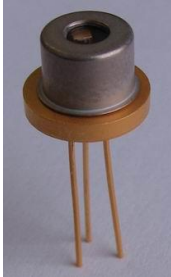


<b>SM-1160-TO-200</b> High Power Diode Laser in 9mm TO-can – 200mW @1160nm	
	<p><b>Features:</b></p> <ul style="list-style-type: none"> <li>• InAs/GaAs Quantum Dot based diode laser</li> <li>• Unique wavelength range</li> <li>• Proprietary mirror coating technology enabling high reliability</li> <li>• 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>• Optional: integrated monitor photodiode</li> </ul>
<b>Specification</b>	DATE: 19 <sup>th</sup> May 2010

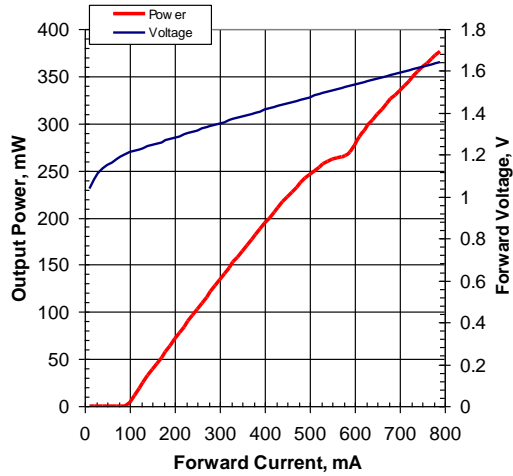
SPECIFICATIONS					
Test conditions: CW operation, thermistor temperature 25°C					
Parameters	Symb.	Min.	Typ.	Max.	Unit
Output power	$P_{out}$	200			mW
Mean wavelength at $P_{out}$ <sup>1</sup>	$\lambda_P$	1150	1160	1170	nm
Spectral width @ -3dB level at $P_{out}$	$\Delta\lambda$		5	8	nm
Wavelength temperature tunability	$\Delta\lambda/\Delta T$	0.45	0.5	0.55	nm/°C
Threshold current	$I_{th}$		100	120	mA
Operating current at $P_{out}$	$I_{op}$		450	550	mA
Forward voltage at $P_{out}$	$V_f$		1.5	1.7	V
Divergence parallel to p-n junction (FWHM)		5	7	9	deg.
Divergence perpendicular to p-n junction (FWHM)		42	45	47	deg.
Recommended operating temperature	$T_{op}$	15	25	30	°C

<sup>1</sup> Weighted mean ("center of mass") spectral point.

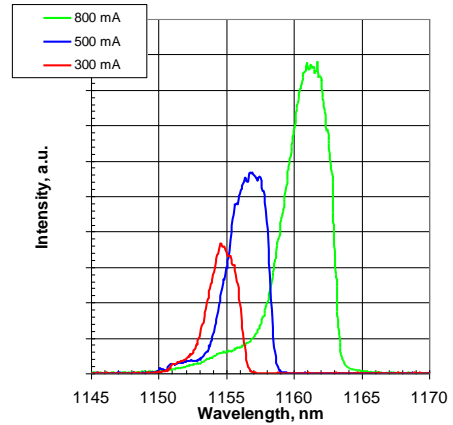
ABSOLUTE MAXIMUM RATINGS			
Parameters	Min.	Max.	Unit
Laser Diode reverse voltage		1	V
Laser Diode CW forward current		800	mA
Lead soldering temperature		250 (5 sec.)	°C
Storage temperature range (in original sealed pack)	-40	85	°C
Operating temperature range	10	50	°C

**TYPICAL PERFORMANCE** for reference only  
 CW, at 25°C heatsink temperature

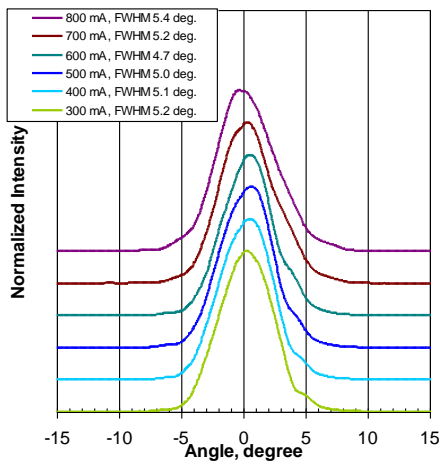
### Light-Current-Voltage Characteristics



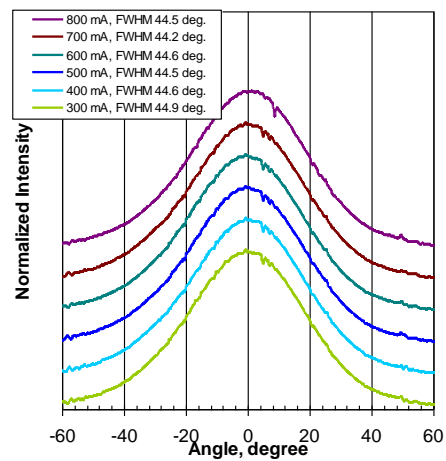
### Spectra Characteristics



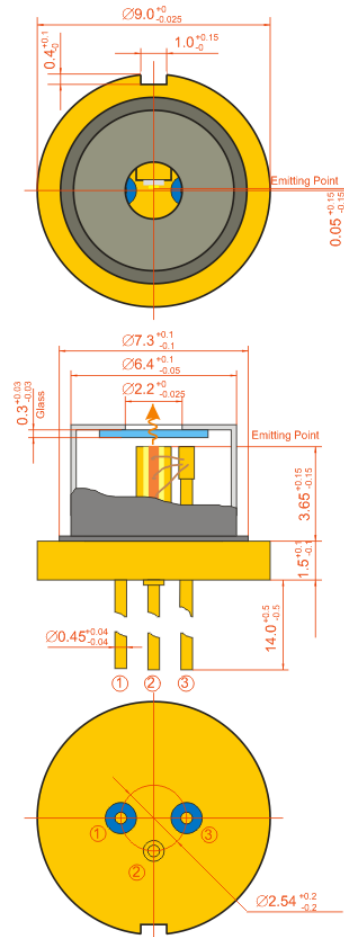
### CW Slow Axis Far Field



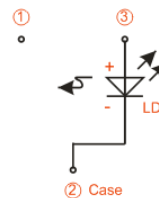
### CW Fast Axis Far Field



## DIMENSIONS (All sizes in mm)



Pins connection:



## 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 laser diode 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. Exposure to maximum ratings for extended periods of time or exposure above one or more maximum ratings may cause damage or affect the reliability of the device. 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 on a thermal radiator is required. The laser diode must be mounted onto a heatsink.

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



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