

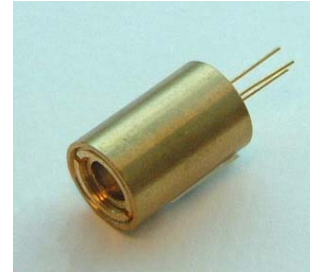
# 635 nm high-power collimated laser module

ML1794



## OVERVIEW

ML1794 is a high-performance multi-mode 635 nm collimated laser module. The laser is based on a 9-mm TO-can, covered by collimating optics. This laser device is designed for CW operation, and active cooling during operation is strongly recommended.



## APPLICATIONS

Medical  
Illumination

Instrumentation  
Imaging

## ELECTRO-OPTICAL CHARACTERISTICS

Parameter	Symbol	Typical value	Unit
Threshold Current	$I_{TH}$	600	mA
Optical Output Power	$P_{OPT}$	300	mW
Operating Current	$I_{OP}$	1050	mA
Operating Voltage	$V_{OP}$	2.3	V
Slope Efficiency	$\eta$	0.67	W/A
Peak Wavelength	$\lambda$	$633 \pm 2$	nm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	0.2	nm/K
Spectral Width (FWHM)	$\delta\lambda$	1	nm
Parallel Beam Divergence (FWHM)	$\theta_{  }$	2	mrad
Perpendicular Beam Divergence (FWHM)	$\theta_{\perp}$	10	mrad
Emitter Width	$W_E$	150	$\mu\text{m}$

All above values are typical for CW operation at 15°C.

## ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Rating	Unit
LD reverse voltage	$V_{RLD}$	0	V
LD forward current	$I_{FLD}$	1500	mA
Operating temperature range	$T_{OP}$	5...20	°C

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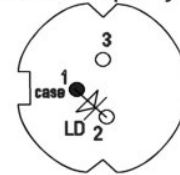
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## PACKAGE INFORMATION

The laser is housed inside a standard 9-mm TO-can (SOT-148), covered by collimating optics. The size of the emitting area of the laser die is  $150 \times 1 \mu\text{m}$ . More specific package information is available per request.

Bottom view - pin layout



## SAFETY INFORMATION

- The laser light emitted from this laser diode is visible 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.

## LIABILITY NOTE

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