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ML1545

830 nm high-performance single transverse mode TO-can laser

Overview

ML1545 is a single transverse mode Fabry-Perot laser chip in a TO-56 can. The laser delivers 50 mW output power at the wavelength of 830 nm. The product is designed for CW operation with a low fast axis divergence.



Applications

Defense	Industrial	Medical
Range-finding	Illumination	Low-intensity laser therapy
Illumination	Test and measurement	Aesthetic Treatments

Electro-optical Characteristics, typical values

Parameter	Symbol	Min	Typical	Max	Unit
Threshold Current	I _{TH}		18	22	mA
Optical Output Power	P _{OPT}	50	-		mW
Operating Current	\mathbf{I}_{OP}		72	85	mA
Operating Voltage	V _{OP}		1.8	2.3	V
Slope Efficiency	η	0.85	0.95		W/A
Peak Wavelength*	λ	810	830	850	nm
Wavelength - Temp. Coefficient	$\Delta\lambda/\Delta T$		0.25		nm/K
Spectral Width (FWHM)	δλ		0.5	1	nm
Parallel Beam Divergence (FWHM)	θ		6		٥
Perpendicular Beam Divergence (FWHM)	θ⊥		30		o

All values are typical for CW operation @ 25°C. *Tighter wavelength specification available on request.

Absolute Maximum Ratings

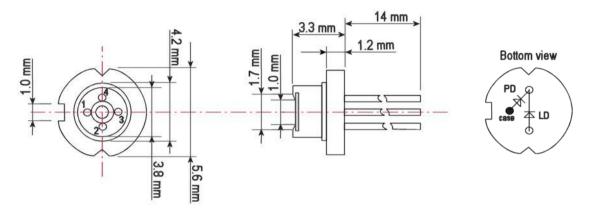
Parameter	Symbol	Rating	Unit
LD Reverse Voltage	V _{RLD}	2	V
LD Forward Current	I _{FLD}	100	mA
Operating Temperature	T _{OP}	-2060 ¹	°C
Storage Temperature	T _{STG}	-4085	°C

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



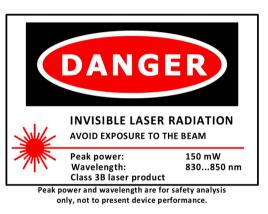
Package Information

The default package is a 5.6 mm TO-can with a flat lens cap. The most important dimensions are shown in the drawing below. Monitor photodiode is included in this package by default.



Safety Information

- The laser light emitted from this laser device is invisible and 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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