

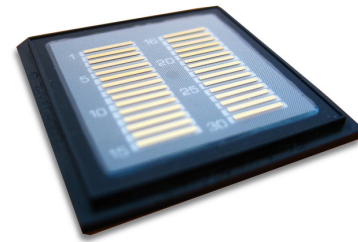
808 nm 30% fill factor laser bar for CW operation

ML1277



OVERVIEW

ML1277 is an unmounted laser bar (laser array) with 30% fill factor. This laser bar is designed for continuous wave (CW) operation, with high power conversion efficiency. The output power level is 40 W at 808 nm. The 8xx nm range laser bars are also available with different wavelength criteria and tolerance, per customer request, between wavelengths 785...810 nm. Please state the desired wavelength when ordering.



APPLICATIONS

Pumping Industrial
Space / Defence Medical

ELECTRO-OPTICAL CHARACTERISTICS

Parameter	Symbol	Typical value	Unit
Threshold Current	I_{TH}	< 9	A
Optical Output Power	P_{OPT}	40	W
Operating Current	I_{OP}	45	A
Operating Voltage	V_{OP}	< 2.0	V
Slope Efficiency	η	> 1.0	W/A
Peak Wavelength	λ	808 ± 3	nm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	0.3	nm/K
Spectral Width	$\delta\lambda$	4	nm
Parallel Beam Divergence (FWHM)	$\theta_{ }$	5...10	°
Perpendicular Beam Divergence (FWHM)	θ_{\perp}	30...35	°
Polarization		TM	

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

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Rating	Unit
LD forward current	I_{FLD}	65	A
Operating temperature range	T_{OP}	-10...+40 ¹	°C
Storage temperature range	T_{OP}	-40...+85	°C

¹A non-condensing environment is required for operation temperatures below 10 °C

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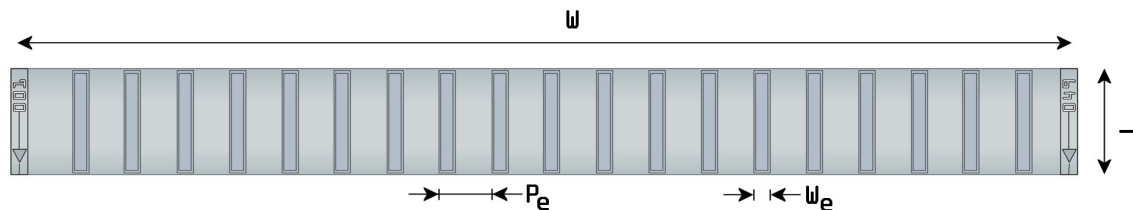
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MECHANICAL SPECIFICATIONS

Parameter	Symbol	Value	Unit
Cavity Length	L	1000	μm
Bar Width	W	10	mm
Emitter Pitch	P_e	500	μm
Emitter Width	W_e	150	μm
Fill Factor	FF	30	%
Bar Thickness	H	130	μm
Emitters in a Bar		19	

BAR 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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