

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	Illumination Test and measurement	Low-intensity laser therapy 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	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)	$\delta\lambda$		0.5	1	nm
Parallel Beam Divergence (FWHM)	$\theta_{ }$		6		°
Perpendicular Beam Divergence (FWHM)	θ_{\perp}		30		°

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

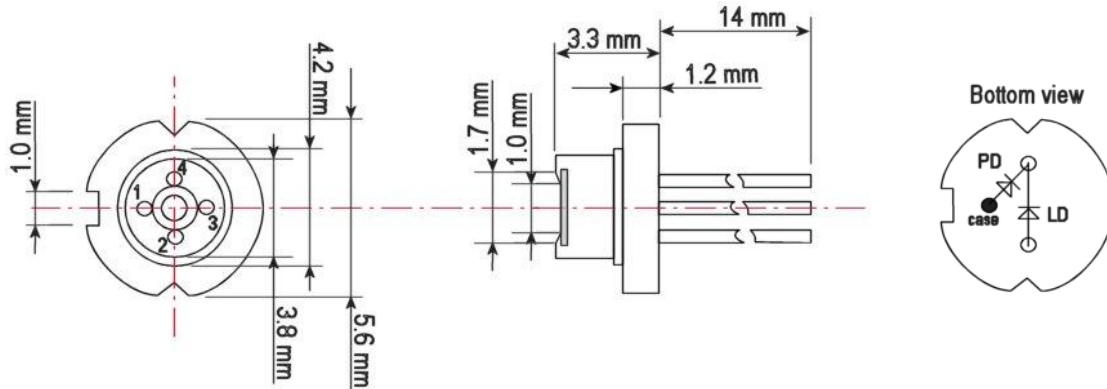
Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
LD Reverse Voltage	V_{RLD}	2	V
LD Forward Current	I_{FLD}	100	mA
Operating Temperature	T_{OP}	-20...60 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 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.

DANGER

INVISIBLE LASER RADIATION
AVOID EXPOSURE TO THE BEAM

Peak power:	150 mW
Wavelength:	830...850 nm
Class 3B laser product	

Peak power and wavelength are for safety analysis only, not to present device performance.

Liability note

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