

CS-mounted bars

633...1550 nm CS-mounted high-power laser bars

Overview

CS-mounted high-power laser bars are available in wavelengths from visible red (ChiliLase) all the way to the eye-safe 1470 and 1550 nm (RangerLase), including a high-brightness 8xx nm band (LumiLase). The bars are mounted on robust CS-type heat sinks, which can be equipped with fast axis collimating optics as per customer request. These multimode devices 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 Laser Projectors	Photodynamic Therapy Aesthetic Treatments Surgery

Electro-optical Characteristics, Typical Values

Parameter	Symbol	ML1467 ¹	ML1806 ¹	ML1869 ²	ML1824 ²	ML1769 ²	Unit
Threshold Current	I_{TH}	4.5	8	9	8	12	A
Optical Output Power	P_{OPT}	4	7	40	20	20	W
Operating Current	I_{OP}	8.5	15	45	65	80	A
Operating Voltage	V_{OP}	2.5	2.5	2.0	1.4	1.5	V
Slope Efficiency	η	0.8	0.9	1.0	0.35	0.28	W/A
Peak Wavelength	λ	633 ± 3	633 ± 3	808 ± 3	1470 ± 15	1550 ± 15	nm
Wavelength - Temp. Coefficient	$\Delta\lambda/\Delta T$	0.2	0.2	0.3	0.6	0.6	nm/K
Spectral Width	$\delta\lambda$	1.2	1.2	4	12	10	nm
Parallel Beam Divergence (FWHM)	$\theta_{ }$	3	3	7	8	8	°
Perpendicular Beam Divergence (FWHM)	θ_{\perp}	38	38	33	32	32	°
Fill Factor	W_E	10	20	30	20	20	%

¹ Red lasers: Values are typical for CW operation @ 15°C.

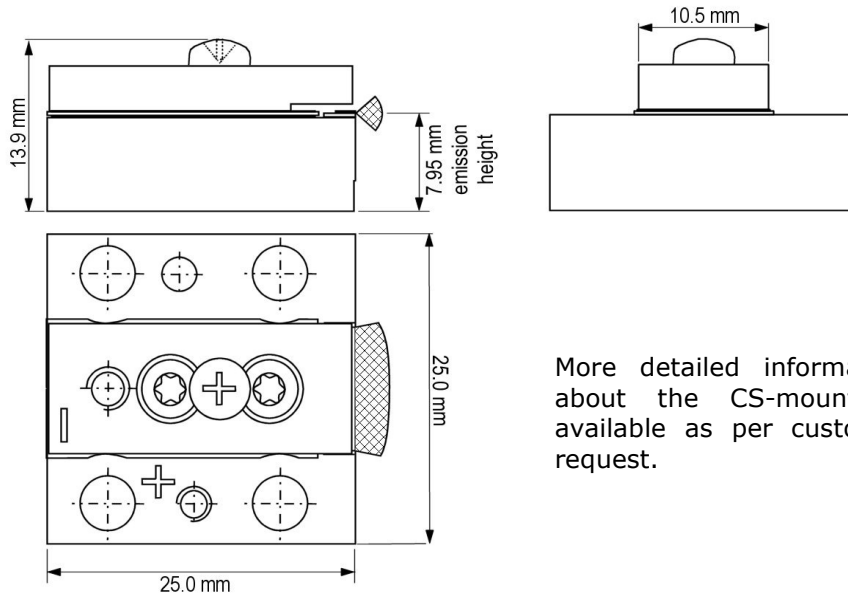
² IR lasers: Values are typical for CW operation @ 20°C.

Absolute Maximum Ratings

Parameter	Symbol	ML1388	ML1806	ML1869	ML1824	ML1769	Unit
LD Reverse Voltage	V_{RLD}	0	0	2	2	2	V
LD Forward Current	I_{FLD}	10	16	65	100	90	A
Operating Temperature	T_{OP}	0...20 ¹	0...20 ¹	-10...40 ¹	0...40 ¹	0...40 ¹	°C
Storage Temperature	T_{STG}	-40...85	-40...85	-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 may be visible or invisible, depending on the laser selected. The laser light is 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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