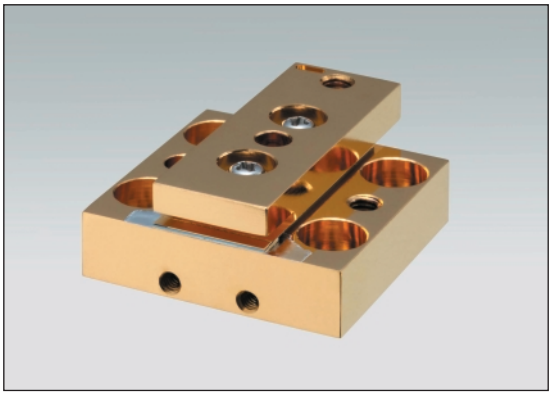
HAMAMATSU

PHOTON IS OUR BUSINESS

High-power Laser Diode CW Single Bar Module
L8413 Series

■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	Φ_e = 50 W, 60 W	808	940	980	nm
Tolerance of λp		—	Φ_e = 50 W, 60 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	Φ_e = 50 W	<2			V
			Φ_e = 60 W	<2			
Beam spread angle	Parallel (slow)	$\theta_{//}$	FWHM	<10			° (degree)
	Vertical (fast)	$\theta_{\perp}$		<40			
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

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

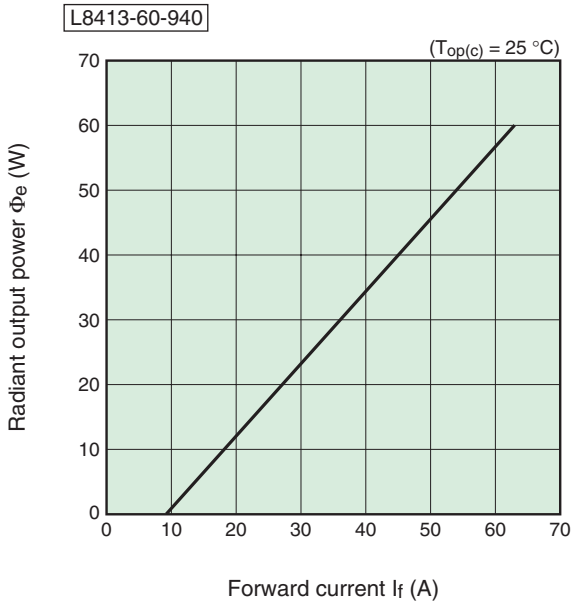


Figure 2: Typical emission spectrum

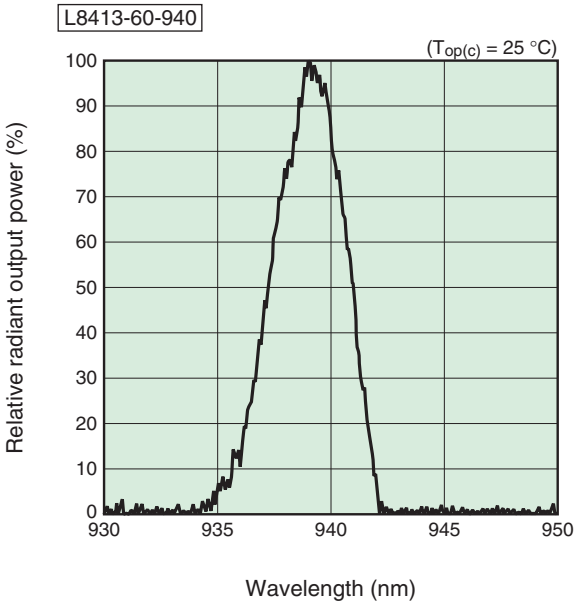
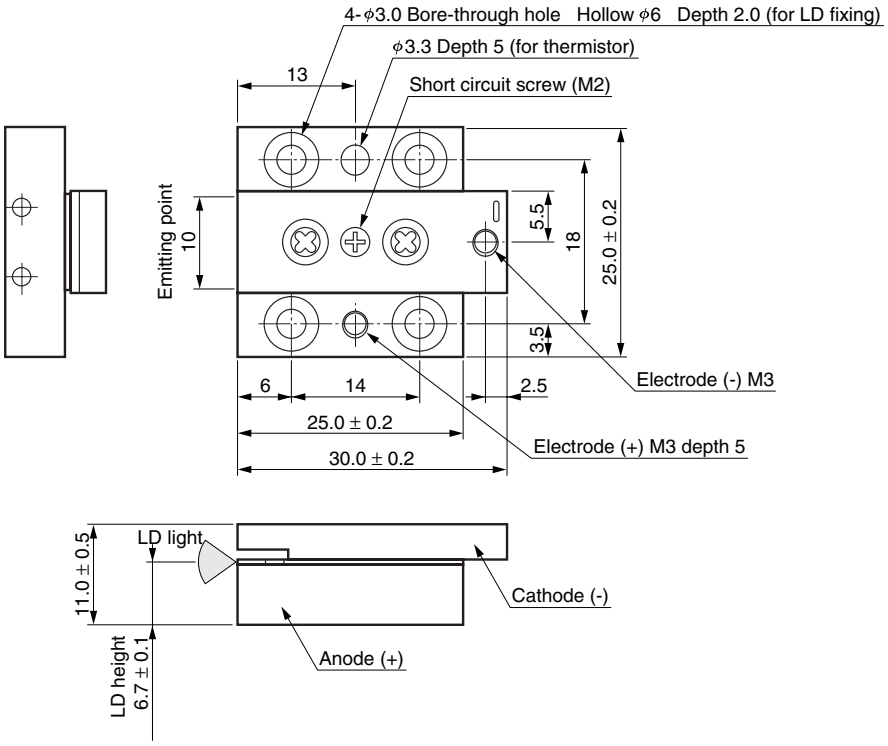


Figure 3: Dimensional outline (unit: mm)



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

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