Laser Diodes

SHEAUMANN

LASER COMPONENTS

SP
—Specialty Packages—

SheauPac (SP)
830nm, 2W

The SheauPac is Sheaumann's flagship product that is manufactured and assembled entirely in our DoD compliant facility in the United States. The Sheaupac's design enables it to withstand extreme temperature and vibration conditions often encountered in military, industrial and space applications. Custom product options are available upon request.

Applications

- Solid State Pumping
- Illumination
- Defense
- Distributed Temperature Sensing
- Scientific Research

Features & Custom Options

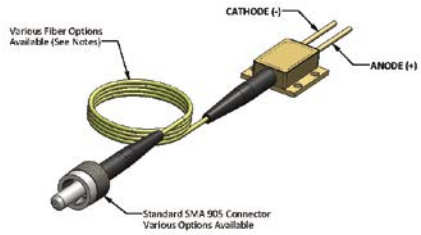
- Single emitter fiber-coupled laser package
- .22 NA diameter fiber 50µm core and 125µm clad
- Electrically isolated case
- Hermetically sealed

Specifications

		2W series		
Parameter	Units	Min	Typ	Max
Wavelength[1]	nm	-	830.0	-
Operating Power	W	-	2.0	-
Operating Current	A	-	2.8	3.4
Operating Voltage	V	-	-	2.1
Threshold	A	-	-	0.3
Slope Efficiency	W/A	0.8	-	-
Operational temp[2]	°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C
Lifetime (Iop, CW)[3]	Hrs.	>10,000	-	-

1) Wavelength Options at ±3, 5 and 10nm
2) All specifications are tested at 25°C
3) Lifetime is quoted on accelerated CW testing.

Rendering & Laser Output



WARNING!
Invisible laser radiation is emitted from devices as shown above

Package Configurations

SP-830-2000-05C	SP 830±5nm 2.0W pkg, 50µm core and 125µm clad fiber, SMA Connector, PVC Jacket
SP-830-2000-05A	SP 830±5nm 2.0W pkg, 50µm core and 125µm clad fiber, FC/PC connector, PVC Jacket

DAT 850094 REV A

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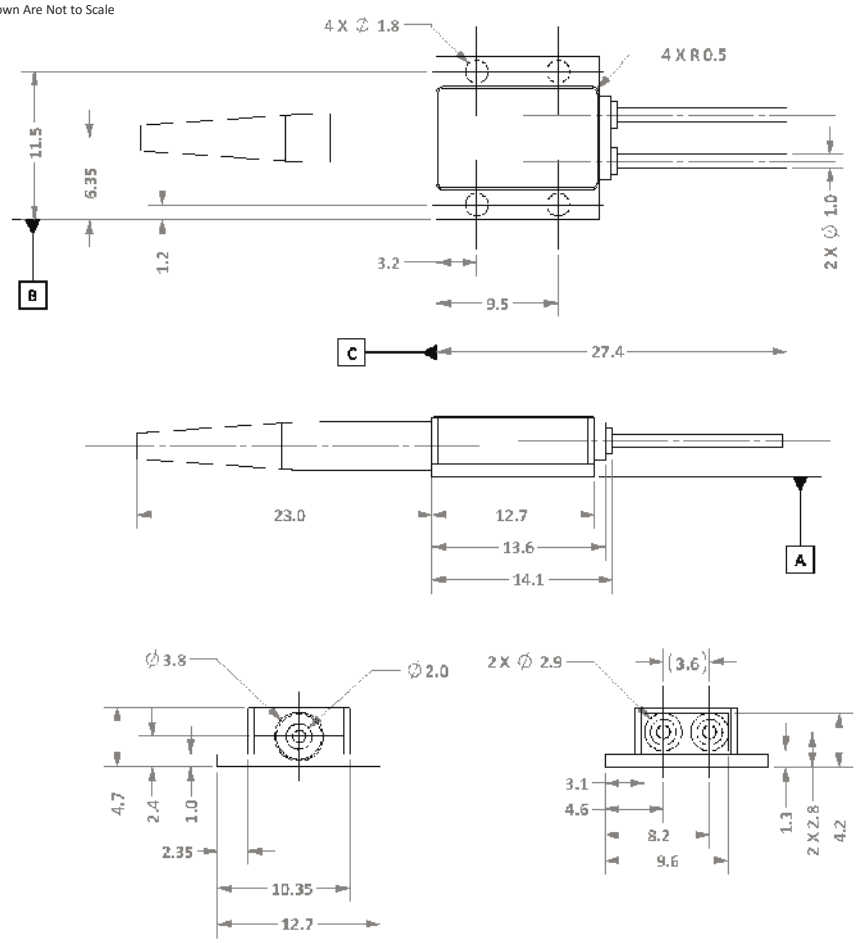
Package Dimensions (mm)

*Images Shown Are Not to Scale



Power Output Danger Label

Notes

1) Specifications are subject to change without notice.
2) See mechanical drawing for pin-outs (RDW 840020).

FDA 21 CFR 1040.10

All devices are manufactured, tested and labeled in compliance with FDA 21 CFR 1040.10 regulations, as applicable under the Radiation Control for Health and Safety Act of 1968. For smaller devices, the appropriate compliance labeling may be affixed to the shipping containter.

All products comply with 21 CFR Chapter 1, Subchapter J.

Safety

Caution: Laser light emitted from a diode may be harmful to the human eye. Avoid looking directly into the diode laser aperture when the device is in operation. Note: The use of optical instruments with this product will increase eye hazard.

DAT 850094 REV A

Operating Considerations

Operating the diode laser outside of its maximum ratings may present a safety hazard or cause a device failure. Additionally, CW diode lasers may be damaged by excessive drive current or switching transients. When using a power supply with the component, it must be used within the specified parameters. DO NOT exceed the maximum peak optical power. Before turning the power supply on, connect the component to the power supply and ensure the output voltage value is zero. After the component has been successfully connected, increase the current slowly and monitor both the output power and drive current. Device degradation accelerates with increased temperature; therefore, careful attention to minimize the case temperature is advised. A proper heat-sink for the diode laser on a thermal radiator will greatly enhance laser life.

ESD Caution

The primary cause of diode failure is unexpected electrostatic discharge. To help prevent device failures, be sure to handle devices with extreme care. The user should always wear an ESD wrist strap, ground all applicable work surfaces and follow anti-static techniques when handling diode lasers.

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