

### Features

- Up to 10W CW output power from a 400  $\mu\text{m}$  .22NA and 200  $\mu\text{m}$  .22NA core fiber
- High Quality, Reliability, & Performance

### Applications

- Defense
- Laser Marking
- Graphics
- Medical/Dental
- Laser Display
- Solid State Pumping

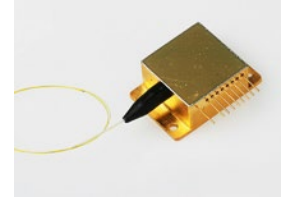
## Product Specifications

### 808nm Multi-Mode Laser High-Heat-Load Modules w/ Fiber Pigtailed Package

#### Description

High brightness, high quality, and high reliability are the foundation of our multi mode product line. Sheaumann's 808nm multi mode laser diodes are available with up to 10W of continuous output power from fiber pigtailed, 9-pin high-heat-load module. All modules come standard with an internal thermistor, TEC, photodiode, and SMA Connector. Output fiber comes with 400 $\mu\text{m}$  or 200 $\mu\text{m}$  fiber core diameter and is 0.22 NA. Sheaumann'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 multi mode line serves a broad range of applications including solid state pumping, laser display, laser marking, graphics, medical, dental, industrial, and defense.

Please view our website for mechanical drawings of all of our modules with fiber.



#### Performance Data for 808nm Multi-Mode HHL Fiber Modules

Parameter	Unit	10W 200 $\mu\text{m}$ fiber			10W 400 $\mu\text{m}$ fiber		
		Min	Typ	Max	Min	Typ	Max
Wavelength	nm	803	808	813	803	808	813
Spectrum FWHM	nm	-	2	4	-	2	4
Operating Power ( $P_o$ )	W	-	10	-	-	10	-
Operating Current ( $I_o$ )	A	-	12	14	-	12	14
Operating Voltage ( $V_o$ )	V	-	2.5	2.8	-	2.5	2.8
Lifetime	hour	10,000	-	-	10,000	-	-
Threshold ( $I_{th}$ )	A	-	2.4	2.8	-	2.4	2.8
Slope Efficiency (dP/dI)	W/A	0.85	1.0	-	0.85	1.0	-
Storage Temperature	$^{\circ}\text{C}$	-40	-	80	-40	-	80
Operating Temperature ( $T_{op}$ )	$^{\circ}\text{C}$	0	25	55	0	25	55
TEC Voltage	V	-	-	8.6	-	-	8.6
TEC Current	A	-	-	3.8	-	-	3.8

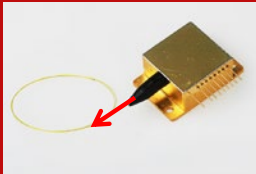
**Note:** Specifications are subject to change without notice. All Sheaumann Laser products are TE polarized

**Power Output  
Danger Label**



**WARNING!**

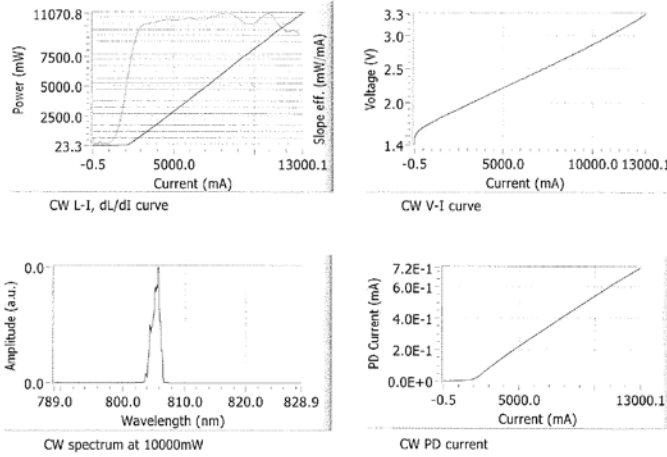
Invisible laser radiation is emitted from devices as shown below



**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.

**Product 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)
HF	HHL package	2 200µm fiber
	(9pin, fiber, TEC, PD, Thermistor)	4 400µm fiber
Wavelength:		Y Option (wavelength tolerance)
808	808nm	5 ±5nm
Power Options:		Z Option (additional options)
010W	10W	C SMA Connector

**10W Series**  
HF-808-010W-25C  
HF-808-010W-45C

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

**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.