

Features

- Up to 3W CW output power from 100 um core fiber.
- High Quality, Reliability, & Performance

Applications

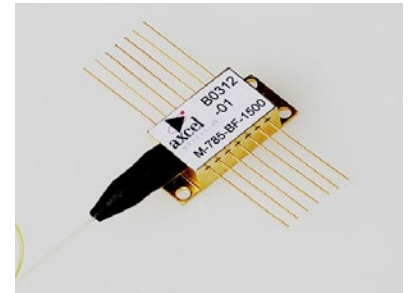
- Fiber Lasers
- Material Processing
- Graphics
- Defense
- Medical

Product Specifications

915 nm Multi-Mode 14-Pin Butterfly Module Laser Diodes

Description:

High brightness, high quality, and high reliability are the foundation of our multi mode product line. Sheumann's 915 nm multi mode laser diodes are available with up to 3W of continuous output power from a 14-pin butterfly packaged 100 um 0.22 NA core fiber. All modules come standard with an internal thermistor, TEC, and photodiode. Sheumann's trademark laser chip design creates un-measurable degradation and long lifetimes that make our chips among the most reliable in the industry today. Our 915 nm multi mode line serves a broad range of applications including fiber lasers, material processing, graphics, defense, and medical.



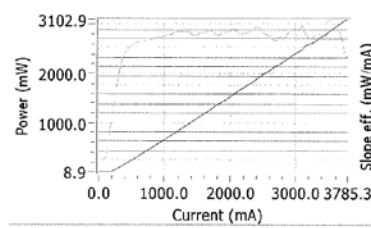
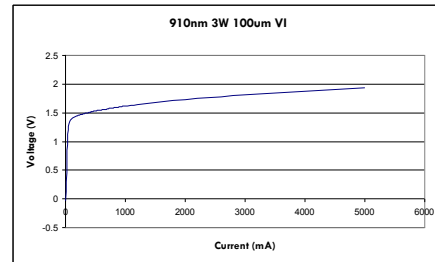
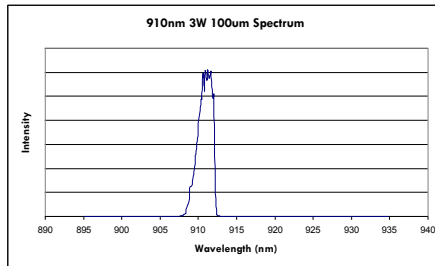
Please view our website for mechanical drawings of our module packages.

Performance Data for Multi-Mode 915 nm Butterfly Module Devices

Parameter	Unit	1.5 W Series			2 W Series			3W Series		
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
Wavelength	nm	910	915	920	910	915	920	910	915	920
Spectrum FWHM	nm	-	3	5	-	3	5	-	3	5
Operating Power (P _o)	W	-	1.5	-	-	2.0	-	-	3.5	-
Operating Current (I _o)	mA	-	2.4	2.8	-	3.1	3.6	-	3.8	-
Operating Voltage (V _o)	V	-	2.1	2.5	-	2.1	2.5	-	1.9	2.3
Lifetime	hour	10,000	-	-	10,000	-	-	20,000	-	-
Threshold (I _{th})	A	-	0.25	0.55	-	0.25	0.55	-	-	-
Slope Efficiency (dP/dI)	W/A	0.60	0.70	-	0.60	0.70	-	0.65	0.75	-
TEC Voltage	V	-	-	3.4	-	-	2.9	-	-	3.4
TEC Current	A	-	-	2.1	-	-	4.0	-	-	2.0
Storage Temperature	°C	-40	-	80	-40	-	80	-40	-	80
Operating Temperature (T _{op})	°C	-20	25	65	-20	25	65	-20	25	70
Lead Soldering Temperature (5 sec)	°C	-	-	250	-	-	250	-	-	250

Note: 1) Specifications are subject to change without notice.
2) All Sheumann Laser products are TE polarized

915nm Multi-Mode Butterfly Module Performance Data Graphs



CW L-I, dL/dI curve

Determining Your Product number:

MM—WWW—PPP—XYZ—(custom add-ons)
(package)-(wavelength)-(power)-(options)

Standard Product Configurations

Package:

B1	14-pin Butterfly
B2	14-pin Butterfly (high power)

Wavelength:

915	915 nm
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Power Options:

1500	1.5 W
2000	2.0 W
3000	3.0 W

X Option (aperture size)

1	100 μm fiber
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Y Option (wavelength tolerance)

5	±5 nm
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Z Option (additional options)

A	FC connector (standard FC/APC)
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Please note: These are our standard product configurations. Other options may be available, please inquire about any additional options that you may require when contacting our Sales Team.

1.5W Series

B1-915-1500-15A

2W Series

B2-915-2000-15A

3.0W Series

B2-915-3000-15A

Safety

Caution: Laser light emitted from any diode laser is invisible and 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.

ESD Caution

Always handle diode lasers with extreme care to prevent electrostatic discharge, the primary cause of unexpected diode failure. You can prevent ESD by always wearing wrist straps, grounding all applicable work surfaces, and following extremely rigorous anti-static techniques when handling diode lasers.

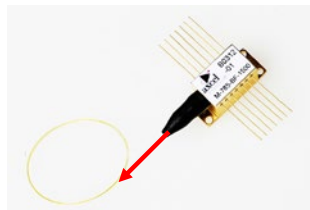
Operating Considerations

Operating the diode laser outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the component must be employed such that the maximum peak optical power cannot be exceeded. CW diode lasers may be damaged by excessive drive current or switching transients. When using power supplies, the diode laser should be connected with the main power on and the output voltage at zero. The current should be increased slowly while monitoring the diode laser output power and the drive current. Device degradation accelerates with increased temperature, and 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.

Power Output Danger Label



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



21 CFR 1040.10 Compliance

Because of the small size of these devices, each of the labels shown are attached to the individual shipping container. They are illustrated here to comply with 21 CFR 1040.10 as applicable under the Radiation Control for Health and Safety Act of 1968.