

# Fiber-Coupled Diode Laser Module

976 nm, 30 W, Conduction-Cooled,  
Single Emitter-Based



OPTICAL PARAMETERS <sup>1</sup>	I5F-HS1
Center Wavelength Range <sup>3</sup> (nm)	976
Center Wavelength Tolerance <sup>3</sup> (nm)	±7
Output Power <sup>2</sup> (W)	30
Spectral Width (90% power content) (nm)	<5
Wavelength Temp. Coefficient (nm/°C)	~0.38
Slope Efficiency (W/A)	2.7 ~ 3.0
Numerical Aperture (NA)	95% in 0.12
FIBER PARAMETERS <sup>5</sup>	
Fiber Core Diameter (µm)	106.5 ±1.5
Fiber Clad Diameter (µm)	125 ±1
Fiber Coating Diameter (µm)	245 ±15
Numerical Aperture <sup>3</sup> (NA)	0.15 ±0.02
Fiber Length (m)	>1.5
Fiber Termination	Fiber Pigtail
ELECTRICAL PARAMETERS <sup>1</sup>	
Power Conversion Efficiency (%)	>50
Threshold Current (I <sub>TH</sub> ) (A)	<0.8
Operating Current (I <sub>OP</sub> ) (A) max.	12
Operating Voltage (V <sub>OP</sub> ) (V) max.	<6.0
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)	60
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.

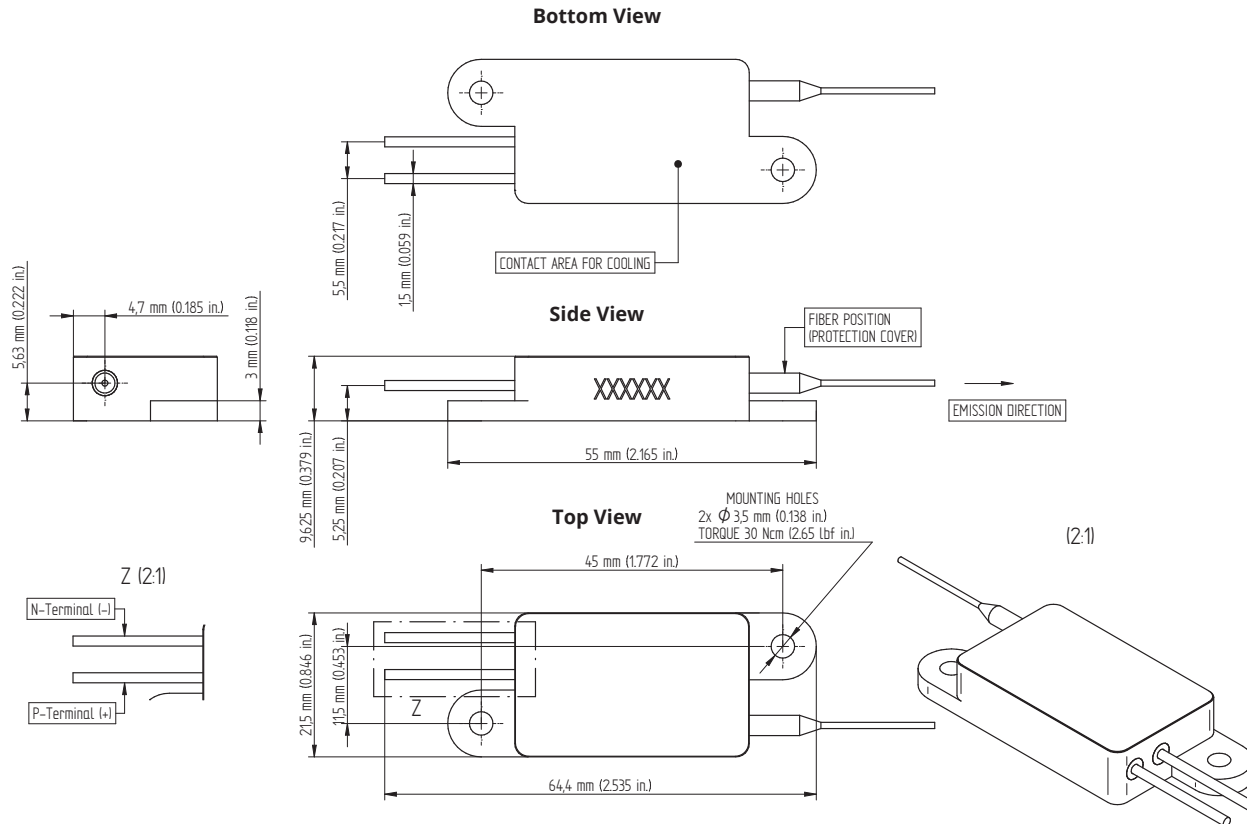
<sup>4</sup> A non-condensing environment is required for storage and operation below the ambient dew point.

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

## MECHANICAL SPECIFICATIONS

### Conduction-Cooled, Single Emitter-Based Fiber-Coupled Diode Laser Module

I5F-HS1



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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