To request any additional information please contact us at:

Email: <u>sales@axcelphotonics.com</u>

Phone: (508) 481-9200



## **Features**

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

# **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. Axcel's 940 nm single mode laser modules are available with

Performance Data for Single-Mode 940 nm Butterfly module devices



## **Applications**

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

## 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. Axcel'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.

Parameter	<u>Unit</u>
Wavelength	nm
Spectrum FWHM	nm
Operating Power (P <sub>o</sub> )	mW
Operating Current (I <sub>o</sub> )	mA
Operating Voltage (V <sub>o</sub> )	v
Lifetime	Hours
Threshold (I <sub>th</sub> )	mA
Slope Efficiency (dP/dl)	W/A
TEC Voltage	v
TEC Current	Α
Storage Temp.	۰C
Operating Temp. (T <sub>op</sub> )	۰C
Lead Soldering Temp. (5 sec)	∘c

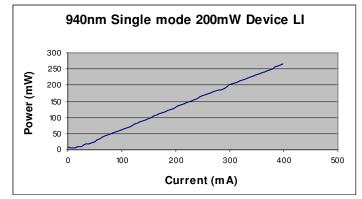
#### 200mW

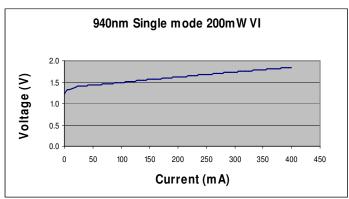
<u>200mw</u>				
Min	Тур	<u>Max</u>		
935	940	945		
-	0.5	2.0		
-	200	-		
-	350	420		
-	2.0	2.3		
100,000	-	-		
-	30	50		
0.60	0.70	-		
-	-	3.2		
-	-	2.0		
-40	-	80		
0	25	75		
-	-	250		

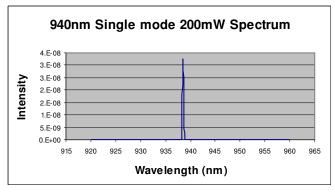
Note: 1) Specifications are subject to change without notice.

2) All Axcel Photonics 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 Configura**tions

Package:				
BF	14-pin Butterfly	X Option (aperture size)		200mW Series
Wavelength:		Р	PM fiber for Module	BF-940-0200-P50
940	940nm	Y Option (wavelength tolerance)		
Power Options:		5	±5nm	
0200	200mW	Z Option (additional options)		
		0	none	
		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

#### ESD Caution

Caution: Laser light emitted from any diode laser is invisible and may be harmful to the human Always handle diode lasers with extreme care to prevent electrostatic discharge, the primary eye. Avoid looking directly into the diode laser aperture when the device is in operation. 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**

Note: The use of optical instruments with this product will increase eye hazard.

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.