HAMAMATSU

PRELIMINARY DATA

CW LASER DIODES
L9418 SERIES

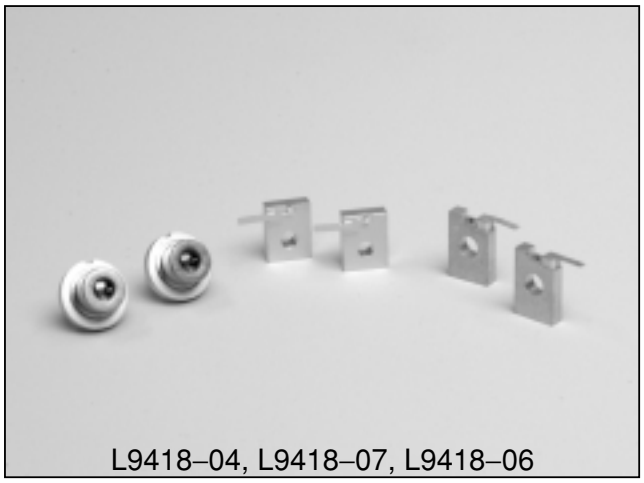
Peak Emission Wavelength 980nm, Radiant Output Power 1W (CW)

■ FEATURES

- Radiant output power (CW) : 1W
- Peak Emission Wavelength : 980 nm ± 3 nm
- Beam Area Size : 100 μm x 1 μm
- High stability
- Long life
- Compact

■ APPLICATIONS

- Medical instrument
- Measuring instrument
- Pumping source for solid state lasers (EDFA)



L9418–04, L9418–07, L9418–06

■ OUTLINE

A 980nm 1W Laser Diode has joined in the range of HAMAMATSU PHOTONICS's Single Chip Laser Diode. Emittinig area size of L9418 series is 100um, it makes easier to focus on to a small spot with optics. Therefore, it can be used for various applications such as medical instruments, measuring instruments, communication etc.

■ ABSOLUTE MAXIMUM RATINGS (Top(c) = 25 °C)

Parameter	Symbol	Value	Unit
Radiant Output Power	Φe	1.2	W
Forward Current	I_f	1.4	A
Reverse Voltage	V_r	2	V
Operating Temperature	$T_{op(c)}$	0~+30	°C
Storage Temperature	T_{stg}	–30~+80	°C

■ CHARACTERISTICS (Top(c) = 25 °C)

Parameter		Symbol	Conditions	Value	Unit
Radiant Output Power		Φe	I_f = 1.2 A	1 (Typ.)	W
Operating Current		I_{op}	Φe = 1 W	1.2 (Typ.)	A
Peak Emission Wavelength		λp		980 ± 3	nm
Spectral Radiation Half Bandwidth		$\Delta\lambda$		2 (Typ.)	nm
Forward Voltage		V_f		1.6 (Typ.)	V
Beam Spread Angle	Parallel	$\theta//$	Φe = 1 W FWHM	8	degree
	Vertical	$\theta\perp$		32	degree
Emitting Area Size		–	Value at designing	100 x 1	μm
Lasing Threshold Current		I_{th}	–	0.24	A

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Specifications are subject to change without notice. No patent rights are granted to any of the circuits described herein. '2003 Hamamatsu Photonics K.K.

CW LASER DIODES L9418

Figure 1: Radiant Output Power vs. Forward Current (Typ.)

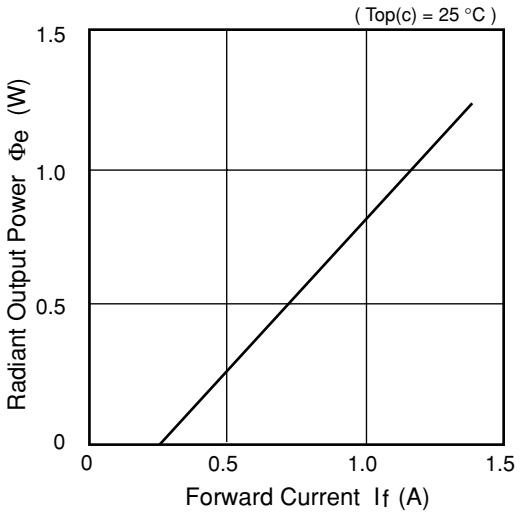


Figure 2: Emission Spectrum (Typ.)

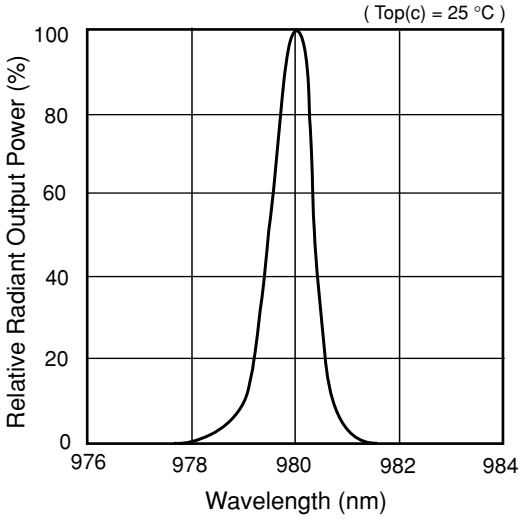


Figure 3: Directivity (Typ.)

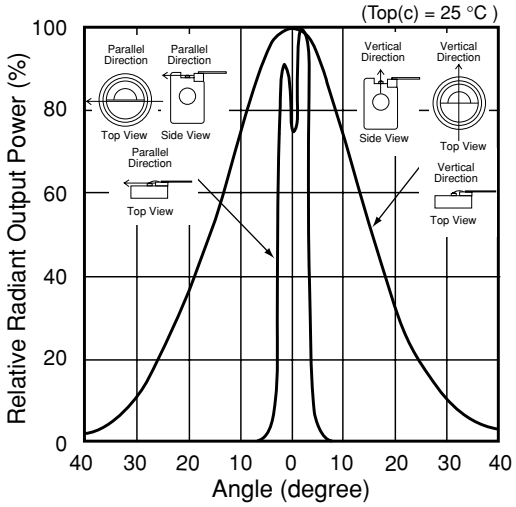
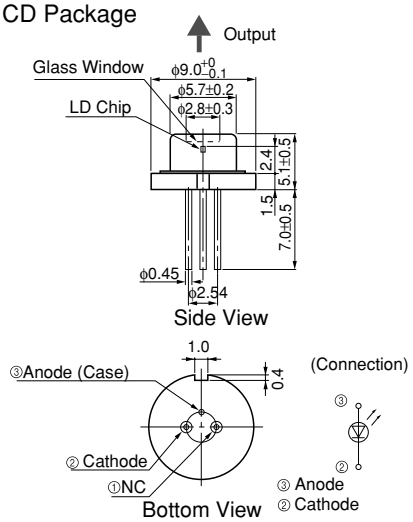
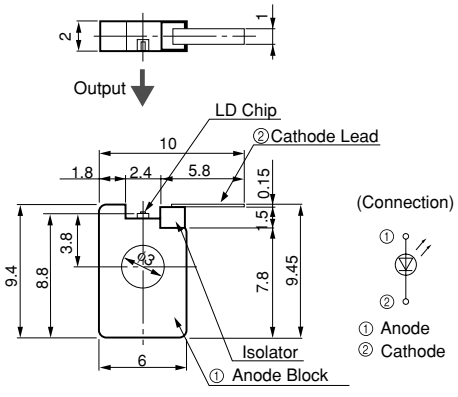


Figure 4: Dimensional Outline (Unit : mm)

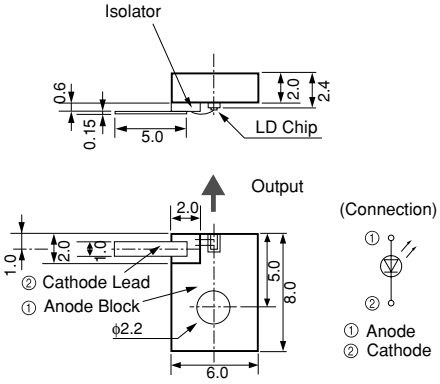
1) L9418–04
ϕ 9.0 CD Package



2) L9418–06
Side-out OHS Package



3) L9418–07
Head-out OHS Package



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