



Modulight, Inc.

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TECHNICAL SPECIFICATION ML1504				
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TECHNICAL SPECIFICATION ML1504

1 OVERVIEW

Modulight ML1504 is a high-performance multi-mode 635 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 100 μm x 1 μm .

2 ELECRO-OPTICAL CHARACTERISTICS

Parameter	Symbol	Typ	Unit
Threshold Current	I_{th}	300	mA
Output Power	P_{opt}	500	mW
Operating Current	I_{op}	900	mA
Operating Voltage	V_{op}	< 2.4	V
Slope Efficiency	η	0.92	W/A
Peak Wavelength	λ	635	nm
Center Wavelength tolerance	$\Delta\lambda$	± 5	nm
Parallel Beam Divergence	$\theta_{ }$	4	degrees
Perpendicular Beam Divergence	θ_{\perp}	40	degrees

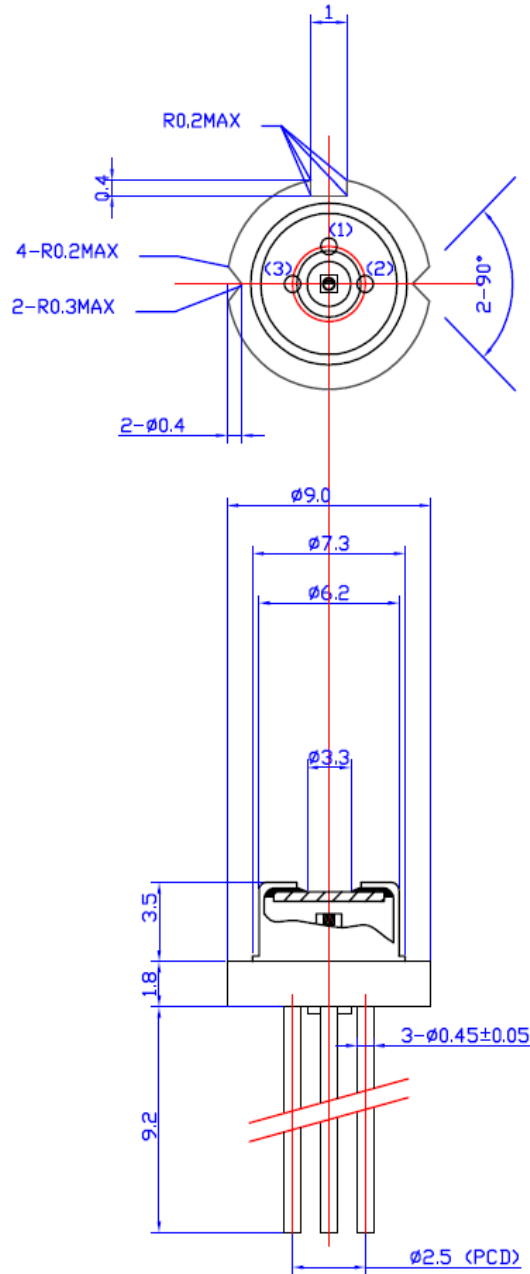
All above values are typical for CW operation at 15°C.

3 ABSOLUTE MAXIMUM RATINGS

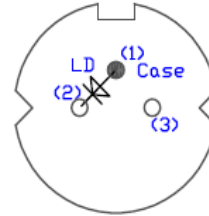
Parameter	Symbol	Rating	Unit
LD reverse voltage	V_{RLD}	2	V
LD forward current	I_{FLD}	1000	mA
Lead soldering temperature (<10 s)	T_{SLD}	260	°C
Operating case temperature	T_c	0–50°C	°C
Storage temperature	T_{STG}	-40–85°C	°C



4 MECHANICAL SPECIFICATION



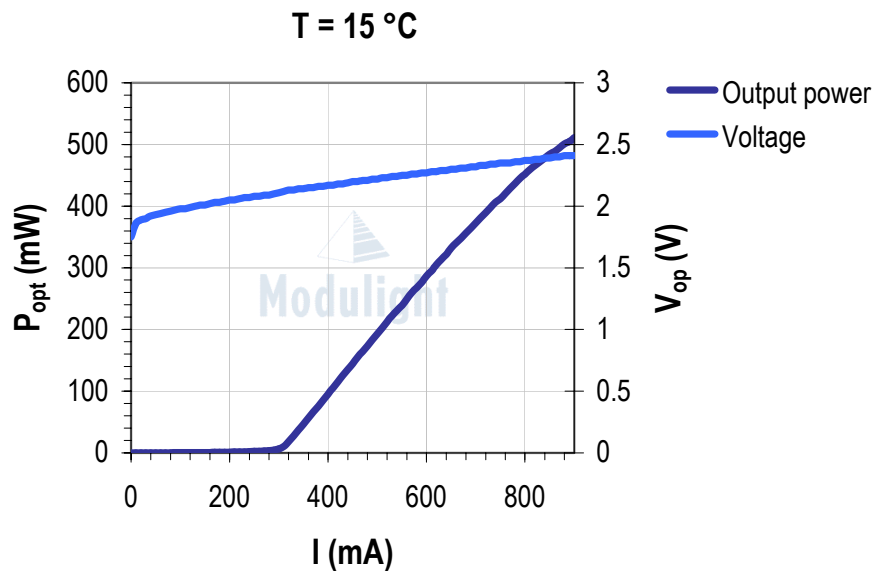
Bottom view
pin layout



Modulight

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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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