


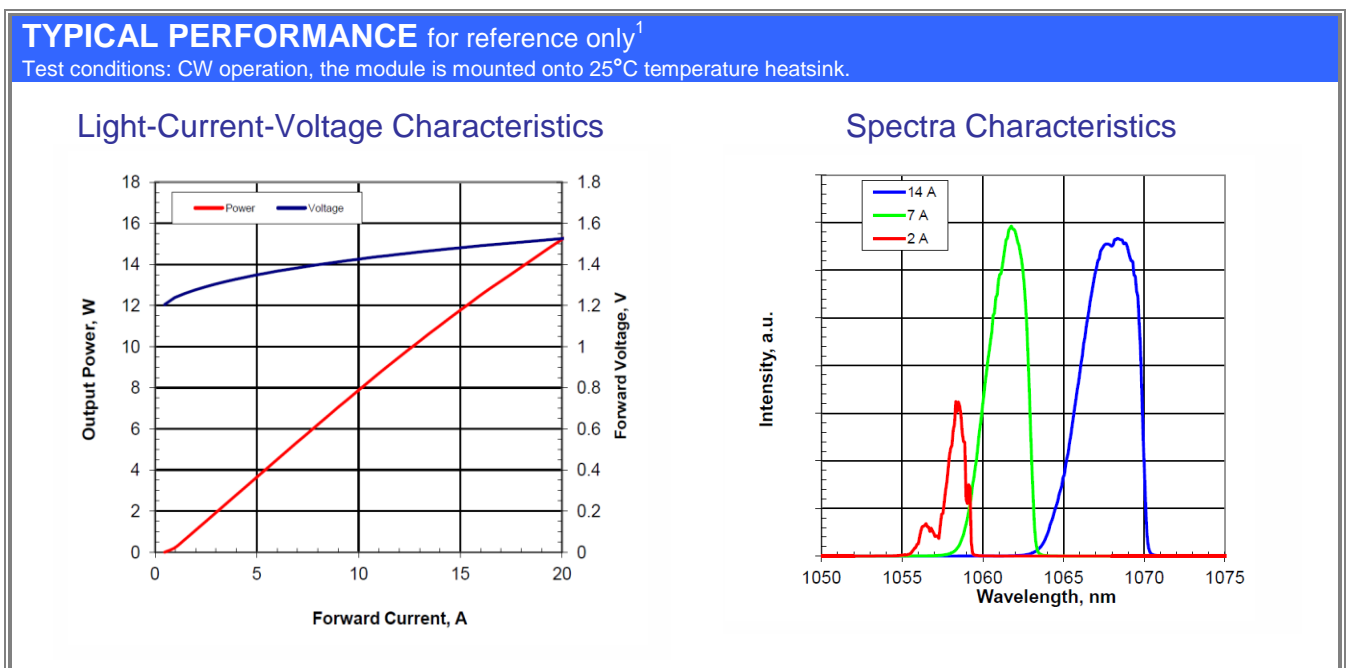
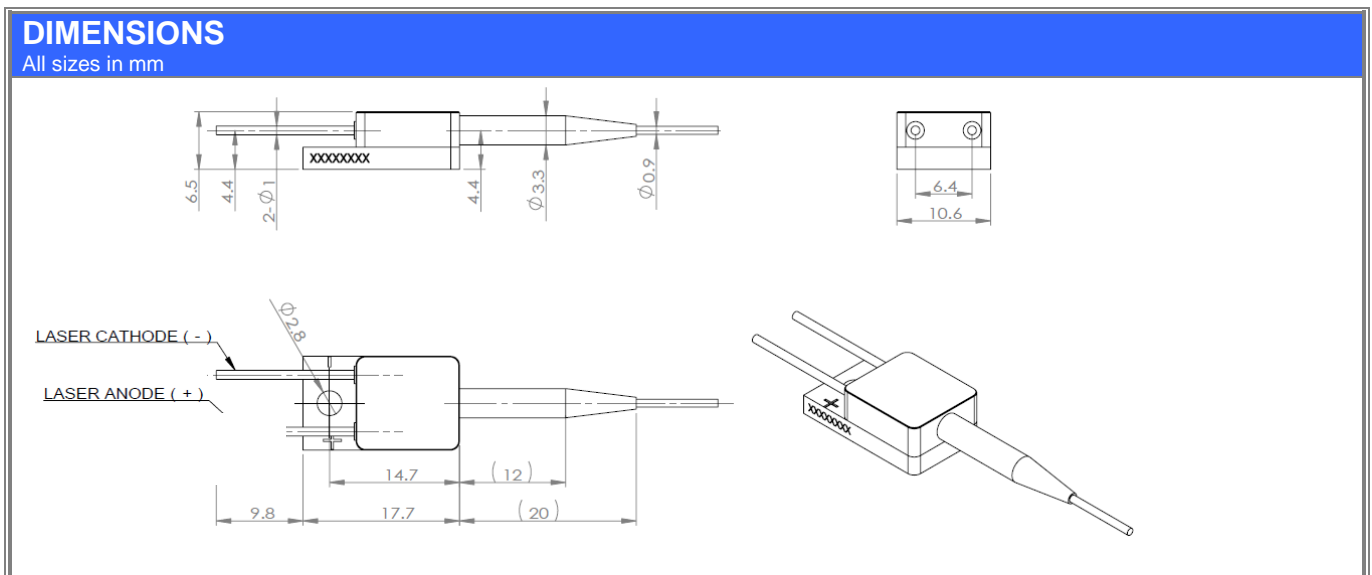
LD-10XX-UM-11W Multimode Pigtail Laser Diode Module – 11W ex-fiber	
	<p>Features:</p> <ul style="list-style-type: none"> • CW, quasi-CW or pulse operation • Available wavelength range 975-1130nm • Isolated electrical contacts • SMA905 optical connector or bare fiber end • Small form factor <p>Application:</p> <ul style="list-style-type: none"> • Medical
Specification	DATE: 30 January 2013

SPECIFICATIONS					
Test conditions: CW operation, heatsink temperature 25°C.					
Parameters	Symb.	Min.	Typ.	Max.	Unit
Output power ex-fiber	P_{out}	11			W
Range of available wavelength at P_{out}	λ	975		1130	nm
Mean wavelength at P_{out} ¹	λ	$\lambda-10$	λ	$\lambda+10$	nm
Spectral width @ -3dB level at P_{out}	$\Delta\lambda$		4	8	nm
Wavelength temperature shift	$\Delta\lambda/\Delta T$	0.3	0.35	0.4	nm/°C
Threshold current	I_{th}		0.4	0.7	A
Operating current at P_{out}	I_{op}		14	15	A
Forward voltage at P_{out}	V_f		1.45	1.6	V
Recommended operating heatsink temperature	T_{op}	20	25	30	°C

¹ Weighted mean ("center of mass") spectral point.

ABSOLUTE MAXIMUM RATINGS				
Parameters	Min.	Typ.	Max.	Unit
Lead soldering temperature		250 (5 sec.)		°C
Laser diode reverse voltage			1	V
Forward current			16	A
Case operating temperature range	15		60	°C
Sort/long term fiber bending radius	20/40			mm
Storage temperature range (in original sealed pack)	5		80	°C

FIBER SPECIFICATION		
Parameters	Value	Unit
Type	step index	
Core diameter	400 ± 5	µm
Cladding diameter	440 ± 5	µm
Buffer diameter	acrylate, 470 ± 5	µm
Jacket	900 (optional)	µm
Numerical Aperture	0.22± 0.02	
Length	1.0 ± 0.1	m
Connector	SMA905 or bare cleaved end	mm



¹ Performance is given for the device with wavelength 1064nm. Similar performance is expected for the other wavelengths in the 975-1130nm range .

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 fiber output or into the collimated beam along its optical axis when the device is in operation. Proper laser safety eyewear must be worn during operation.

Absolute Maximum Ratings may be applied to the Laser Diode for short period of time only. Exposure to maximum ratings for extended period of time or exposure more than one maximum ratings may cause damage or affect the reliability of the device. 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 screw. 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. It's undesirable to use thermal grease for this.

Do not pull the fiber. Do not bend a fiber with a radius smaller than 4 cm. Operate the laser module with clean fiber connector only. Periodically check and clean the connector if necessary. To clean the connector use a clean-room compatible tissue only, put some Isopropyl alcohol onto it and carefully clean the facet of the connector, or use special fiber cleaning tools. Perform cleaning only with the laser current switched off.

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



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