

To request any additional information please contact us at:

Email: sales@axcelphotonics.com

Phone: (508) 481-9200



Features

- Up to 1W CW output power.
- Lambda-Lok option available for increased wavelength stability (± 0.5 nm).
- High Quality, Reliability, & Performance

Applications

- Raman Spectroscopy
- Laser Pumping
- Laser Therapy

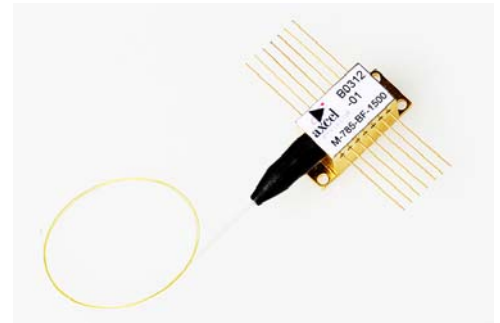
Product Specifications

785 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. Axcel's 785nm multi mode laser diodes are available with up to 1W of continuous output power from a 14-pin butterfly package with 100 μ m fiber core. All modules come standard with an internal thermistor, TEC, and photodiode. Axcel'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 785nm multi mode line serves a broad range of applications including Raman Spectroscopy, laser pumping, and medical laser therapy.

Our Lambda-Lok option is available at 785nm. The grating offers greater wavelength stability to within 0.5nm! More options are available upon request. Please view our website for mechanical drawings of all of our sub-mount, mount, and module packages.



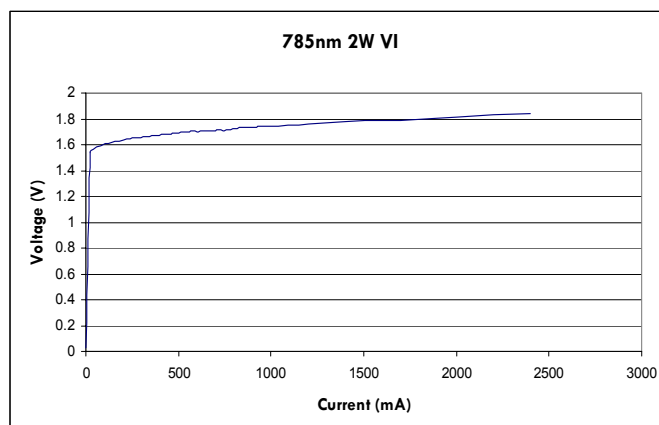
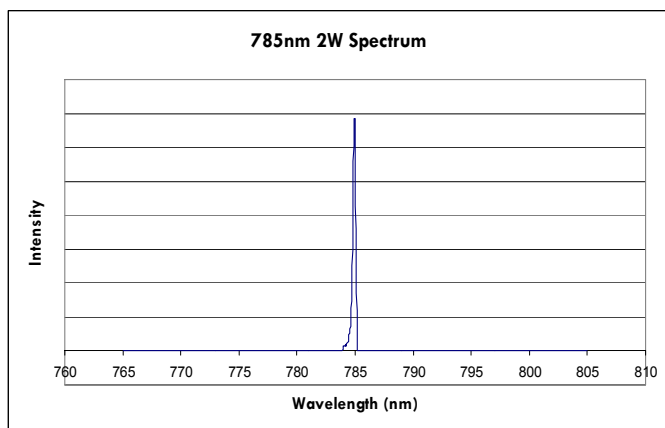
Contact us today and learn how Axcel Photonics can accelerate your research and production!

Performance Data for Multi-Mode 785nm Butterfly module devices

Parameter	Unit	1W Series Lambda-Lok			500mW Series Lambda-Lok			1W Series		
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
Wavelength	nm	784.5	785.0	785.5	784.5	785.0	785.5	780	785	790
Spectrum FWHM	nm	-	0.2	0.5	-	0.2	0.5	-	2	4
Operating Power (P _o)	W	-	1.0	-	-	0.5	-	-	1.0	-
Operating Current (I _o)	mA	-	1.9	2.4	-	1.2	1.8	-	1.5	1.8
Operating Voltage (V _o)	V	-	2.1	2.5	-	2.1	2.5	-	2.1	2.5
Lifetime	hour	10,000	-	-	10,000	-	-	10,000	-	-
Threshold (I _{th})	mA	-	400	700	-	400	700	-	400	700
Slope Efficiency (dP/dI)	W/A	0.50	0.64	-	0.50	0.64	-	0.8	0.95	-
TEC Voltage	V	-	-	3.2	-	-	3.2	-	-	3.2
TEC Current	A	-	-	2.0	-	-	2.0	-	-	2.0
Storage Temperature	°C	-40	-	80	-40	-	80	-40	-	80
Operating Temperature (T _{op})	°C	-20	25	70	-20	25	70	-20	25	70
Lead Soldering Temperature (5 sec)	°C	-	-	250	-	-	250	-	-	250

- Note:
- 1) Specifications are subject to change without notice.
 - 2) All Axcel Photonics products are TE polarized
 - 3) All Lambda-Lok models have a spectral shift over temp. of 0.005-0.010 nm/°C and over operating current of 0.1-0.3 nm/A

785nm Multi-Mode Butterfly Module Product Performance Data Graphs



Determining Your Product number:

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

[Standard Product Configurations](#)

Package:

B1 14-pin Butterfly (multi-mode)

Wavelength:

785 785 nm

Power Options:

0500 500mW

1000 1W

X Option (fiber core diameter)

1 100µm fiber

Y Option (wavelength tolerance)

L Lambda-Lok (± 0.5 nm)

5 ± 5 nm

Z Option (additional options)

0 none

A FC Connector (standard FC/APC)

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.

500mW Series

B1-785-0500-1LA

B1-785-0500-150

1W Series

B1-785-1000-1LA

B1-785-1000-150

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.

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.

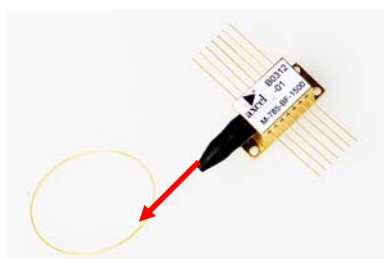
ESD Caution

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.

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.