

Features

- Up to 200mW CW output power.
- High Quality, Reliability, & Performance

Applications

- Fiber Lasers
- Optical Data Storage
- Spectral Analysis
- Remote Sensing
- Graphics

Product Specifications

940 nm Single-Mode 14-Pin Butterfly Module Laser Diodes

Description:

High brightness, high quality, and high reliability are the foundation of our single mode product line. Sheumann's 940 nm single mode laser modules are available with up to 200mW of continuous output power from a 14-pin butterfly packaged fiber. All chips are mounted on a 2.1mm COS within the package and come standard with an internal thermistor, TEC, and photodiode. Sheumann's trademark laser chip design offers un-measurable degradation and long lifetimes that make our chips among the most reliable in the industry today. Our 940 nm single mode line serves a broad range of applications including fiber lasers, optical data storage, spectral analysis, remote sensing and graphics.

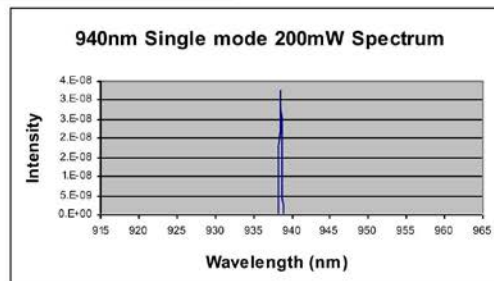
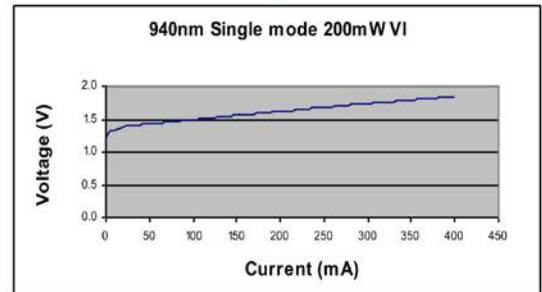
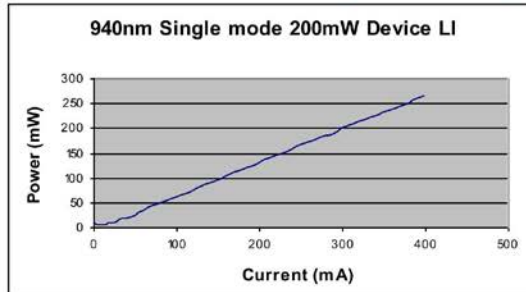


Performance Data for Single-Mode 940 nm Butterfly module devices

Parameter	Unit	200mW		
		Min	Typ	Max
Wavelength	nm	935	940	945
Spectrum FWHM	nm	-	0.5	2.0
Operating Power (P _o)	mW	-	200	-
Operating Current (I _o)	mA	-	350	420
Operating Voltage (V _o)	V	-	2.0	2.3
Lifetime	Hours	100,000	-	-
Threshold (I _{th})	mA	-	30	50
Slope Efficiency (dP/dI)	W/A	0.60	0.70	-
TEC Voltage	V	-	-	3.2
TEC Current	A	-	-	2.0
Storage Temp.	°C	-40	-	80
Operating Temp. (T _{op})	°C	0	25	75
Lead Soldering Temp. (5 sec)	°C	-	-	250

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

940nm Single Mode Butterfly Module Performance Data Graphs



Determining Your Product number: MM—WWW—PPPP—XYZ—(custom add-ons)
(package)-(wavelength)-(power)-(options)

Standard Product Configurations

Package:	X Option (aperture size)	200mW Series
BF 14-pin Butterfly	S SM fiber for Module	BF-940-0200-S5F
Wavelength:	Y Option (wavelength tolerance)	
940 940nm	S ±5nm	
Power Options:	Z Option (additional options)	
O200 200mW	F FC/APC connector	

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.

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.

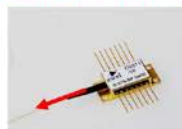
Operating Considerations

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.