

FAP 600 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.

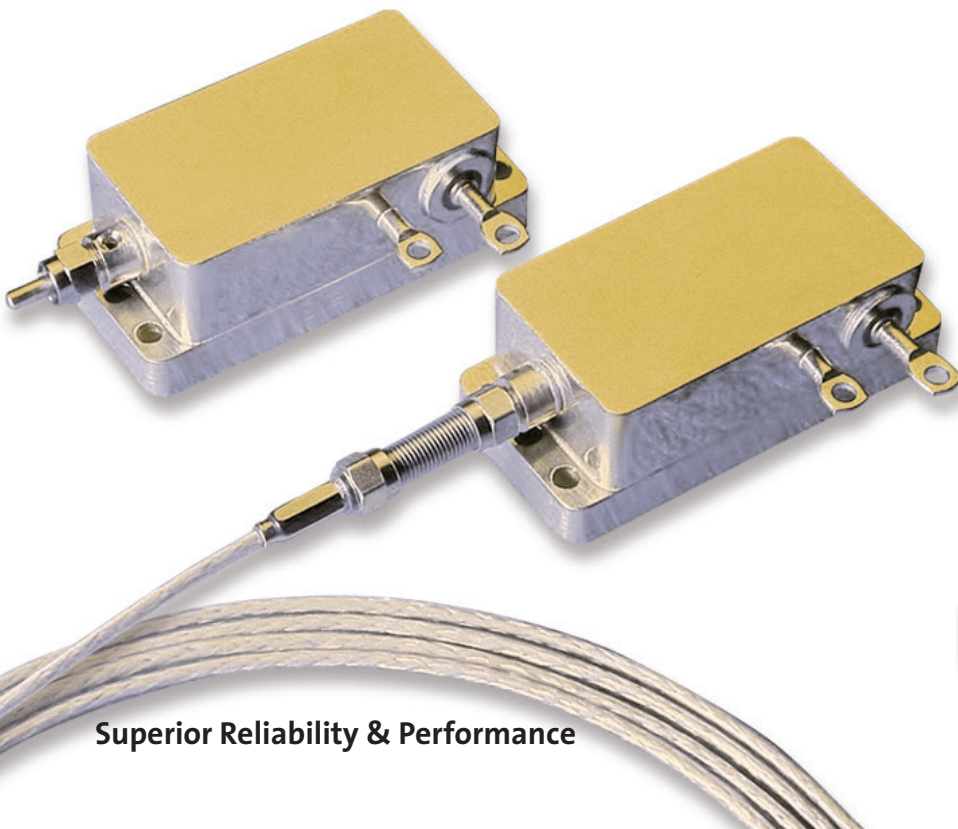
The FAP 600 series consists of a 19-element conduction-cooled diode laser bar, lensed and coupled to an 600 μm , multimode fiber bundle array.

FAP 600 Series Features:

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

FAP 600 Series Applications:

- **Solid-state Laser Pumping**
- **Plastic Welding**
- **Soldering**
- **Heating**



Superior Reliability & Performance

FAP 600 Series

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Device Specifications	FAP600-22W- 975.0to980.0-F<4.5-25C	FAP600-25W- 800to820nm	FAP600-25W- 805.0to811.0-F<3.5-25C
Part Number	1068164	1041807	1041806
Optical Specifications¹			
CW Output Power (W)	22	25	25
Center Wavelength ² (nm)	977	812.5	808
Center Wavelength Tolerance (nm)	+3/-2	±7.5	±3.0
Spectral Width ² (nm)	<4.5	<6.0	<3.5
Wavelength Temperature Coefficient (nm/°C)	0.35	0.28	0.28
Beam Divergence ³ (NA)	<0.14	<0.16	<0.16
Beam Diameter (µm)	600	600	600
Electrical Characteristics (typical)			
Slope Efficiency (W/A)	>0.75	>0.9	>0.9
Conversion Efficiency (%)	>35	>35	>40
Threshold Current (A)	2 to 4	6 to 8	6 to 9
Operating Current (A)	<34	<41	<36
Operating Voltage (V)	<2.1	<2.0	<2.0
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.

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Part Number	1041811	1057503	1041808	1276388
Optical Specifications¹				
CW Output Power (W)	22	30	25	50
Center Wavelength ² (nm)	980	810	810	810
Center Wavelength Tolerance (nm)	±10.0	±10.0	±10.0	±10.0
Spectral Width ² (nm)	<6.0	<6.0	<6.0	<8.0
Wavelength Temperature Coefficient (nm/°C)	0.35	0.28	0.28	0.28
Beam Divergence ³ (NA)	<0.16	<0.14	<0.14	<0.16
Beam Diameter (µm)	600	600	600	600
Electrical Characteristics (typical)				
Slope Efficiency (W/A)	>0.8	>0.9	>0.9	>1.0
Conversion Efficiency (%)	>38	>40	>40	>52
Threshold Current (A)	2 to 4	6 to 8	6 to 9	8
Operating Current (A)	<34	<46	<36	<55
Operating Voltage (V)	<2.0	<2.0	<2.0	<2.0
Recommended Hookup Wire (gauge)	8 or heavier	8 or heavier	8 or heavier	8 or heavier
Thermal Specifications				
Thermal Resistance (typical)(°C/W)	0.7	0.7	0.7	0.7
Case Operating Temperature (°C)	-20 to 30	-20 to 30	-20 to 30	-20 to 30
Case Storage Temperature (°C)	-20 to 60	-20 to 60	-20 to 60	-20 to 60
Recommended Heat Sink				
Capacity (W)	100	100	100	100
Thermal Resistance (°C/W)	<0.1	<0.1	<0.1	<0.1
Mechanical Specifications				
Weight	300 g (10.3 oz.)	300 g (10.3 oz.)	300 g (10.3 oz.)	300 g (10.3 oz.)
Fiber Connector	SMA 905	SMA 905	SMA 905	SMA 905

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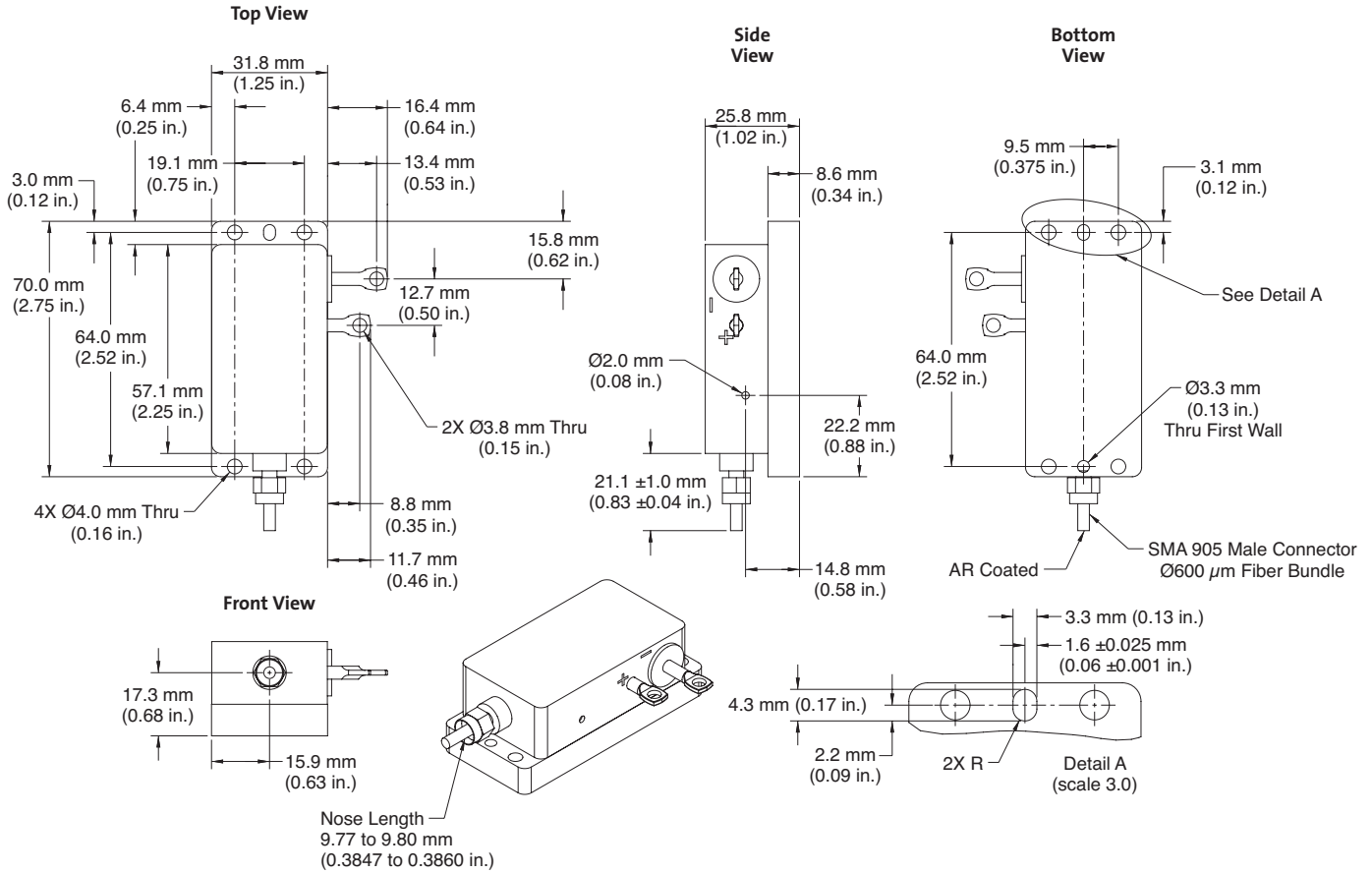
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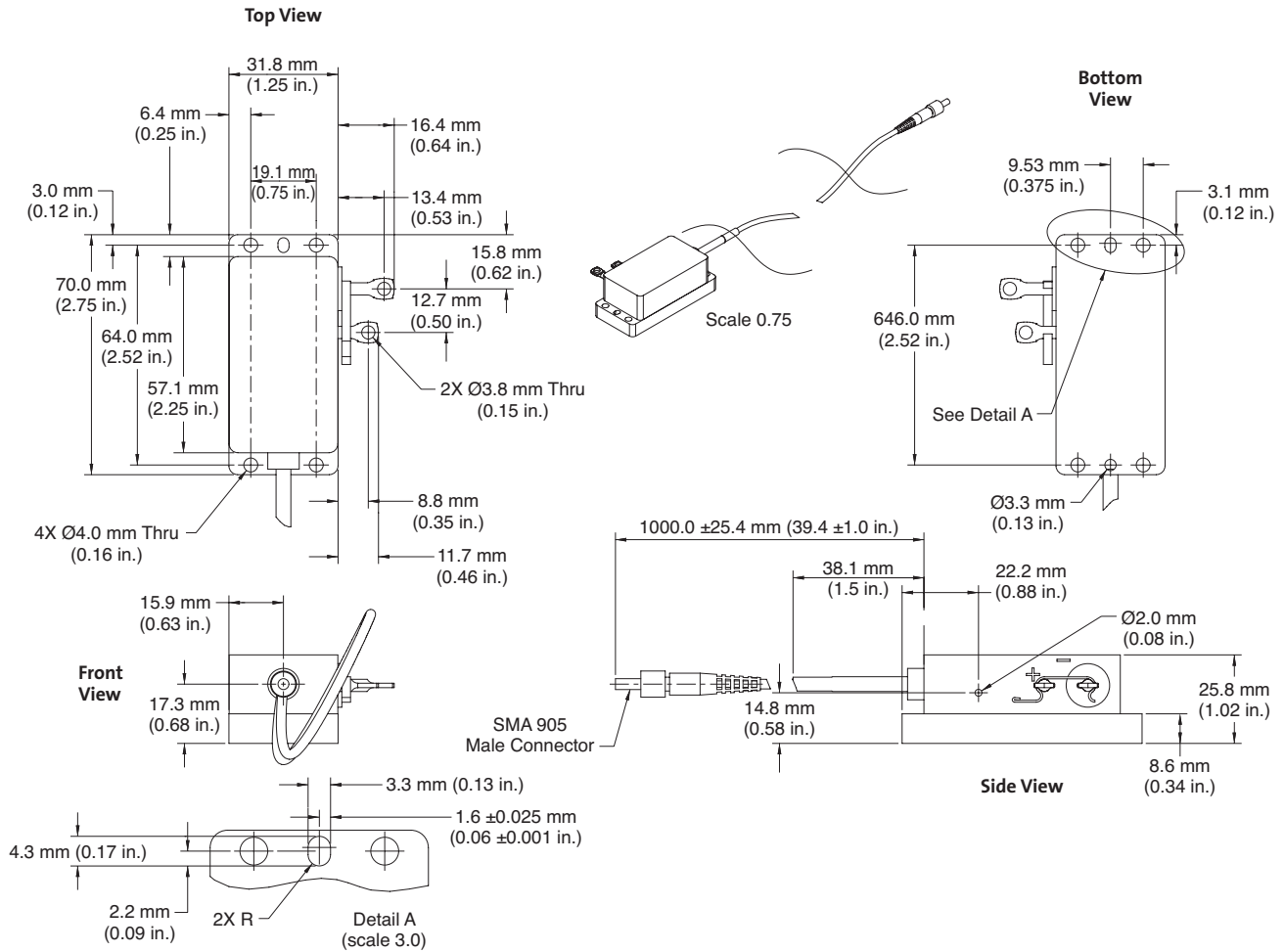
Mechanical Specifications



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Mechanical Specifications



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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.