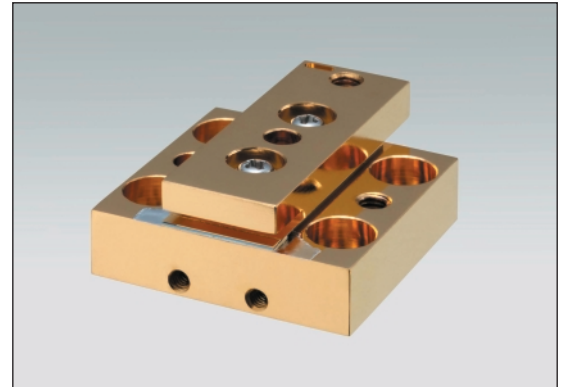


FEATURES

- High optical power: CW 60 W
- High stability
- Long life
- Compact

APPLICATIONS

- Measuring instrument
- Pumping source for solid state laser
- IR illumination for surveillance
- Heat treatment



OPTION

Possible to attach a fast axis collimation (FAC) lens

- Beam spread angle(fast axis) 1° (typ)
- Coupling efficiency > 95°

SPECIFICATIONS

CW operation

[T_{op}(hs) = 25 °C]

Parameter	Symbol	Conditions	Value			Unit
			L8413-50-808	L8413-60-940	L8413-50-980	
Peak emission wavelength	λ_p	$\Phi_e = 50\text{ W}, 60\text{ W}$	808	940	980	nm
Tolerance of λ_p	—	$\Phi_e = 50\text{ W}, 60\text{ W}$	±5			nm
Spectral radiation bandwidth	$\Delta\lambda$	FWHM	3	4		nm
Radiant output power	Φ_e	I _f = 60 A	50	—	—	W
		I _f = 63 A	—	60	—	
		I _f = 65 A	—	—	60	
Forward voltage	V _f	$\Phi_e = 50\text{ W}$	<2			V
		$\Phi_e = 60\text{ W}$	<2			
Beam spread angle	Parallel (slow)	FWHM	<10			° (degree)
	Vertical (fast)					
Lasing threshold current	I _{th}	—	17	9	8	A
Expected life time	—	—	15,000	20,000		hour

COOLING CONDITIONS AND SURROUNDINGS

Parameter	Description / Value	Unit
Coolant	Passive cooling (heat conductive cooling)	—
Operating heatsink temperature	+5 to +25	°C
Storage temperature	-20 to +40	°C

High-power Laser Diode CW Single Bar Module L8413 Series

Figure 1: Radiant output power vs. Forward current (typ.)

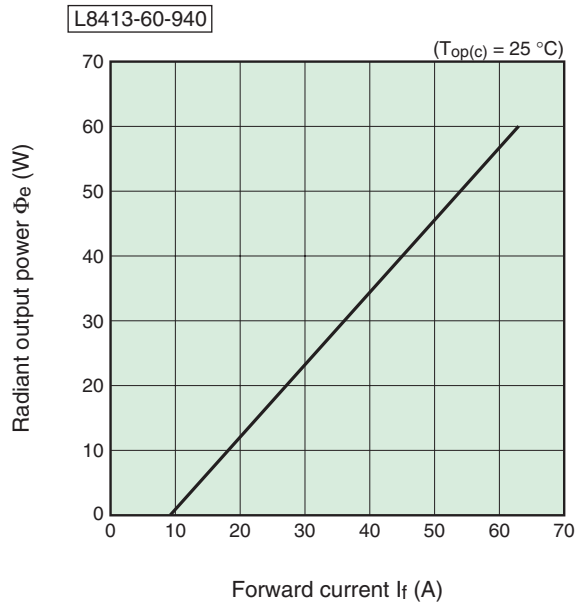


Figure 2: Typical emission spectrum

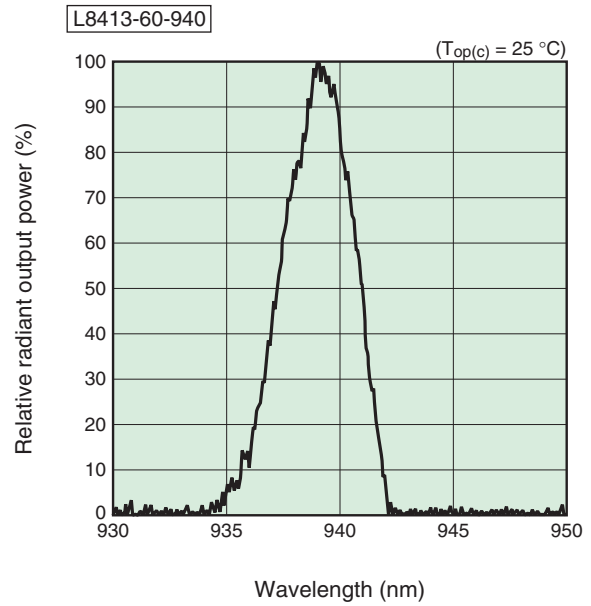
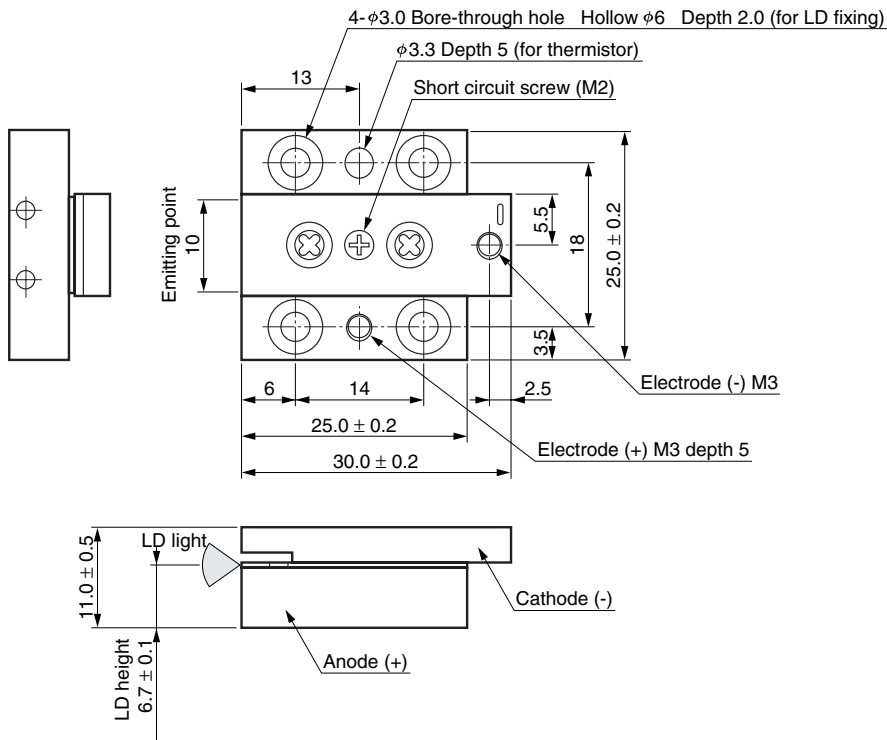


Figure 3: Dimensional outline (unit: mm)



●When using laser products, classify the laser products in accordance with IEC 60825-1. Take adequate measures for classification. Observe the latest regulations and standards of each country and region.

HAMAMATSU PHOTONICS K.K. www.hamamatsu.com

HAMAMATSU PHOTONICS K.K., Laser Group, Sales Dept.

1-8-3, Shinmiyakoda, Kita-ku, Hamamatsu City, Shizuoka, 431-2103, Japan, Telephone: (81)53-484-1301, Fax: (81)53-484-1302, E-mail: laser-g@lsl.hpk.co.jp

U.S.A.: Hamamatsu Corporation: 360 Foothill Road, P. O. Box 6910, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1)908-231-0960, Fax: (1)908-231-1218 E-mail: usa@hamamatsu.com

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-2658 E-mail: info@hamamatsu.de

France: Hamamatsu Photonics France S.A.R.L.: 19, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: (33)1 69 53 71 00, Fax: (33)1 69 53 71 10 E-mail: infos@hamamatsu.fr

United Kingdom: Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Twin Road Welwyn Garden City Hertfordshire AL7 1BW, United Kingdom, Telephone: 44-(0)1707-294888, Fax: 44(0)1707-325777 E-mail: info@hamamatsu.co.uk

North Europe: Hamamatsu Photonics Norden AB: Smidesvägen 12, SE-171-41 SOLNA, Sweden, Telephone: (46)8-509-031-00, Fax: (46)8-509-031-01 E-mail: info@hamamatsu.se

Italy: Hamamatsu Photonics Italia: S.R.L.: Strada della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39)02-935 81 733, Fax: (39)02-935 81 741 E-mail: info@hamamatsu.it

China: HAMAMATSU PHOTONICS (CHINA) Co., Ltd.: 1201 Tower B, Jianning Center, No.27 Dongsanhuan Beilu, Chaoyang District, Beijing 100020, China, Telephone: (86)10-6586-6006, Fax: (86)10-6586-2866 E-mail: hpc@hamamatsu.com.cn