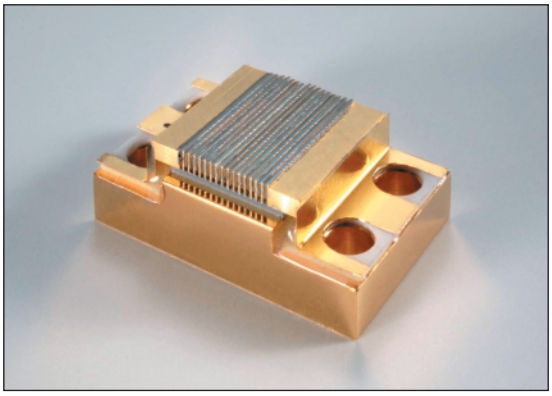
HAMAMATSU

PHOTON IS OUR BUSINESS

High-Power QCW Laser Diode Stack Module
L11398 Series

■FEATURES

- ●High optical power: QCW 100 W/bar
- ●High stability
- ●Long life
- ●Compact



■APPLICATIONS

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

■SPECIFICATIONS

QCW operation (Max. duty ratio is 1 % (200 μs, 50 Hz)) [$T_{op(hs)}$ = 25 °C]

Parameter		Symbol	Conditions	Value			Unit
				L11398-16P808	L11398-16P940	L11398-16P980	
Peak emission wavelength		λ_p	Φ_{ep} = 1.6 kW	808	940	980	nm
Tolerance of λ_p		—	Φ_{ep} = 1.6 kW	±5			nm
Spectral radiation bandwidth		$\Delta\lambda$	FWHM	4			nm
Radiant output power		Φ_{ep}	Duty to 1 % I_f = 100 A	—	1.6	1.6	kW
			Duty to 1 % I_f = 105 A	1.6	—	—	
Forward voltage		V_f		<32			V
Beam spread angle	Parallel (slow)	$\theta_{//}$	FWHM	<10			° (degree)
	Vertical (fast)	$\theta_{\perp}$		<40			
Lasing threshold current		I_{th}	Duty to 1 %	23	15	15	A
Expected life time		—	t_w = 200 μs	1.0×10^9			shot

* Max. No. of Stack 16
* Stack pitch 0.4 mm

■COOLING CONDITIONS AND SURROUNDINGS

Parameter	Description / Value	Unit
Coolant	Passive cooling (Heat conductive cooling)	—
Operating case temperature	+5 to +35	°C
Storage temperature	-20 to +40	°C

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

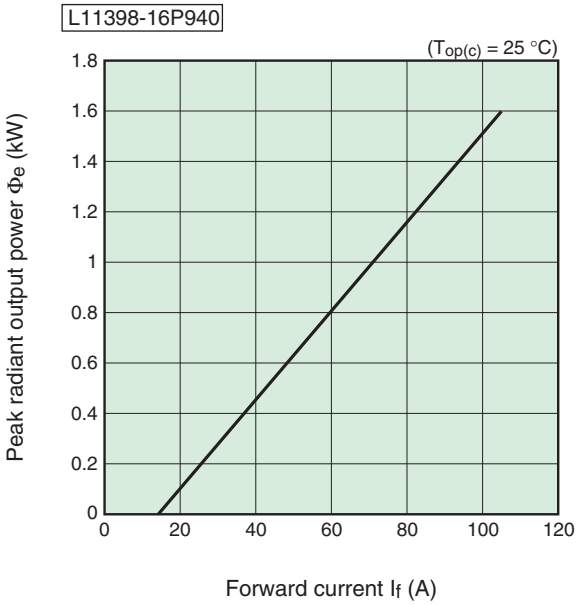


Figure 2: Typical emission spectrum

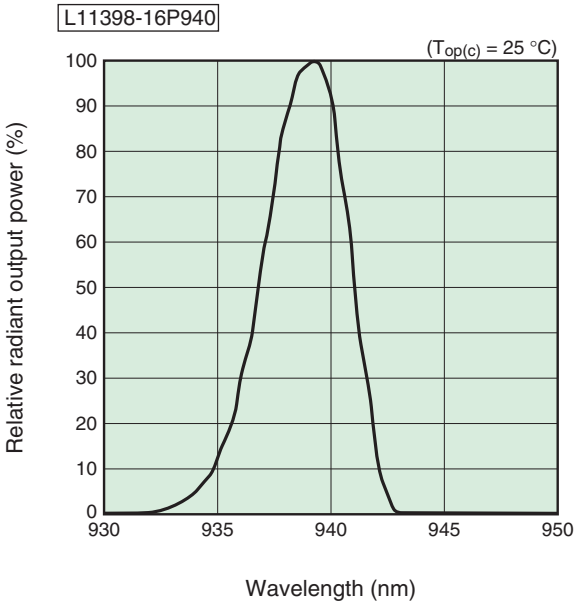
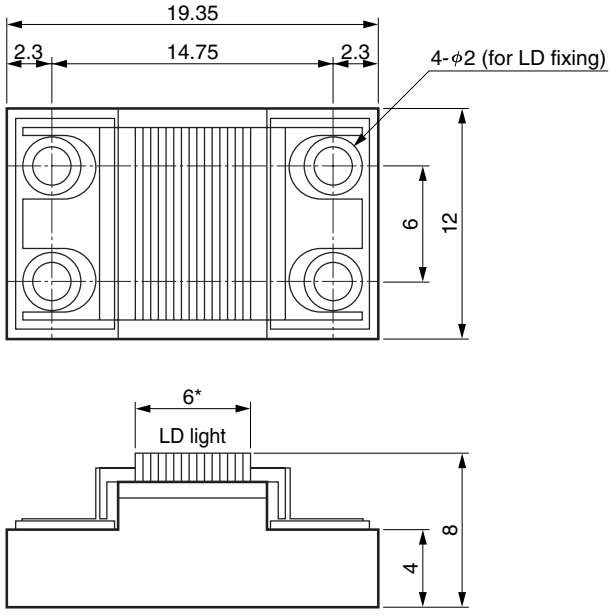


Figure 3: Dimensional outline (unit: mm)



* Emitting point @16 ST
(Emitting area width will vary in accordance with the number of bar stack.)

●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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