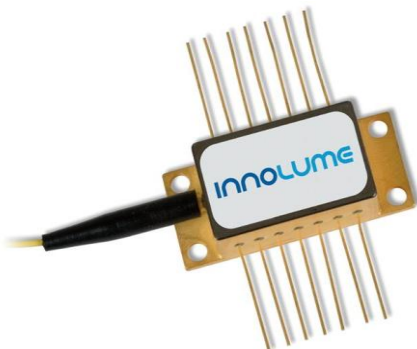


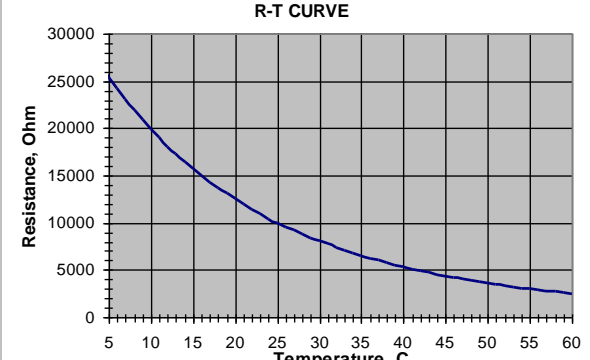
LD-1080-FBG-200	
Fiber Bragg Grating wavelength locked Laser Diode – 200mW @1080nm	
	<p>Features:</p> <ul style="list-style-type: none"> • Fiber Bragg Grating stabilized external cavity laser • 200mW output power in <0.1nm spectral line • Proprietary mirror coating technology enabling long life-time • CW or pulse (down to 2ns pulse width) operation <hr/> <ul style="list-style-type: none"> • High reliable Au/Sn-technology • Polarization maintaining PM980 fiber • Optional: monitor photodiode for power control
Specification	DATE: 5 th March 2010

SPECIFICATIONS					
Test conditions: CW operation at P _{out} , thermistor temperature 25°C					
Parameters	Symb.	Min.	Typ.	Max.	Unit
Output power	P _{out}	200			mW
Mean wavelength at P _{out}	λ _P	1079.5	1080.0	1080.5	nm
Spectral Bandwidth @ -3dB	Δλ			100	pm
Threshold current	I _{th}		50	120	mA
Operating current	I _{op}		500	700	mA
Forward voltage	V _f		1.6	1.8	V
Polarization Extinction Ratio	PER	15	17		dB
Monitor photodiode responsivity ¹			0.1		μA/mW
Recommended operating temperature (on thermistor)	T _{op}	10	25	40	°C

¹ In the case of monitor photodiode option chosen.

THERMISTOR SPECIFICATION		
Parameters	Value	Unit
Thermistor type	BC103J1K	
Resistance @25°C	10 ± 1	kOhm
Beta 0-50°C	3890	K

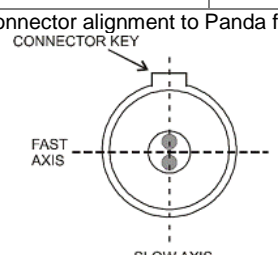
R-T CURVE



Temperature (C)	Resistance (Ohm)
5	25000
10	18000
15	14000
20	11000
25	9000
30	7500
35	6500
40	5800
45	5200
50	4800
55	4400
60	4000

FIBER SPECIFICATION		
Parameters	PANDA PM980	Unit
Mode-field diameter	6.6±1.0	μm
Cladding diameter	125±1	μm
Coating diameter	245±15	μm
Core-to-cladding offset	≤0.5	μm
Length	1.2 ± 0.2	m
Distance from FBG to laser chip	0.8 ± 0.2	m
Connector	FC/APC	

Connector alignment to Panda fiber:
CONNECTOR KEY



DIMENSIONS (All sizes in mm)

Pin identification:

1. TEC "+"
2. Thermistor
3. Monitor PD anode
4. Monitor PD cathode
5. Thermistor
- 6.
- 7.
- 8.
- 9.
10. Laser Diode anode "+"
11. Laser Diode cathode "-"
- 12.
13. Case
14. TEC "-"

ABSOLUTE MAXIMUM RATINGS


Parameters	Min.	Max.	Unit
Laser Diode reverse voltage		2	V
Laser Diode CW forward current		$I_{op}+200$	mA
Thermo Electric Cooler current		3	A
Thermo Electric Cooler voltage		4	V
Fiber bend radius		3	cm
Storage temperature range (in original sealed pack)	5	80	°C
Case operating temperature range	10	50	°C

SAFETY AND OPERATING INSTRUCTIONS

The laser light emitted from this device is invisible and will be harmful to the human eye. Avoid looking directly into the output fiber or into the collimated beam along its optical axis when the device is in operation. Proper laser safety eyewear must be worn during operation.

Operating the device 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. A proper heatsink for the Laser Diode module is required. Exposure to maximum ratings for extended period of time or exposure above one or more max ratings may cause damage or affect the reliability of the device.

ESD PROTECTION – Electrostatic discharge is the primary cause of unexpected Laser Diode failure. Take extreme precaution to prevent ESD. Use wrist straps, grounded work surfaces and rigorous antistatic techniques when handling laser diodes.



LASER RADIATION
AVOID EXPOSURE TO THE BEAM
CLASS 3B LASER PRODUCT

CAUTION
STATIC SENSITIVE DEVICE
OBSERVE PRECAUTIONS

DANGER

VISIBLE AND/OR INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION

DIODE LASER
MAX POWER 0.5W
WAVELENGTH 1000 - 1400 nm
CLASS IIIb LASER PRODUCT



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NOTE: Innolume product specifications are subject to change without notice.