

# 1550 nm high-power collimated laser chip in 9 mm TO-can

ML1533



## OVERVIEW

ML1533 is a high-performance collimated multi-mode 1550 nm laser designed for applications requiring high-power free-space laser beams at eye-safe wavelengths. The laser is housed in a 9-mm TO-can (SOT-148) covered by a rod lens. This laser device is designed for CW operation. Due to the inherent thermal sensitivity of this laser product, proper cooling must be ensured during operation.

## APPLICATIONS

Eye-safe range finding  
Illumination

## ELECTRO-OPTICAL CHARACTERISTICS

Parameter	Symbol	Typical value	Unit
Threshold Current	$I_{TH}$	900	mA
Optical Output Power	$P_{OPT}$	500	mW
Operating Current	$I_{OP}$	3000	mA
Operating Voltage	$V_{OP}$	2	V
Slope Efficiency	$\eta$	0.24	W/A
Peak Wavelength	$\lambda$	1550	nm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	0.6	nm/K
Spectral Width (FWHM)	$\delta\lambda$	10	nm
Parallel Beam Divergence (FWHM)	$\theta_{  }$	7	°
Perpendicular Beam Divergence (FWHM)	$\theta_{\perp}$	7	°
Emitter Width	$W_E$	150	$\mu\text{m}$

All above values are typical for CW operation @ 20°C.

## ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Rating	Unit
LD forward current	$I_{FLD}$	4	A
Operating temperature range	$T_{OP}$	-10 ... +30	°C
Storage temperature range	$T_{STG}$	-40 ... +85	°C

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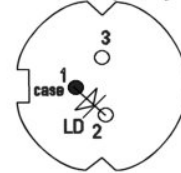
ML1533



## PACKAGE INFORMATION

The laser is housed inside a standard 9-mm TO-can (SOT-148), covered by a rod lens. More specific package information is available per request.

Bottom view - pin layout



## 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 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, not to present device performance.

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