



**Modulight, Inc.**

<b>Document type:</b>		<b>Document number:</b>	<b>Version:</b>	
		TBD	1.0	
<b>Document name:</b>				
TECHNICAL SPECIFICATION ML1469				
<b>Author:</b>	<b>Reviewer:</b>	<b>Approver:</b>	<b>Release date:</b>	<b>Pages:</b>
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# TECHNICAL SPECIFICATION ML1469

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## 1 OVERVIEW

Modulight ML1469 is a high-performance multi-mode 690 nm laser designed for medical and instrumentation applications. The laser is housed in a 9-mm TO-can (SOT-148), covered by a flat window in standard versions. Custom beam-shaping optics is available on demand. This laser device is suitable for operation in both pulsed and CW modes. The size of the emitting area of the laser die is 50  $\mu\text{m}$  x 1  $\mu\text{m}$ .

## 2 ELECRO-OPTICAL CHARACTERISTICS

Parameter	Symbol	Typ	Unit
Threshold Current	$I_{th}$	150	mA
Output Power	$P_{opt}$	350	mW
Operating Current	$I_{op}$	500	mA
Operating Voltage	$V_{op}$	< 2.2	V
Slope Efficiency	$\eta$	1	W/A
Peak Wavelength	$\lambda$	690	nm
Center Wavelength tolerance	$\Delta\lambda$	$\pm 5$	nm
Parallel Beam Divergence	$\theta_{  }$	4	degrees
Perpendicular Beam Divergence	$\theta_{\perp}$	40	degrees

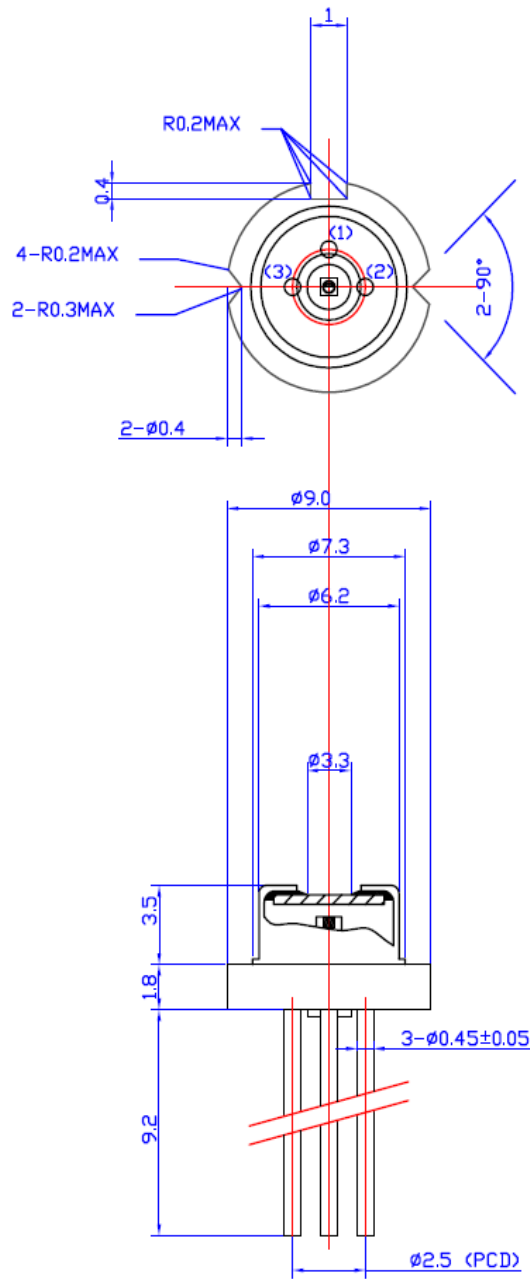
All above values are typical for CW operation at 15°C.

## 3 ABSOLUTE MAXIMUM RATINGS

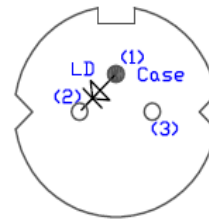
Parameter	Symbol	Rating	Unit
LD reverse voltage	$V_{RLD}$	2	V
LD forward current	$I_{FLD}$	600	mA
Lead soldering temperature (<10 s)	$T_{SLD}$	260	°C
Operating case temperature	$T_c$	0–50°C	°C
Storage temperature	$T_{STG}$	-40–85°C	°C



#### 4 MECHANICAL SPECIFICATION



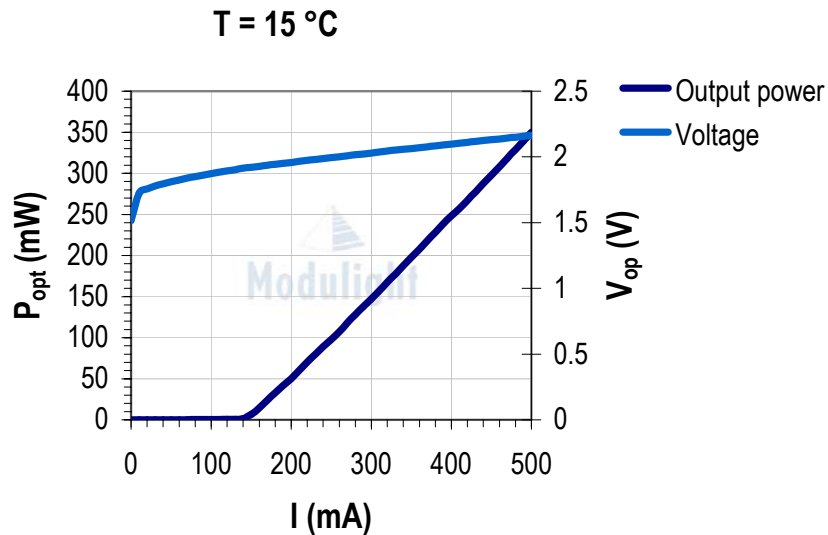
Bottom view  
pin layout



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## 5 TYPICAL PERFORMANCE



## 6 SAFETY INFORMATION

- The laser light emitted from this laser diode, although visible, may be harmful to the human eye. Avoid eye exposure to the beam, both direct and reflected.
- Products are subject to the risks normally associated with sensitive electronic devices including static discharge, transients, and overload. Please take care of proper ESD protection prior to handling the products.
- These Modulight products are not intended for use in systems where product malfunction can reasonably be expected to result in personal injury.



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## 7 LIABILITY NOTE

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- All statements related to the products herein are believed to be reliable and accurate. However, the accuracy is not guaranteed and no responsibility is assumed for any inaccuracies or omissions. Modulight, Inc. reserves the right to make changes in the specifications at any time without prior notice.



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