



FAP 800 Series

High-Brightness Fiber-Coupled Bars

Fiber Array Packages (FAP) from Coherent are the highest quality fiber-coupled diode lasers in the industry, offering you the simplest way of delivering the output from a diode laser bar to your application.

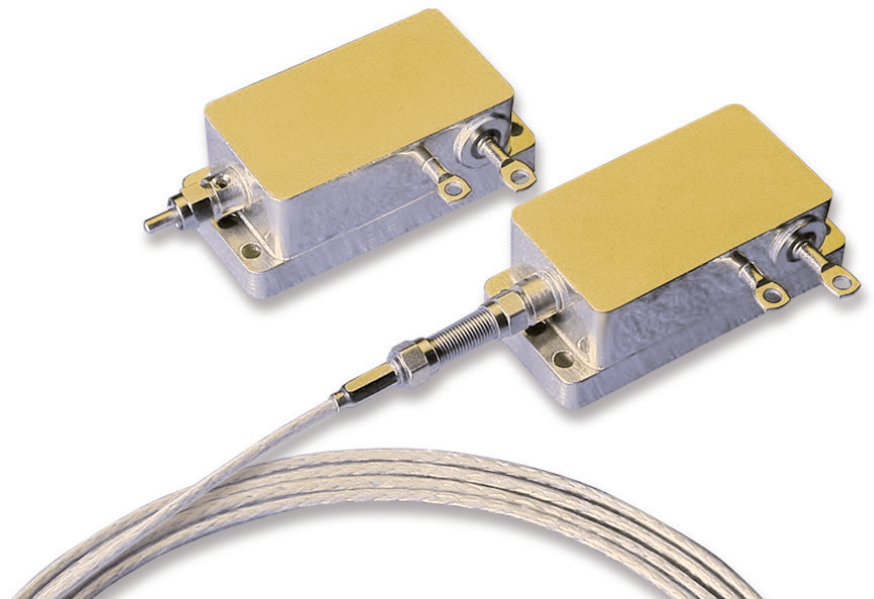
The FAP 800 series consists of a 19-element conduction-cooled diode laser bar, lensed and coupled to an 800 μm , multimode fiber bundle array.

FEATURES

- High reliability
- High efficiency
- High brightness
- Rugged construction

APPLICATIONS

- Solid-State Laser Pumping
- Plastic Welding
- Soldering
- Heating



| SPECIFICATIONS ¹ | FAP800-L-30W-803.0 to809.0-F<3.0-25C | FAP800-30W-805.0 to811.0-F<3.5-25C | FAP800-30W-805.0 to811.0-F<3.5-25C |
|---|---|---------------------------------------|---------------------------------------|
| Part Number | 1065526 | 1059281 | 1071370 |
| OPTICAL SPECIFICATIONS | | | |
| CW Output Power (W) | 25 | 30 | 30 |
| Center Wavelength ² (nm) | 807.5 | 808 | 940 |
| Center Wavelength Tolerance (nm) | ±2.5 | ±3.0 | ±2.0 |
| Spectral Width ² (nm) | <2.5 | <3.5 | <6.0 |
| Wavelength Temperature Coefficient (nm/°C) | 0.28 | 0.28 | 0.35 |
| Beam Divergence ³ (NA) | <0.14 | <0.14 | <0.16 |
| Beam Diameter (µm) | 810 | 810 | 810 |
| ELECTRICAL CHARACTERISTICS (typical) | | | |
| Slope Efficiency (W/A) | >0.8 | >0.8 | >0.75 |
| Conversion Efficiency (%) | >35 | >35 | >35 |
| Threshold Current (A) | 8 to 11 | 8 to 11 | 4 to 7 |
| Operating Current (A) | <28 | <46 | <46 |
| Operating Voltage (V) | <2.1 | <2.1 | <2.2 |
| Recommended Hookup Wire (gauge) | 8 or heavier | 8 or heavier | 8 or heavier |
| THERMAL SPECIFICATIONS | | | |
| Thermal Resistance (typical) (°C/W) | 0.7 | 0.7 | 0.7 |
| Case Operating Temperature (°C) | -20 to 30 | -20 to 30 | -20 to 30 |
| Case Storage Temperature (°C) | -20 to 60 | -20 to 60 | -20 to 60 |
| RECOMMENDED HEAT SINK | | | |
| Capacity (W) | 100 | 100 | 100 |
| Thermal Resistance (°C/W) | <0.1 | <0.1 | <0.1 |
| MECHANICAL SPECIFICATIONS | | | |
| Weight | 300 g (10.3 oz.) | 300 g (10.3 oz.) | 300 g (10.3 oz.) |
| Fiber Connector | SMA 905 | SMA 905 | SMA 905 |

¹ All values measured at case temperature (TC) = 25°C.

² Custom center wavelengths and custom spectral widths are available, some from stock. Consult your Coherent representative.

³ The numerical aperture of the output beam is defined as the sine of the half-angle of the divergence cone that encircles 90% of the energy.

| SPECIFICATIONS ¹ | FAP800-40W-805.0 to811.0-F<3.5-25C | FAP800-R-40W-930.0 to950.0-F<6.0-25C | FAP800-R-40W-970.0 to990.0-F<6.0-25C |
|---|---------------------------------------|---|---|
| Part Number | 1057814 | 1082408 | 1082412 |
| OPTICAL SPECIFICATIONS | | | |
| CW Output Power (W) | 40 | 40 | 40 |
| Center Wavelength ² (nm) | 808 | 940 | 980 |
| Center Wavelength Tolerance (nm) | ±3.0 | ±10.0 | ±10.0 |
| Spectral Width ² (nm) | <3.5 | <6.0 | <6.0 |
| Wavelength Temperature Coefficient (nm/°C) | 0.28 | 0.28 | 0.28 |
| Beam Divergence ³ (NA) | <0.14 | <0.11 | <0.11 |
| Beam Diameter (µm) | 810 | 810 | 810 |
| ELECTRICAL CHARACTERISTICS (typical) | | | |
| Slope Efficiency (W/A) | >0.8 | >0.8 | >0.8 |
| Conversion Efficiency (%) | >35 | >50 | >50 |
| Threshold Current (A) | 9 to 13 | <8 | <7 |
| Operating Current (A) | <53 | <54 | <54 |
| Operating Voltage (V) | <2.2 | <1.7 | <1.7 |
| Recommended Hookup Wire (gauge) | 8 or heavier | 8 or heavier | 8 or heavier |
| THERMAL SPECIFICATIONS | | | |
| Thermal Resistance (typical) (°C/W) | 0.7 | 0.7 | 0.7 |
| Case Operating Temperature (°C) | -20 to 30 | -20 to 30 | -20 to 30 |
| Case Storage Temperature (°C) | -20 to 60 | -20 to 60 | -20 to 60 |
| RECOMMENDED HEAT SINK | | | |
| Capacity (W) | 100 | 100 | 100 |
| Thermal Resistance (°C/W) | <0.1 | <0.1 | <0.1 |
| MECHANICAL SPECIFICATIONS | | | |
| Weight | 300 g (10.3 oz.) | 300 g (10.3 oz.) | 300 g (10.3 oz.) |
| Fiber Connector | SMA 905 | SMA 905 | SMA 905 |

¹ All values measured at case temperature (TC) = 25°C.

² Custom center wavelengths and custom spectral widths are available, some from stock. Consult your Coherent representative.

³ The numerical aperture of the output beam is defined as the sine of the half-angle of the divergence cone that encircles 90% of the energy.

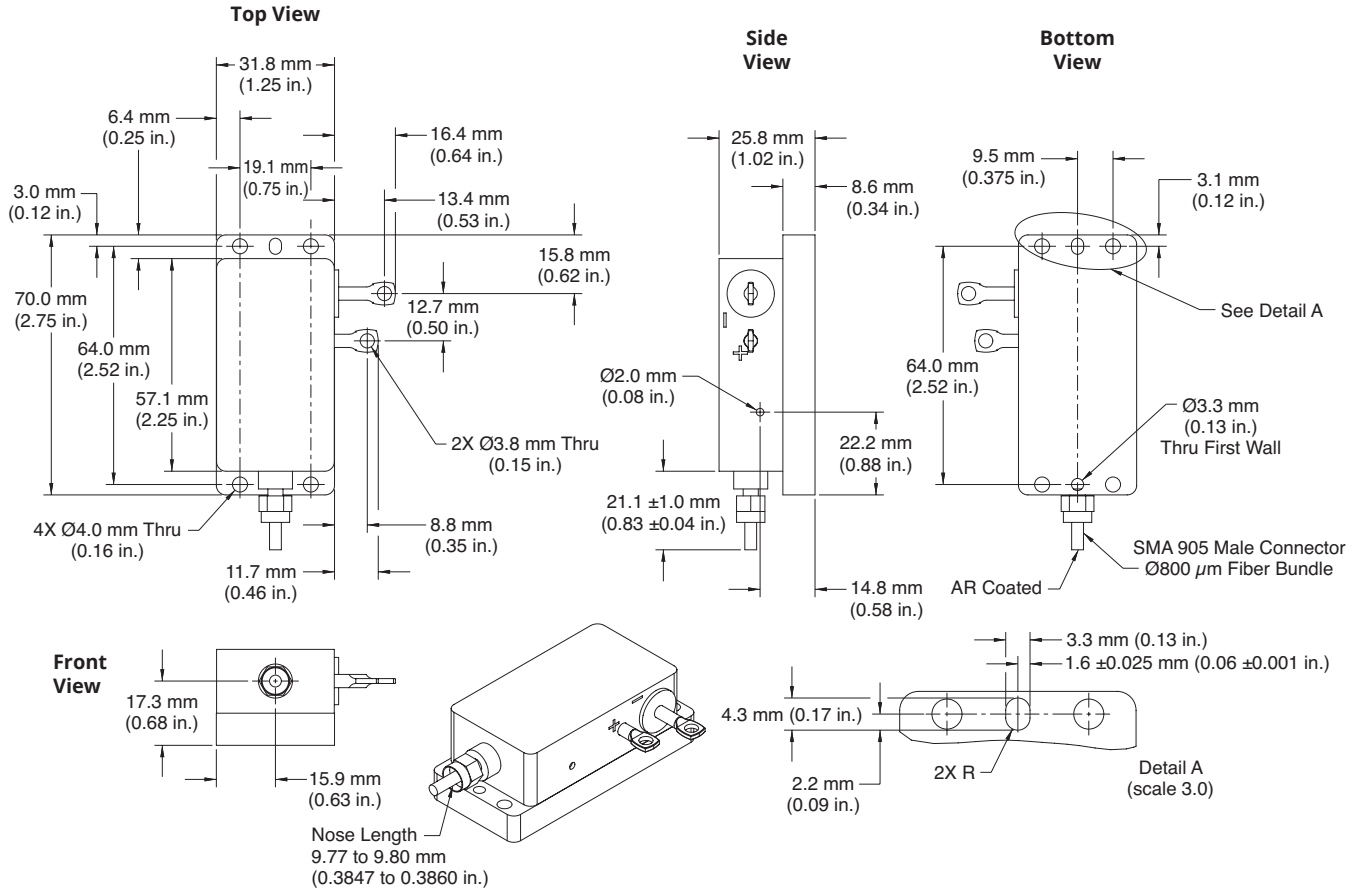
| SPECIFICATIONS ¹ | FAP800-50W-805.0 to811.0-FW90E<4.5-25C | FAP800-70W-800.0to 820.0-FW90E<5.0-25C |
|--|---|---|
| Part Number | 1124386 | 1295614 |
| OPTICAL SPECIFICATIONS | | |
| CW Output Power (W) | 50 | 70 |
| Center Wavelength ² (nm) | 808 | 810 |
| Center Wavelength Tolerance (nm) | ±3.0 | ±10.0 |
| Spectral Width ² (nm) | <4.5 | <8.0 |
| Wavelength Temperature Coefficient (nm/°C) | 0.28 | 0.28 |
| Beam Divergence ³ (NA) | <0.14 | <0.16 |
| Beam Diameter (µm) | 810 | 810 |
| ELECTRICAL CHARACTERISTICS (typical) | | |
| Slope Efficiency (W/A) | >0.8 | >0.9 |
| Conversion Efficiency (%) | >40 | >45 |
| Threshold Current (A) | 8 to 11 | 11 |
| Operating Current (A) | <65 | <85 |
| Operating Voltage (V) | <2.2 | <2.2 |
| Recommended Hookup Wire (gauge) | 8 or heavier | 8 or heavier |
| THERMAL SPECIFICATIONS | | |
| Thermal Resistance (typical) (°C/W) | 0.7 | 0.7 |
| Case Operating Temperature (°C) | -20 to 30 | -20 to 30 |
| Case Storage Temperature (°C) | -20 to 60 | -20 to 60 |
| RECOMMENDED HEAT SINK | | |
| Capacity (W) | 100 | 100 |
| Thermal Resistance (°C/W) | <0.1 | <0.1 |
| MECHANICAL SPECIFICATIONS | | |
| Weight | 300 g (10.3 oz.) | 300 g (10.3 oz.) |
| Fiber Connector | SMA 905 | SMA 905 |

¹ All values measured at case temperature (TC) = 25°C.

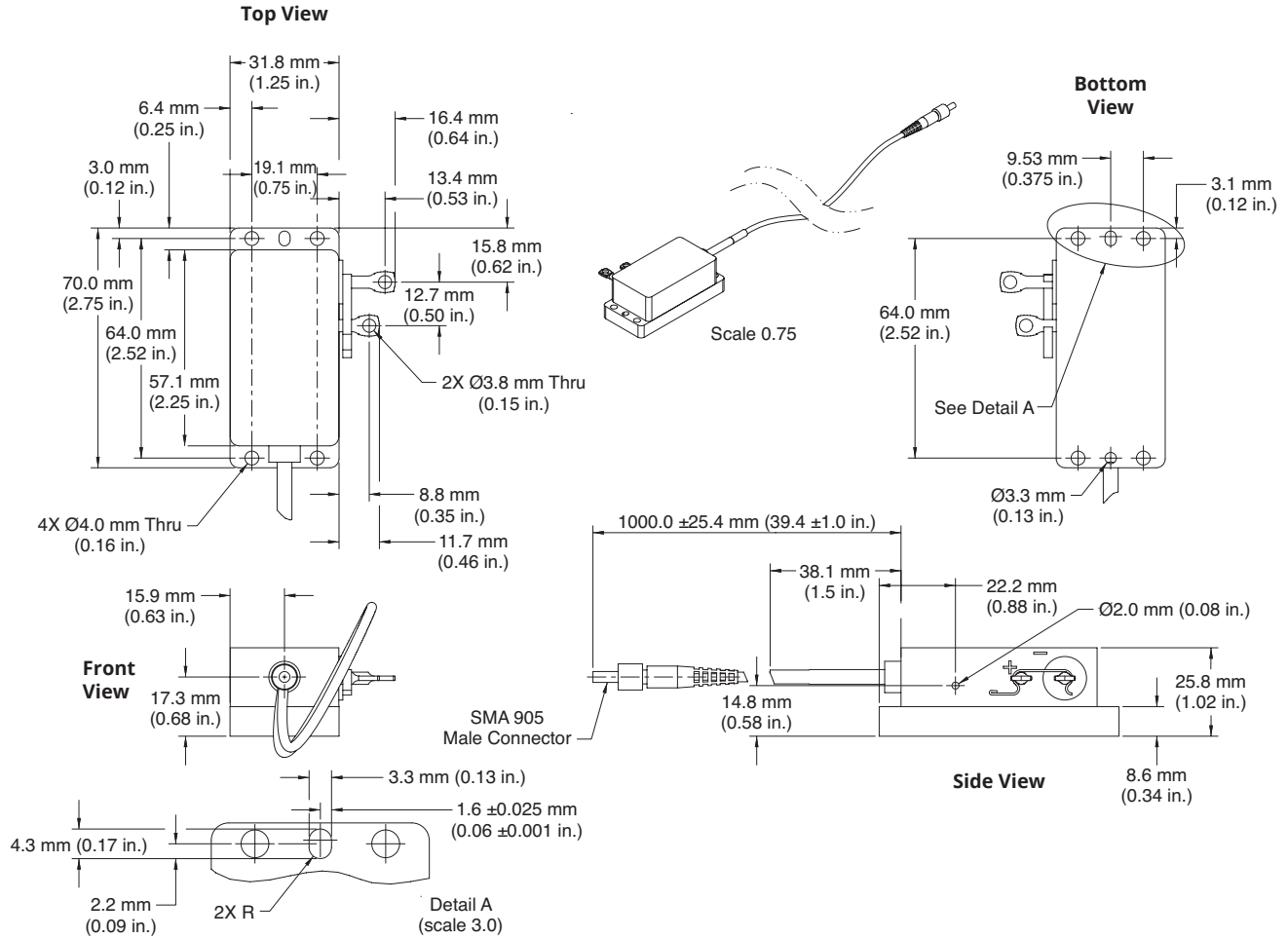
² Custom center wavelengths and custom spectral widths are available, some from stock. Consult your Coherent representative.

³ The numerical aperture of the output beam is defined as the sine of the half-angle of the divergence cone that encircles 90% of the energy.

MECHANICAL SPECIFICATIONS



MECHANICAL SPECIFICATIONS



Coherent, Inc.,
 5100 Patrick Henry Drive Santa Clara, CA 95054
 p. (800) 527-3786 | (408) 764-4983
 f. (408) 764-4646

tech.sales@Coherent.com www.Coherent.com

Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all Fiber Array Packages. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative. Printed in the U.S.A. MC-156-04-0M0917Rev.E Copyright ©2017 Coherent, Inc.