ML1520

635 nm, 220 mW TO-canned high-power laser

Overview

Part of Modulight's ChiliLase product range, ML1520 is a high-performance multi-mode 635 nm laserdiode, housed in a 9-mm TO-can (SOT-148) package, covered by a flat window. A monitoring photodiode is included in the package. The laser device is designed to withstand CW operation. Due to the inherent thermal sensitivity of this laser product, adequate active cooling must be ensured during operation.



Applications

Industrial	Medical
Illumination Imaging	Low-intensity laser therapy Photodynamic therapy

Electro-optical Characteristics

Parameter	Symbol	Typical value	Unit
Peak Wavelength	λ	635	nm
Optical Output Power (peak power)	P_{OPT}	220	mW
Operating Current	I_{OP}	420	mA
Operating Voltage	V_{OP}	2.3	V
Slope Efficiency	η	0.9	W/A
Threshold Current	I_{TH}	170	mA
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	0.2	nm/K
Spectral Width	$\delta\lambda$	1	nm
Parallel Beam Divergence (FWHM)	$\theta\parallel$	5	°
Perpendicular Beam Divergence (FWHM)	$\theta\perp$	40	°
Emitter Width	W_E	50	µm

All values are typical for CW operation @ 15°C.

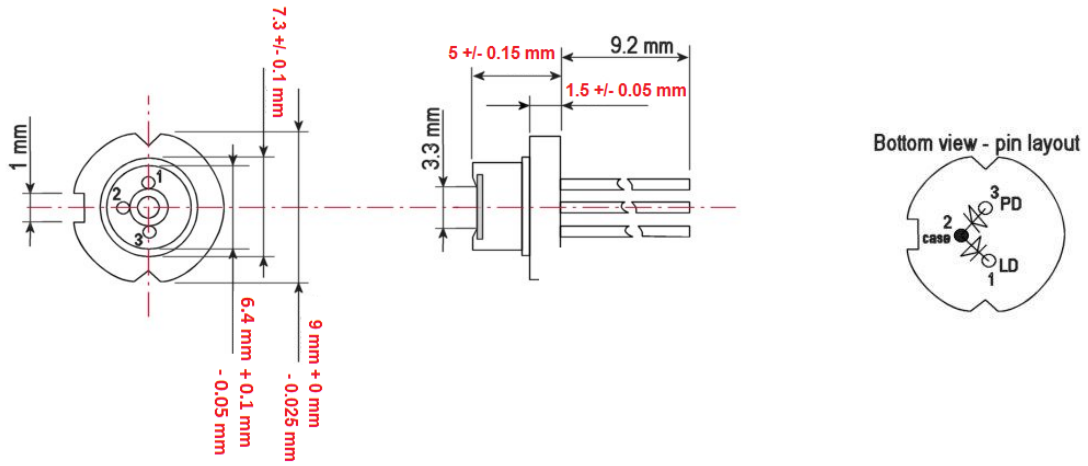
Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
LD Reverse Voltage	V_{RLD}	0	V
LD Forward Current	I_{FLD}	500	mA
Operating Temperature	T_{OP}	5…20 [1]	°C
Storage Temperature	T_{STG}	-40…85	°C

[1] A non-condensing environment should be ensured over the useful temperature range.

Package Information

The laser diode is packaged in a 9 mm TO-can package (SOT-148). The most important dimensions are shown in the drawing below. Monitor photodiode is included.



Safety Information

- The laser light emitted from this laser diode is visible and may be harmful to the human eye. Avoid eye and skin 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 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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