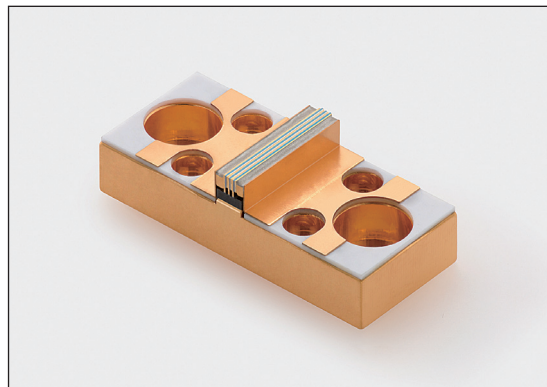


■ Features

- Peak radiant power: 300 W
- Wavelength: 798 nm
- Passive cooling
- Compact
- High-density laser beam

■ Applications

- Pumping of solid state laser



■ Outline

This is a laser diode (LD) bar module with a peak radiant power of 300 W. By stacking the LD bars at a narrow pitch, high-density laser beam can be realized. In addition, the compact package provides a higher design flexibility when assembling equipment. It can be used in a variety of applications requiring high-peak power, including solid state laser pumping.

■ Absolute maximum rating

Parameter		Symbol	Value	Unit
Pulse forward current		I _{fp}	120	A
Pulse width (FWHM)		t _w	400	μs
Peak radiant power		Φ _{ep}	330	W
Duty ratio	Average	DR	2.2	%
	Burst mode (1 second)	DR _b	3.5	%
Reverse voltage		V _r	2	V
Operating temperature (case) *1		T _{op(c)}	+5 to +35	°C
Storage temperature *1		T _{sta}	-20 to +40	°C

*1 No condensation (When operation at temperature below dew point, use under dry N₂ environment.)

* Indicating limits that must not be exceeded instantaneously and shall not exceed any one value.

* Except for parameter, $T_{op(c)}$ = 25 °C

■ Specification

Parameter	Symbol	Condition	Value			Unit
			Min.	Typ.	Max.	
Operating current	I_{op}	$\Phi_{ep} = 300 \text{ W}$	—	100	110	A
Center emission wavelength	λ_c		795	798	801	nm
Spectral width (FWHM)	$\Delta\lambda$	$\Phi_{ep} = 300 \text{ W}$	—	4	5	nm
Operating voltage	V_{op}	$\Phi_{ep} = 300 \text{ W}$	—	—	6.5	V
Beam-divergence angle	Horizontal	$I_{fp} = 100 \text{ A}, t_w = 200 \mu s$ $f_r = 50 \text{ Hz}, \text{ FWHM}$	—	11	15	° (degrees)
	Vertical		22	26	30	
Threshold current	I_{th}	—	—	16	22	A
Polarization	—	—	TE mode			—

* Condition: $t_w = 400 \mu s$, $f_r = 40 \text{ Hz}$, $T_{op(c)} = 25 \text{ °C}$

■ Other

Parameter	Designing value		Unit
Dimensions of light-emitting section (width)	Horizontal	10	mm
	Vertical	0.8	

Pulsed Laser Diode Bar Module L13459-01

Figure 1: Peak radiant output - pulse forward current (example)

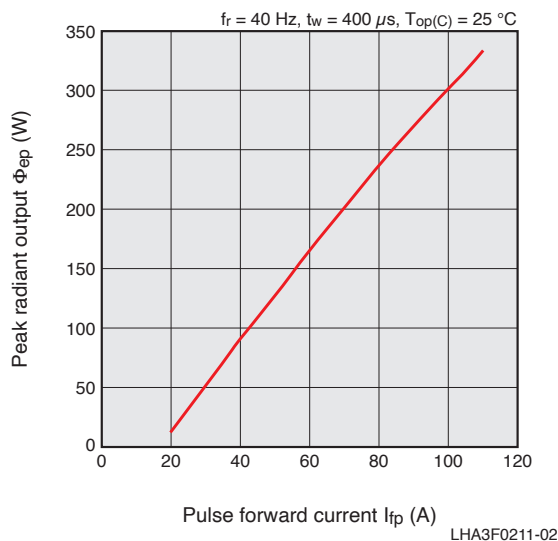


Figure 2: Emission spectrum (example)

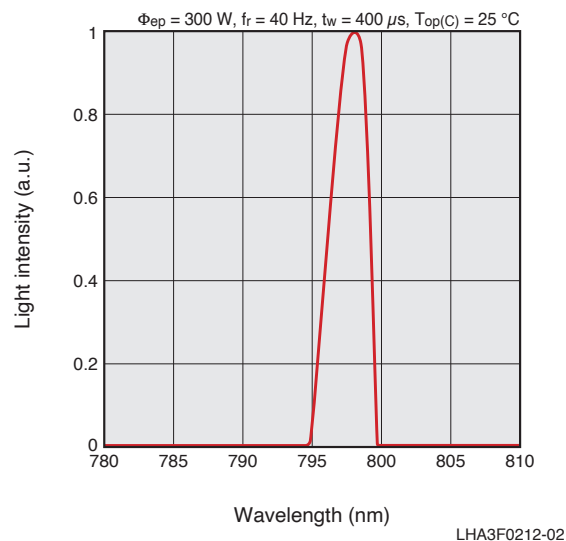
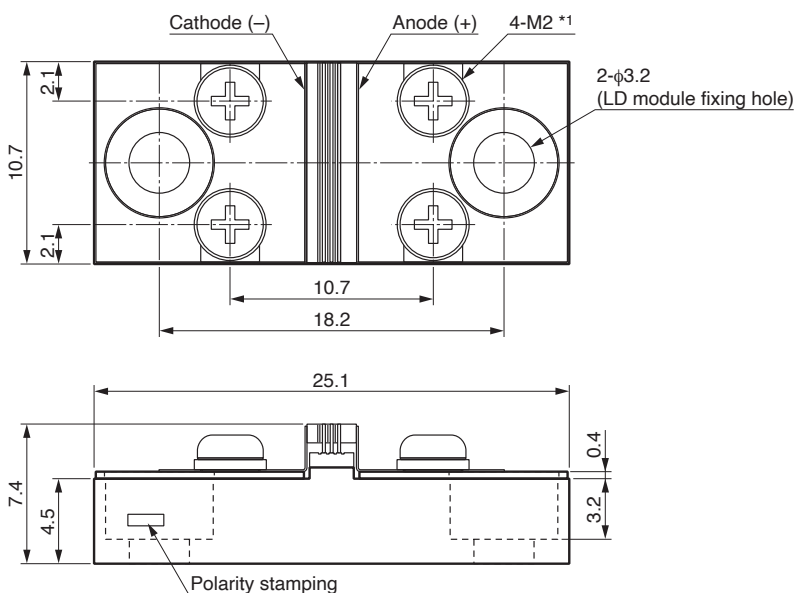


Figure 3: Dimensions (unit: mm)



*1 Screws for fixing electrode and insulation bushes are accessories.

The insulation bushes must be used when fixing electrode.

* Unspecified tolerances are ISO 2768-1.

LHA3B0083-02

Danger (Class 4 Laser)

Invisible laser radiation: Avoid eye or skin exposure to direct or scattered radiation

● Laser beam emitted from this product is an invisible laser beam that cannot be seen by the naked eye. This product is a IEC 60825-1 classification of laser products. It corresponds to "Class 4 Laser". To use this product safely, follow IEC 60825-1 regulations, etc.

Examples of labels



● Information described in this material current as of June 2021. Specifications are subject to change without notice.

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