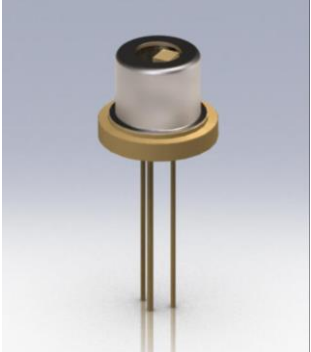


SM-12XX-TO-XXX	
High Power Diode Laser in 9mm TO-can package	
	<p><b>Features:</b></p> <ul style="list-style-type: none"> <li>• InAs/GaAs Quantum Dot heterostructure based diode laser</li> <li>• Up to 300mW output power</li> <li>• Available wavelength range 1175-1280nm</li> <li>• Proprietary mirror coating technology enabling high reliability</li> <li>• High reliable Au/Sn-technology</li> </ul>
<b>Specification</b>	DATE: 27 <sup>th</sup> June 2012

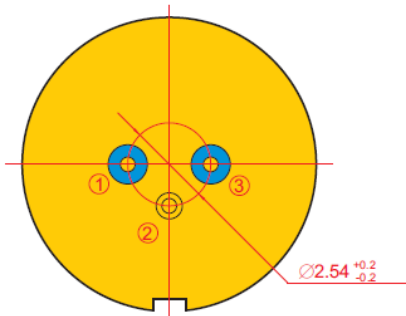
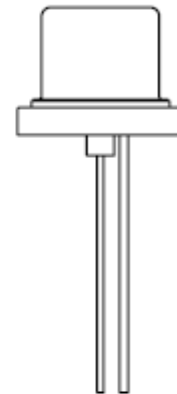
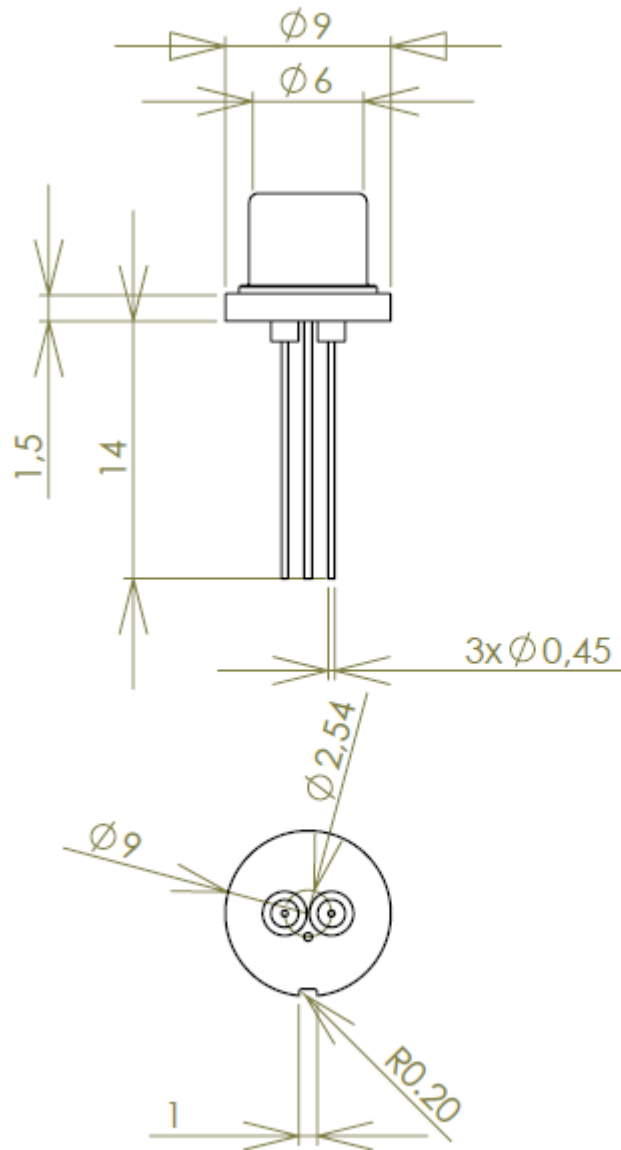
SPECIFICATIONS					
Test conditions: CW operation, heatsink temperature 25°C.					
Parameters	Symb.	Min.	Typ.	Max.	Unit
Output power	$P_{out}$	Table 1			mW
Range of available wavelength at $P_{out}$ <sup>1</sup>	$\lambda$	1175		1280	nm
Mean wavelength at $P_{out}$ <sup>1</sup>	$\lambda$	$\lambda-10$	$\lambda$	$\lambda+10$	nm
Spectral width @ -3dB level at $P_{out}$	$\Delta\lambda$		5	10	nm
Wavelength temperature shift	$\Delta\lambda/\Delta T$	0.45	0.5	0.65	nm/°C
Threshold current	$I_{th}$		50	100	mA
Operating current at $P_{out}$	$I_{op}$	Table1			mA
Divergence parallel to p-n junction (FWHM)	$\Theta_{\perp}$	4	6	9	deg.
Divergence perpendicular to p-n junction (FWHM)	$\Theta_{\parallel}$	36	38	42	deg.
Forward voltage at $P_{out}$	$V_f$	Table 1			V
Recommended operating temperature	$T_{op}$	20	25	30	°C

<sup>1</sup> Weighted mean ("center of mass") spectral point. Reduced wavelength tolerance on request.

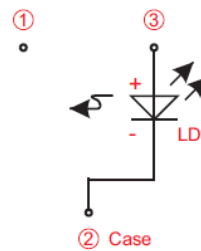
TABLE 1							
Test conditions: CW operation, heatsink temperature 25°C.							
Output Power (mW)	Operating current (mA)			Forward voltage (V)			Part Number
	Min.	Typ.	Max.	Min.	Typ.	Max.	
100	200	250	550		1.25	1.35	SM-12XX-TO-100
150	300	350	750		1.3	1.4	SM-12XX-TO-150
200	400	450	550		1.35	1.45	SM-12XX-TO-200
250	450	500	650		1.45	1.55	SM-12XX-TO-250
300	550	600	750		1.5	1.6	SM-12XX-TO-300

ABSOLUTE MAXIMUM RATINGS			
Parameters	Min.	Max.	Unit
Laser Diode reverse voltage		1	V
Laser Diode CW forward current		1000	mA
Lead soldering temperature		250 (5 sec.)	°C
Storage temperature range (in original sealed pack)	-40	85	°C
Operating temperature range	above dew point	50	°C

## 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 device 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 Device for short period of time only. 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.

Operating the product outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the Device must be employed such that the maximum peak optical power cannot be exceeded. A proper heatsink for the Device on thermal radiator is required, sufficient heat dissipation and thermal conductance to the heatsink must be ensured.

The Device is an Open-Heatsink Diode Laser; it may be operated in cleanroom atmosphere or dust-protected housing only. Operating temperature and relative humidity must be controlled to avoid water condensation on the laser facets. Any contamination or contact of the laser facet must be avoided.

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.

Example Part Number Identification:

SM-1240-TO-250 -> 250mW output power at mean wavelength 1240±10nm