

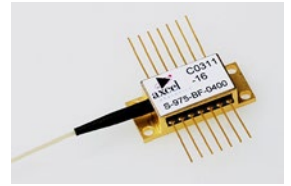
Features

- Up to 180mW CW output power.
- High Quality, Reliability, & Performance

Applications

- Scanner
- 3-D Scanning
- Detection

Product Specifications 905nm Single-Mode Laser diodes



Description:

High brightness, high quality, and high reliability are the foundation of our single mode product line. Sheumann's 905 nm single mode laser diode is available with up to 180mW of continuous output power from a fiber coupled packaged. Sheumann's trademark laser diode design offers un-measurable degradation and long lifetimes that make our laser diode among the most reliable in the industry today. Our 905 nm single mode line serves a broad range of applications.

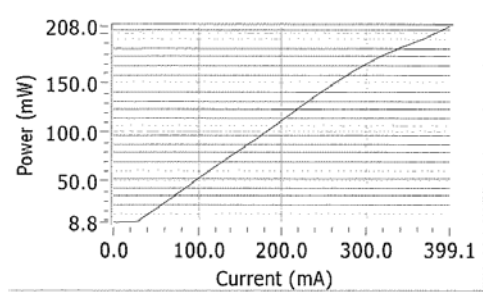
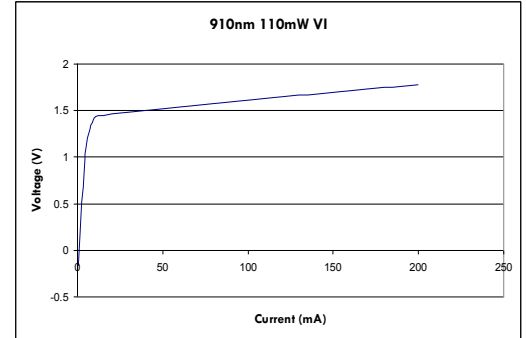
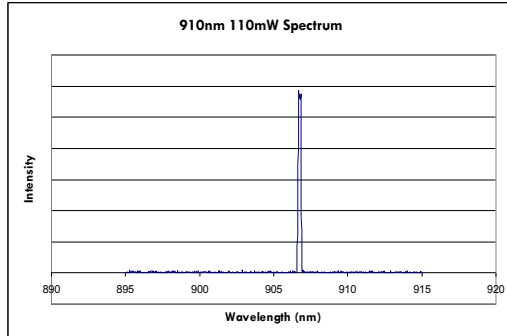
Please view our website for mechanical drawings of our packages.

Standard Product Specifications for Single-Mode 905nm Laser Diode

Parameter	Unit	180mW		
		Min.	Typ	Max.
Wavelength	nm	900	905	910
Spectrum FWHM	nm		0.5	2.0
Operating Power (P _o)	mW	-	200	-
Operating Current (I _o)	mA	-	340	390
Operating Voltage (V _o)	V	-	2.1	2.5
Kink-Free Power	mW	220	-	-
Lifetime	hour	100,000	-	-
Threshold (I _{th})	mA	-	30	50
Slope Efficiency (dP/dI)	W/A	0.55	0.63	-
TEC Voltage	V	-	-	3.2
TEC Current	A	-	-	2.0
Storage Temperature	°C	-40	-	80
Operating Temperature (T _{op})	°C	-20	25	70
Lead Soldering Temp. (5 sec)	°C	-	-	250

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

905nm Single Mode Performance Data Graphs



Safety

Caution: Laser diode 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.

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 diode life.

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.

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



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.