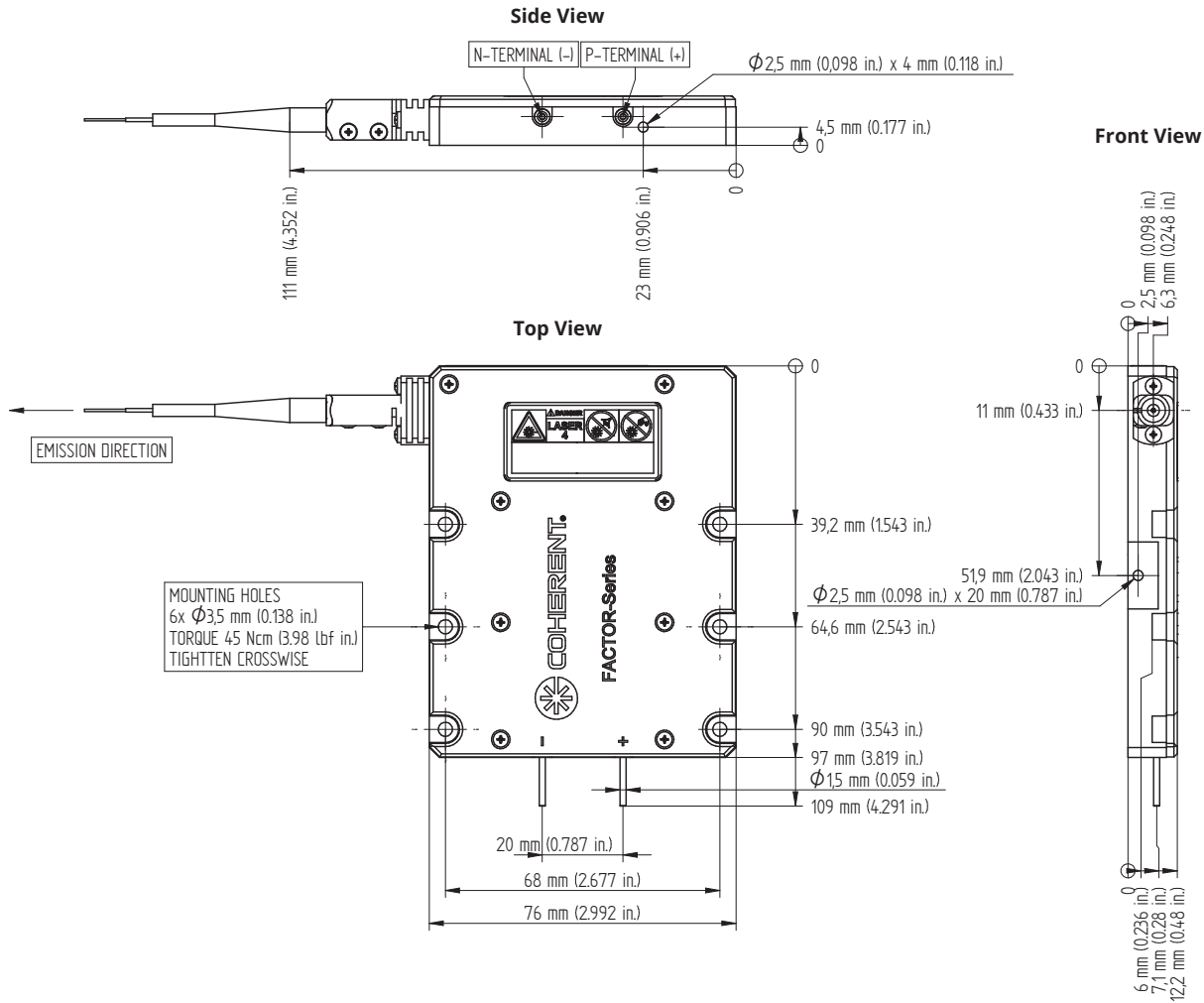
<sup>4</sup> A non-condensing environment is required for storage and operation below the ambient dew point.

<sup>5</sup> Non-detachable fiber.

**MECHANICAL SPECIFICATIONS**

**VBG, Conduction-Cooled, Single Emitter-Based  
FACTOR-Series Fiber-Coupled Diode Laser Module**

**FACTOR-22 | HS8**



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Visible / invisible laser radiation.  
Avoid eye or skin exposure to  
direct or scattered radiation!  
Class 4 Laser product  
IEC 60825-1:2014