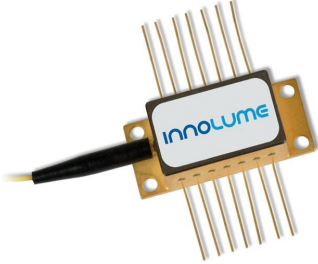
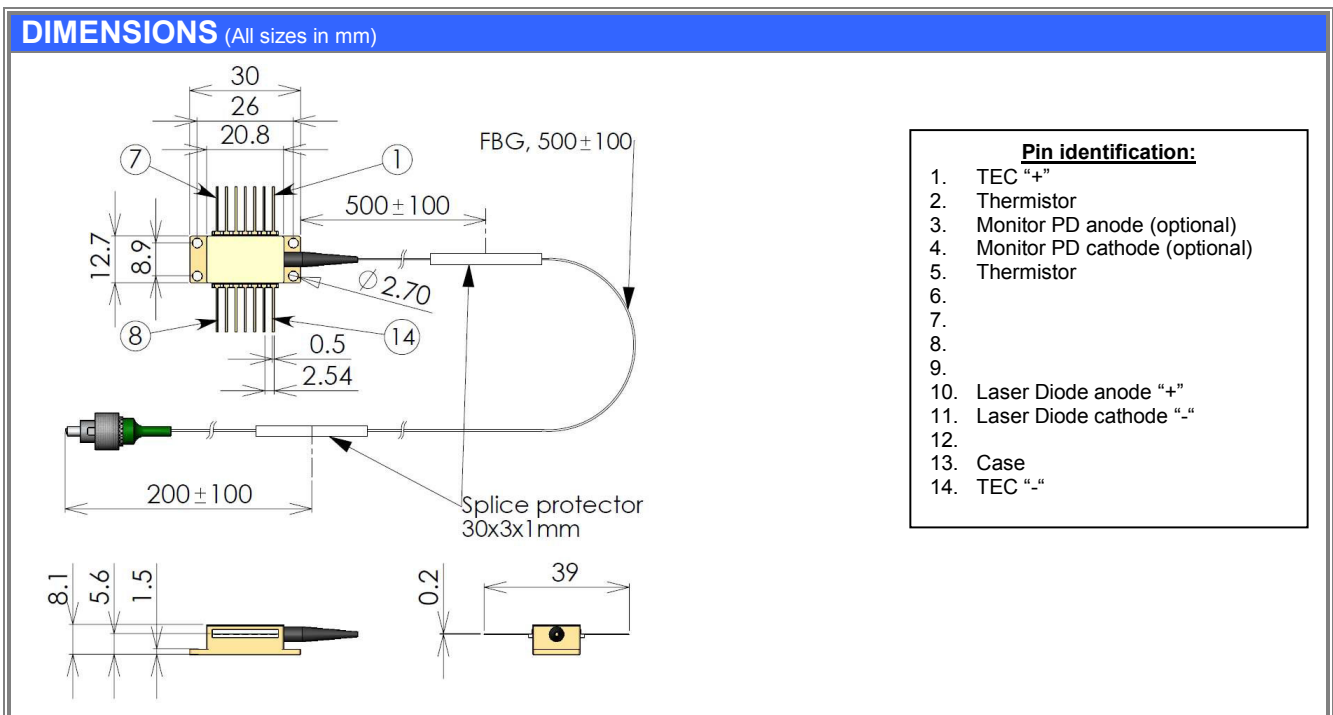
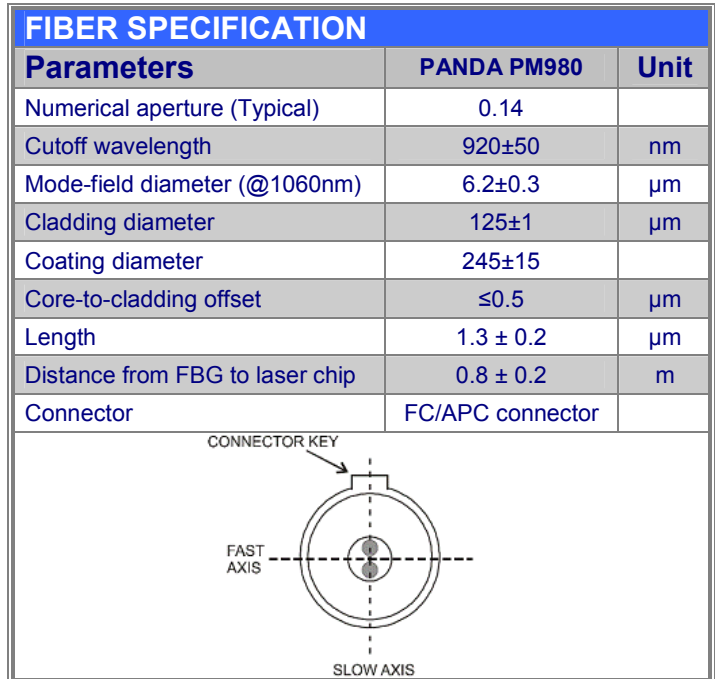
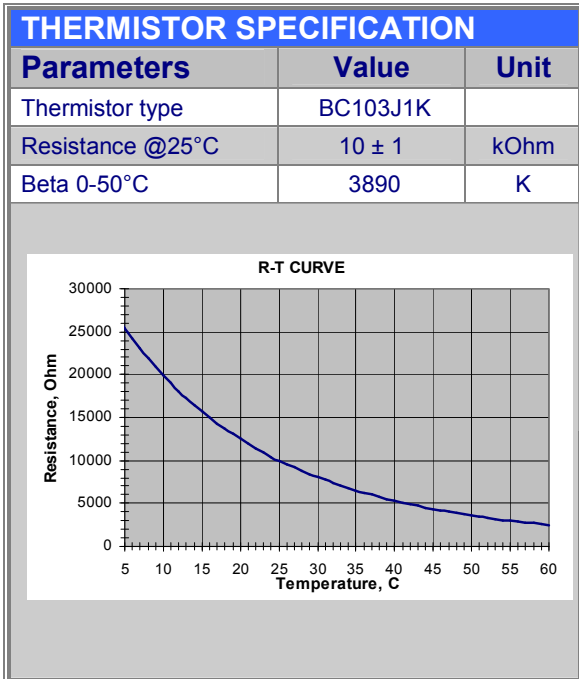


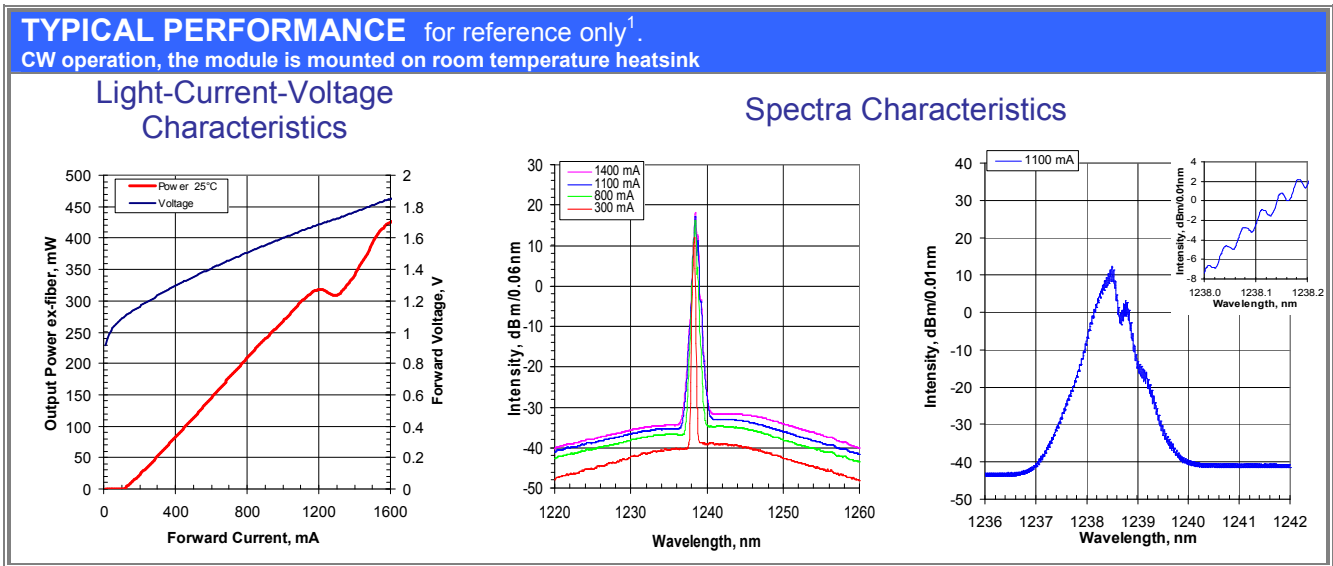
LD-1205-FBG-300	
Fiber Bragg Grating wavelength locked Laser Diode – 300mW @1205nm	
	<p><b>Features:</b></p> <ul style="list-style-type: none"> <li>• InAs/GaAs Quantum Dot based diode laser</li> <li>• Fiber Bragg grating stabilized external cavity laser</li> <li>• Proprietary mirror coating technology enabling high reliability</li> <li>• CW or pulse (down to 2ns pulse width) operation</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• High reliable Au/Sn-technology</li> <li>• Polarization maintaining Corning PM980 fiber</li> <li>• Optional: monitor photodiode for power control</li> </ul>
<b>Specification</b>	DATE: 27 <sup>th</sup> May 2009

SPECIFICATIONS					
Test conditions: CW operation, thermistor temperature 25°C					
Parameters	Symb.	Min.	Typ.	Max.	Unit
Output power	$P_{out}$	300			mW
Peak wavelength at $P_{out}$	$\lambda_P$	1204.5	1205	1205.5	nm
Spectral Bandwidth @ -3dB level at $P_{out}$	$\Delta\lambda$		0.5	1.5	pm
Wavelength shift with FBG temperature	$\Delta\lambda/\Delta T_{FBG}$		9	12	pm/°C
Threshold current	$I_{th}$		100	180	mA
Operating current at $P_{out}$	$I_{op}$		1100	1400	mA
Forward voltage at $P_{out}$	$V_f$		1.6	1.8	V
Polarization Extinction Ratio	PER	15	17		dB
Monitor photodiode responsivity <sup>1</sup>			0.1		$\mu A/mW$
Recommended operating temperature (on thermistor)	$T_{op}$	15	25	30	°C

<sup>1</sup> In the case of monitor photodiode option chosen.

ABSOLUTE MAXIMUM RATINGS			
Parameters	Min.	Max.	Unit
Laser Diode reverse voltage		2	V
Laser Diode CW forward current		1500	mA
Thermo Electric Cooler current		3	A
Thermo Electric Cooler voltage		4	V
Storage temperature range (in original sealed pack)	5	80	°C
Case operating temperature range	10	50	°C





<sup>1</sup> Performance is given for the device with wavelength 1240nm. Similar performance is expected for the wavelength 1205nm.

## 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.

**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

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