

Fiber-Coupled Diode Laser Module

878.6 nm, 110 W, VBG,
Conduction-Cooled, Single Emitter-Based



OPTICAL PARAMETERS ¹	I5F-HS16.2
Center Wavelength Range ³ (nm)	878.6
Center Wavelength Tolerance ³ (nm)	±0.6
Output Power ² (W)	110
Spectral Width (90% power content) (nm)	<1
Wavelength Temp. Coefficient (nm/°C)	0.01
Slope Efficiency (W/A)	>9
Numerical Aperture (NA)	>90% (typ. 95%) in 0.15
FIBER PARAMETERS ⁵	
Fiber Core Diameter (μm)	200 ±5
Fiber Clad Diameter (μm)	280 ±6
Fiber Coating Diameter (μm)	450 ±30
Fiber Loose Tubing Diameter (mm)	2.2
Numerical Aperture ³ (NA)	0.22 ±0.02
Fiber Length (m)	1.5
Fiber Termination	SMA905
ELECTRICAL PARAMETERS ¹	
Power Conversion Efficiency (%)	>45% (typ. 50%)
Threshold Current (I _{TH}) (A)	<2
Operating Current (I _{OP}) (A)	<14 (typ. 12)
Operating Voltage (V _{OP}) (V) max.	19
THERMAL PARAMETERS	
Operating Temperature Range ^{3,4} (°C)	+20 to +30
Storage Temperature Range ⁴ (°C)	0 to +55
Recommended Heatsink Capacity (W)	145
Maximum Soldering Temperature for Electrical Leads (°C)	320
Maximum Soldering Time per Lead (s)	10

¹ Data at 25°C base 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 Non-detachable fiber.

Fiber-Coupled Diode Laser Module

885 nm, 110 W, VBG,
Conduction-Cooled, Single Emitter-Based



OPTICAL PARAMETERS ¹	I5F-HS16.2
Center Wavelength Range ³ (nm)	885
Center Wavelength Tolerance ³ (nm)	±0.6
Output Power ² (W)	110
Spectral Width (90% power content) (nm)	<1
Wavelength Temp. Coefficient (nm/°C)	0.01
Slope Efficiency (W/A)	>9
Numerical Aperture (NA)	>90% (typ. 95%) in 0.15
FIBER PARAMETERS ⁵	
Fiber Core Diameter (μm)	200 ±5
Fiber Clad Diameter (μm)	280 ±6
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² Reduced lifetime if used above nominal operating conditions.

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⁵ Non-detachable fiber.

Fiber-Coupled Diode Laser Module

888 nm, 110 W, VBG,
Conduction-Cooled, Single Emitter-Based



OPTICAL PARAMETERS ¹	I5F-HS16.2
Center Wavelength Range ³ (nm)	888
Center Wavelength Tolerance ³ (nm)	±0.6
Output Power ² (W)	110
Spectral Width (90% power content) (nm)	<1
Wavelength Temp. Coefficient (nm/°C)	0.01
Slope Efficiency (W/A)	>9
Numerical Aperture (NA)	>90% (typ. 95%) in 0.15
FIBER PARAMETERS ⁵	
Fiber Core Diameter (μm)	200 ±5
Fiber Clad Diameter (μm)	280 ±6
Fiber Coating Diameter (μm)	450 ±30
Fiber Loose Tubing Diameter (mm)	2.2
Numerical Aperture ³ (NA)	0.22 ±0.02
Fiber Length (m)	1.5
Fiber Termination	SMA905
ELECTRICAL PARAMETERS ¹	
Power Conversion Efficiency (%)	>45% (typ. 50%)
Threshold Current (I _{TH}) (A)	<2
Operating Current (I _{OP}) (A)	<14 (typ. 12)
Operating Voltage (V _{OP}) (V) max.	20
THERMAL PARAMETERS	
Operating Temperature Range ^{3,4} (°C)	+20 to +30
Storage Temperature Range ⁴ (°C)	0 to +55
Recommended Heatsink Capacity (W)	145
Maximum Soldering Temperature for Electrical Leads (°C)	320
Maximum Soldering Time per Lead (s)	10

¹ Data at 25°C base plate temperature.

² Reduced lifetime if used above nominal operating conditions.

³ Others available upon request.

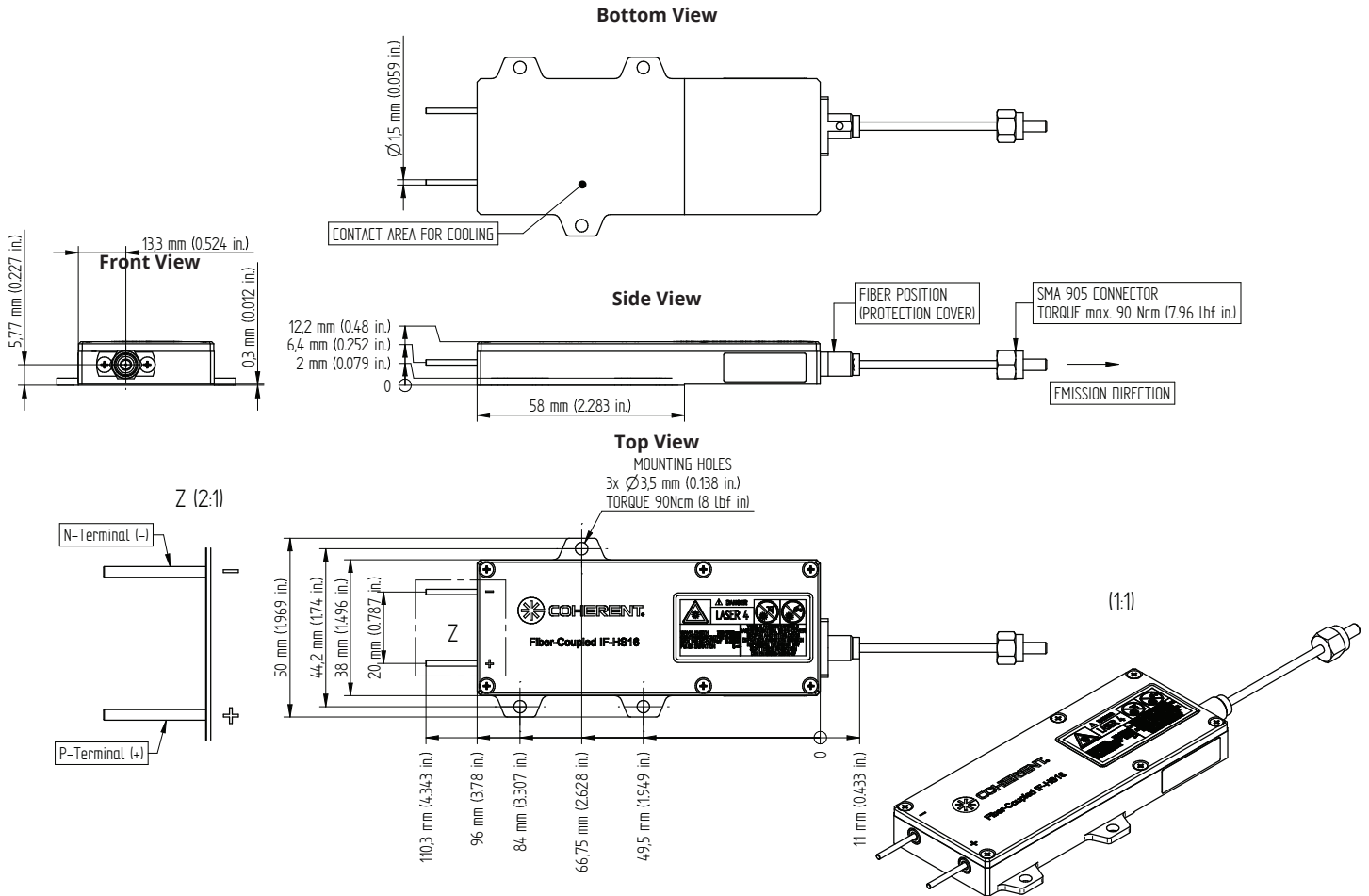
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⁵ Non-detachable fiber.

MECHANICAL SPECIFICATIONS

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

15F-HS16



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