



Modulight, Inc.

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ML1470-TECHNICAL SPECIFICATION				
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ML1470 TECHNICAL SPECIFICATION

1 OVERVIEW

Modulight ML1470 is a high-performance multi-mode 1550 nm laser in a SOT-148 (9 mm) can with a flat window. The laser emits typically >500 mW of CW power at 1550 nm wavelength.

2 ORDERING INFORMATION

ML1470

3 ELECTRO-OPTICAL CHARACTERISTICS¹

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Optical power ²	P _O	400	500	-	mW	T _c = 20°C
Operating current	I _{OP}	-	3000	-	mA	T _c = 20°C, P _O = 500 mW
Threshold current	I _{TH}	-	950	-	mA	T _c = 20°C
Forward voltage	V _{OP}	-	-	2.5	V	cw, T _c = 20°C, P _O = 500 mW
Slope efficiency ²	η	-	0.28	-	W/A	T _c = 20°C, up to 500 mW
Central wavelength ²	λ _C	1530	-	1580	nm	T _c = 20°C, I _{OP} = 3000 mA
Spectral width ²	Δλ	-	-	7	nm	T _c = 20°C, I _{OP} = 3000 mA
Perpendicular beam divergence angle (FWHM) ^{2,3}	θ _⊥	-	40	48	deg	T _c = 20°C
Parallel beam divergence angle (FWHM) ^{2,3}	θ _∥	-	10	15	deg	T _c = 20°C

4 ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Rating	Unit
LD reverse voltage	V _{RLD}	2	V
LD forward current	I _{FLD}	4000 ⁴	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

¹ All temperatures refer to case temperature, T_c = 20°C

² CW

³ Full Width at Half Maximum

⁴ DC



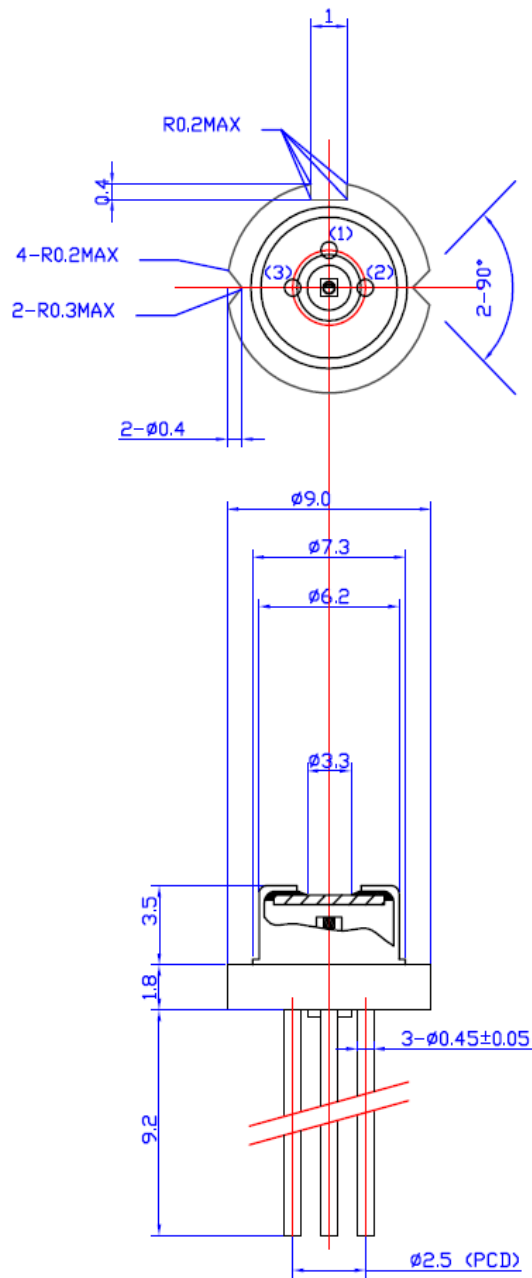
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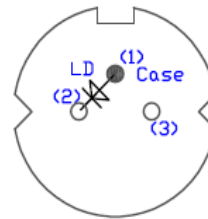
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5 MECHANICAL SPECIFICATION



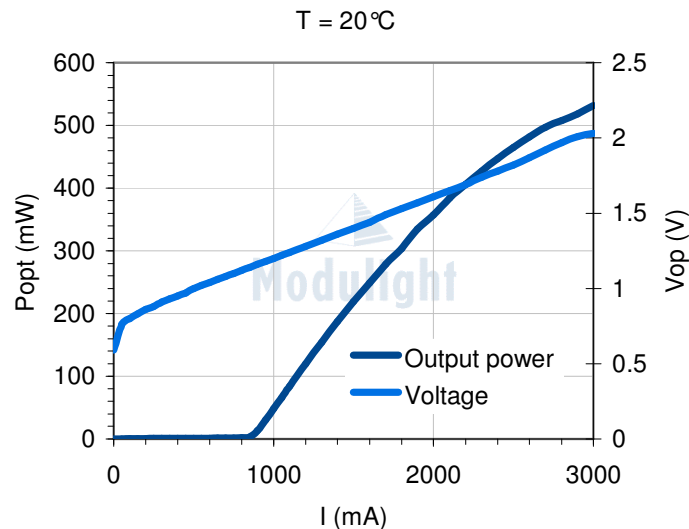
Bottom view
pin layout



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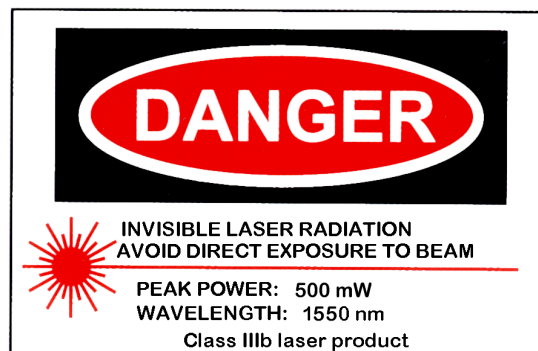
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6 TYPICAL PERFORMANCE



7 SAFETY INFORMATION

- The laser light emitted from this laser diode is invisible and 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 ensure a 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.



Peak power and wavelength are for safety analysis only do not present device performance



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