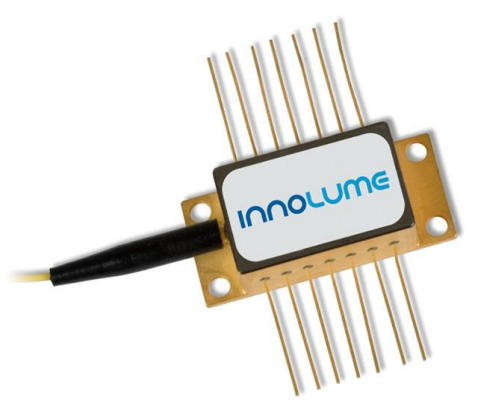
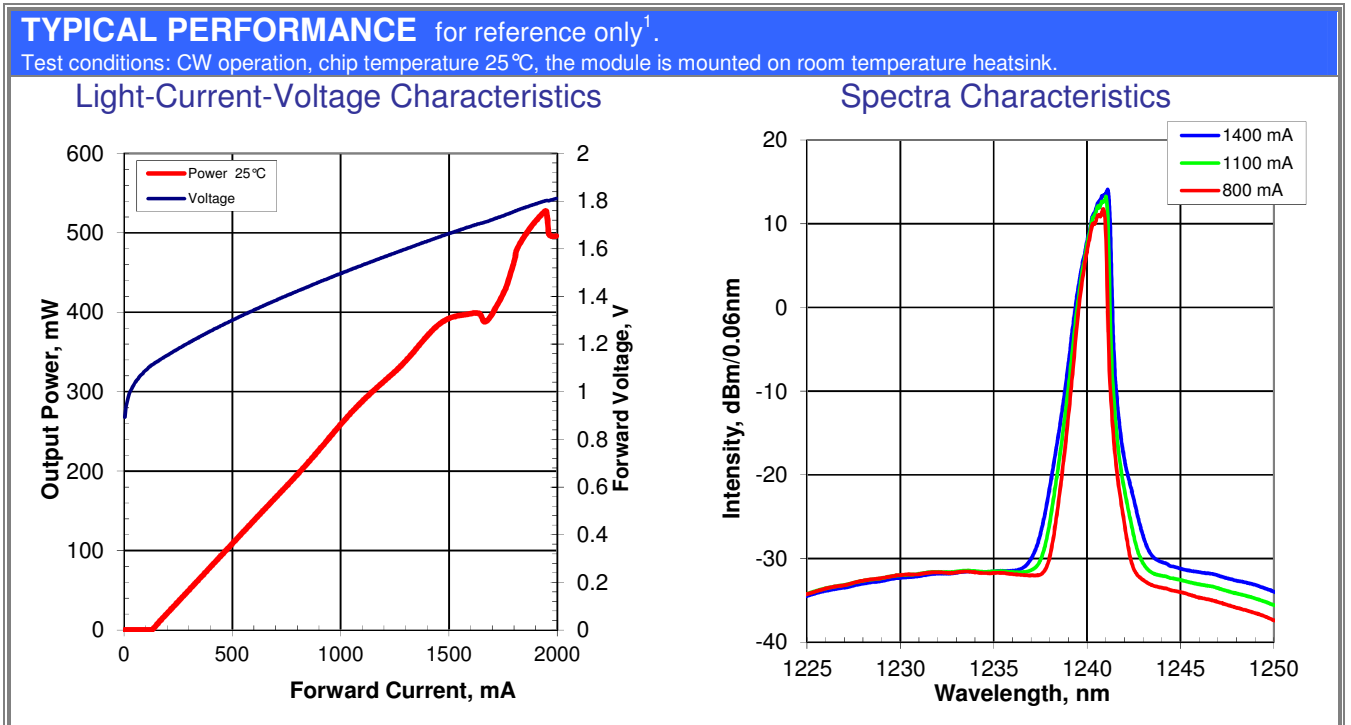
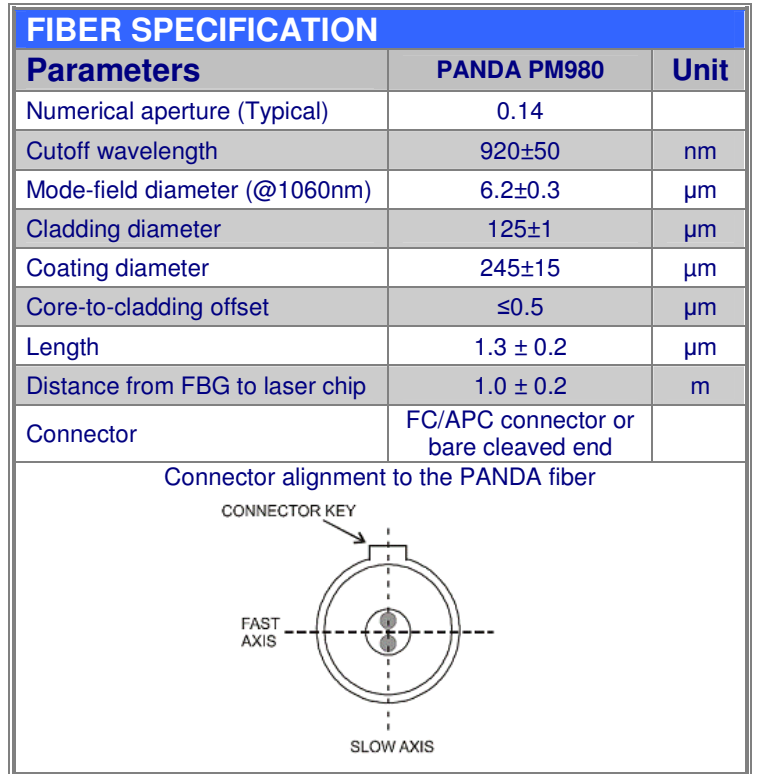
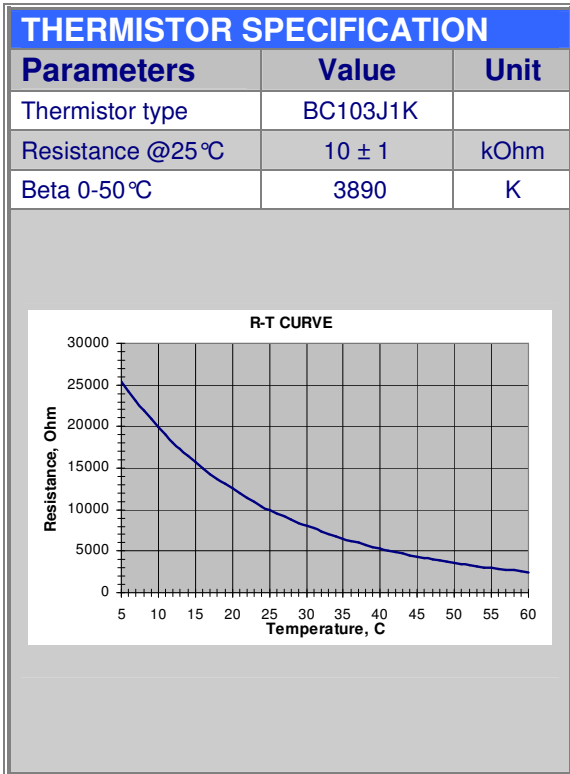


LD-12XX-FBG-350	
Fiber Bragg Grating wavelength locked High Power Laser Diode	
	<p>Features:</p> <ul style="list-style-type: none"> • InAs/GaAs Quantum Dot based diode laser • 350mW output power ex-single mode fiber • Available wavelength range 1175-1280nm • Polarization maintaining PM980 fiber • Fiber Bragg grating stabilized external cavity laser • Proprietary mirror coating technology enabling high reliability • High reliable Au/Sn-technology • Optional: monitor photodiode for power control <p>Application:</p> <ul style="list-style-type: none"> • Raman amplifier
Specification	DATE: 18 th May 2011

SPECIFICATIONS					
Test conditions: CW operation, chip temperature 25 °C, the module is mounted on room temperature heatsink.					
Parameters	Symb.	Min.	Typ.	Max.	Unit
Output power	P _{out}	350			mW
Range of available wavelengths	λ _P	1175		1280	nm
Peak wavelength at P _{out}	λ _P	λ _P -2	λ _P	λ _P +2	nm
Spectral Bandwidth @ -3dB level at P _{out}	Δλ		0.5	1.5	nm
Wavelength shift with FBG temperature	Δλ/ΔT _{FBG}		9	12	pm/°C
Threshold current	I _{th}		120	200	mA
Operating current at P _{out}	I _{op}		1350	1600	mA
Forward voltage at P _{out}	V _f		1.6	1.8	V
Total power consumption (case temperature: 30 °C)	P _{30°C}		2.7	4.0	W
Total power consumption (case temperature: 50 °C)	P _{50°C}		5.0	6.5	W
Polarization Extinction Ratio	PER	15	17		dB
Monitor photodiode responsivity ¹			0.1		μA/mW
Recommended operating chip temperature (on thermistor)	T _{op}	20	25	30	°C

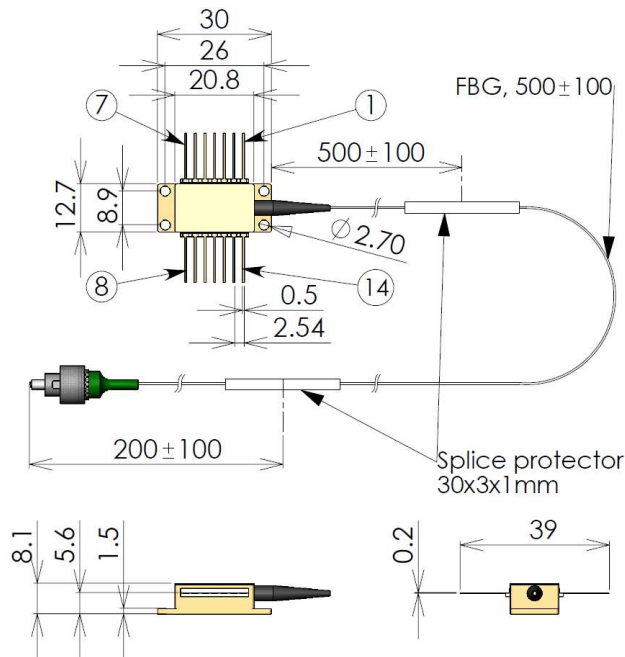
¹ Valid for monitor photodiode option

ABSOLUTE MAXIMUM RATINGS			
Parameters	Min.	Max.	Unit
Laser Diode reverse voltage		2	V
Laser Diode CW forward current		2000	mA
Thermo Electric Cooler current		3	A
Thermo Electric Cooler voltage		4	V
Storage temperature range (in original sealed pack)	5	80	°C
Lead soldering temperature (max. 5 sec.)		250	°C
Case operating temperature range	10	50	°C



¹ Performance is given for the device with wavelength 1240nm. Similar performance is expected for the other wavelengths in the 1175-1280nm range .

DIMENSIONS (All sizes in mm)



- Pin identification:**
1. TEC "+"
 2. Thermistor
 3. Monitor PD anode (optional)
 4. Monitor PD cathode (optional)
 5. Thermistor
 - 6.
 - 7.
 - 8.
 - 9.
 10. Laser Diode anode "+"
 11. Laser Diode cathode "-"
 - 12.
 13. Case
 14. TEC "-"

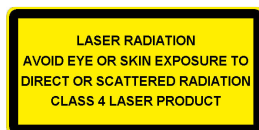
SAFETY AND OPERATING INSTRUCTIONS

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 laser diode 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 forward current cannot be exceeded. A proper heatsink for the laser diode module on thermal radiator is required. The module must be mounted on radiator with screws (bolt down in X-style fashion with initial torque set to 0.075Nm and final X-style bolt down at 0.15Nm) or clamps. The deviation from flatness of radiator surface must be less than 0.05mm. It's recommended using of In-foil or similar between bottom of the module and heatsink for thermal interface.

Carefully handle the fragile fiber, do not apply any stress, do not pull the fiber, do not bend fiber with a radius smaller than 3cm. Operate the laser module with clean fiber connector only. Periodically check and clean the connector if necessary. To clean the connector use suitable fiber cleaning tools (e.g. special cleaning tissue for optics). Perform cleaning only while the laser is switched off. Protect the fiber connector with protection cap while it's unplugged.

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.



Part Number Identification:
 LD-1240-FBG-350 -> 350mW output power at peak wavelength 1240nm

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