

808...1550 nm mounted bars

Mounted high-power laser bars in near-IR wavelengths

Overview

The LumiLase and RangerLase mounted high-power laser bars cover the near-infrared wavelengths range 808...1550nm. The bars are mounted on robust, industry standard CS-type heat sink. The LumiLase bars (8xx nm) provide very high conversion efficiency and high brightness. The Rangerlase products are targeted for applications where eye-safe wavelengths are preferred. These multimode laser bars provide efficient and stable laser light output in CW operation. Adequate cooling should be ensured during operation.



Applications

Defense	Industrial	Medical
Illumination Range-finding	Materials Processing Optical Pumping	Aesthetic Treatments Surgery

Electro-optical Characteristics, Typical Values

Parameter	Symbol	ML1869	ML1824	ML1769	Unit
Peak Wavelength	λ	808 \pm 3	1470 \pm 15	1550 \pm 15	nm
Optical Output Power	P_{OPT}	40	20	20	W
Operating Current	I_{OP}	45	65	72	A
Operating Voltage	V_{OP}	2.0	1.4	1.3	V
Threshold Current	I_{TH}	9	7	8	A
Slope Efficiency	η	1.0	0.35	0.30	W/A
Wavelength - Temp. Coefficient	$\Delta\lambda/\Delta T$	0.3	0.6	0.6	nm/K
Spectral Width	$\delta\lambda$	4	12	11	nm
Parallel Beam Divergence (FWHM)	$\theta_{ }$	7	8	8	°
Perpendicular Beam Divergence (FWHM)	θ_{\perp}	33	32	32	°
Fill Factor	W_E	30	20	20	%

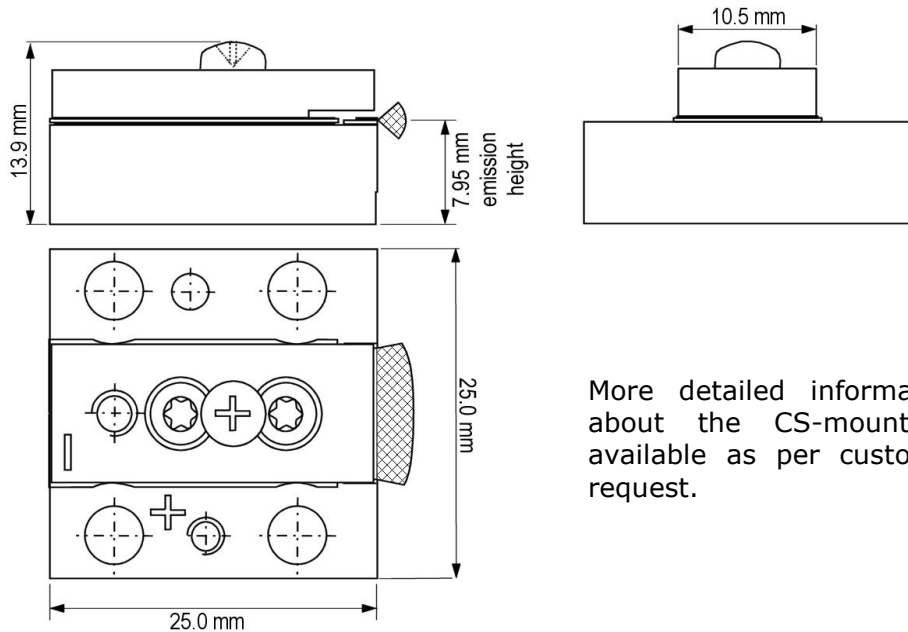
All values are typical for CW operation @ 20°C.

Absolute Maximum Ratings

Parameter	Symbol	ML1869	ML1824	ML1769	Unit
LD Reverse Voltage	V_{RLD}	2	2	2	V
LD Forward Current	I_{FLD}	65	100	90	A
Operating Temperature	T_{OP}	-10...40 ¹	0...40 ¹	0...40 ¹	°C
Storage Temperature	T_{STG}	-40...85	-40...85	-40...85	°C

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

Package Information



More detailed information about the CS-mount is available as per customer request.

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.



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

Liability note

This document is sole property of Modulight, Inc. No part of this document may be copied without written acceptance of Modulight, Inc. All statements related to the products herein are believed to be reliable and accurate. However, the accuracy is not guaranteed and no responsibility is assumed for any inaccuracies or omissions. Modulight, Inc. reserves the right to make changes in the specifications at any time without prior notice.