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 μ m, multimode fiber bundle array.

FEATURES

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

APPLICATIONS

- · Solid-State Laser Punping
- · Plastic Welding
- Soldering
- Heating





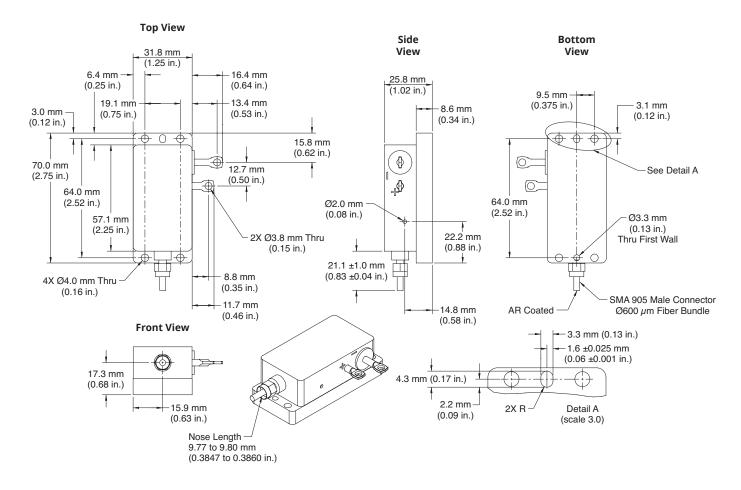
SPECIFICATIONS ¹	FAP600-25W- 805.0to811.0-F<3.5-25C	FAP600-50W-800.0to 820.0-FW90E<8.0-25C
Part Number	1041806	1276388
OPTICAL SPECIFICATIONS		
CW Output Power (W)	25	50
Center Wavelength ² (nm)	808	810
Center Wavelength Tolerance (nm)	±3.0	±10.0
Spectral Width ² (nm)	<3.5	<8.0
Wavelength Temperature Coefficient (nm/°C)	0.28	0.28
Beam Divergence ³ (NA)	<0.16	<0.16
Beam Diameter (µm)	600	600
ELECTRICAL CHARACTERISTICS (typical	il)	
Slope Efficiency (W/A)	>0.9	>1.0
Conversion Efficiency (%)	>40	>52
Threshold Current (A)	6 to 9	8
Operating Current (A)	<36	<55
Operating Voltage (V)	<2.0	<2.0
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

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

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

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

Top View 31.8 mm (1.25 in.) **Bottom** View 6.4 mm -16.4 mm (0.25 in.) (0.64 in.) 9.53 mm -19.1 mm (0.75 in.) (0.375 in.) 3.0 mm 3.1 mm 13.4 mm (0.12 in.) (0.12 in.) (0.53 in.) $\overline{+}$ 15.8 mm (0.62 in.) 70.0 mm (2.75 in.) 12.7 mm Scale 0.75 646.0 mm (0.50 in.) 64.0 mm (2.52 in.) (2.52 in.) 57.1 mm 2X Ø3.8 mm Thru (2.25 in.) (0.15 in.) See Detail A 8.8 mm Ø3.3 mm (0.35 in.) (0.13 in.) 1000.0 ±25.4 mm (39.4 ±1.0 in.) 4X Ø4.0 mm Thru (0.16 in.) 11.7 mm 22.2 mm (0.46 in.) (1.5 in.) (0.88 in.) 15.9 mm Ø2.0 mm (0.63 in.) (0.08 in.) Front 25.8 mm View 17.3 mm 14.8 mm (1.02 in.) (0.68 in.) SMA 905 (0.58 in.) Male Connector 8.6 mm 3.3 mm (0.13 in.) **Side View** (0.34 in.) 1.6 ±0.025 mm (0.06 ±0.001 in.) 4.3 mm (0.17 in.) 2.2 mm 2X R Detail A (0.09 in.) (scale 3.0)

