

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

■ FEATURES

- Radiant output power (CW) : 1W
- Peak Emission Wavelength : 980 nm $\pm$ 3 nm
- Beam Area Size : 100 μ m x 1 μ m
- High stability
- Long life
- Compact

■ APPLICATIONS

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



■ OUTLINE

A 980nm 1W Laser Diode has joined in the range of HAMAMATSU PHOTONICS's Single Chip Laser Diode. Emitting area size of L9418 series is 100 μ m, 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	Φ_e	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		Φ_e	$I_f = 1.2$ A	1 (Typ.)	W
Operating Current		I_{op}	$\Phi_e = 1$ W	1.2 (Typ.)	A
Peak Emission Wavelength		λ_p		980 $\pm$ 3	nm
Spectral Radiation Half Bandwidth		$\Delta\lambda$		2 (Typ.)	nm
Forward Voltage		V_f		1.6 (Typ.)	V
Beam Spread Angle	Parallel	$\theta_{//}$	$\Phi_e = 1$ W FWHM	8	degree
	Vertical	$\theta_{\perp}$		32	degree
Emitting Area Size		—	Value at designing	100 x 1	μ m
Lasing Threshold Current		I_{th}	—	0.24	A

CW LASER DIODES L9418

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

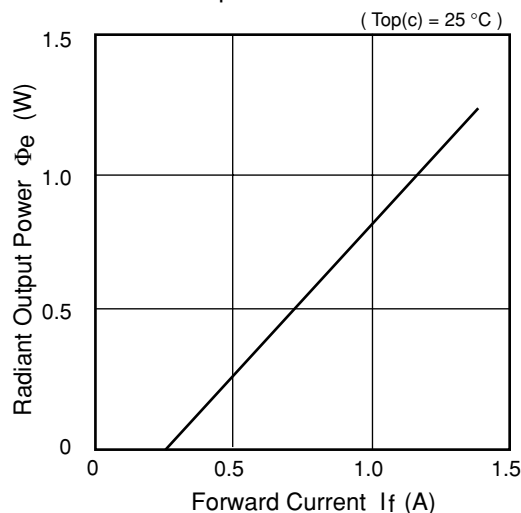


Figure 2: Emission Spectrum (Typ.)

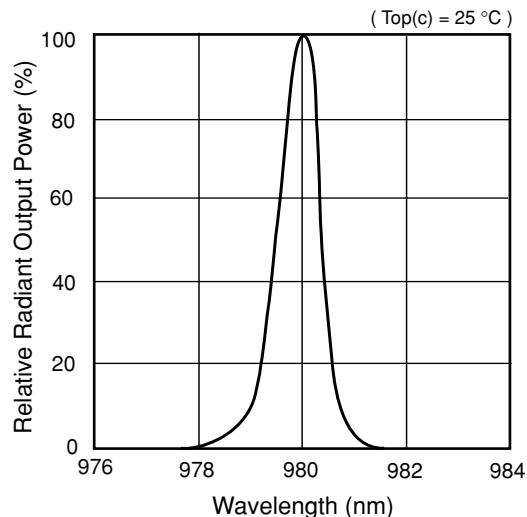


Figure 3: Directivity (Typ.)

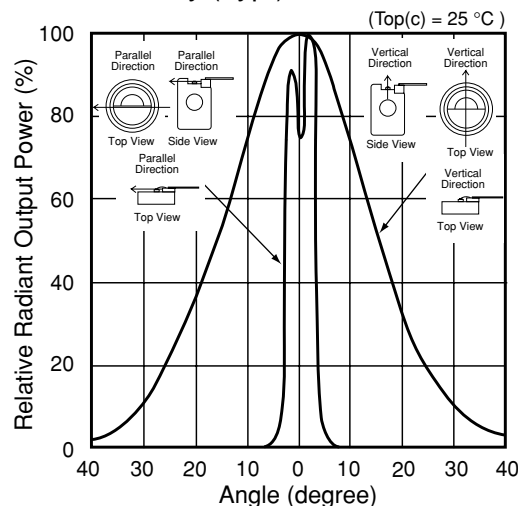
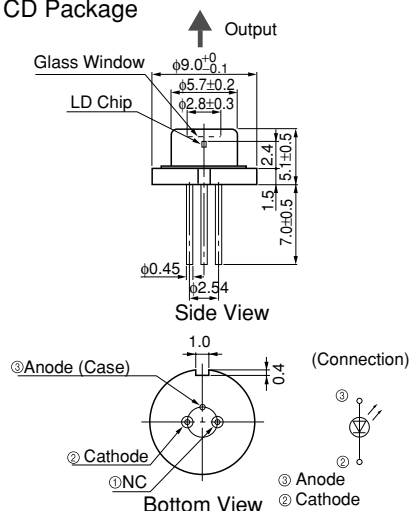
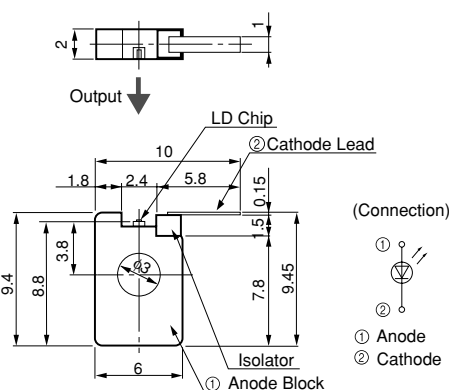


Figure 4: Dimensional Outline (Unit : mm)

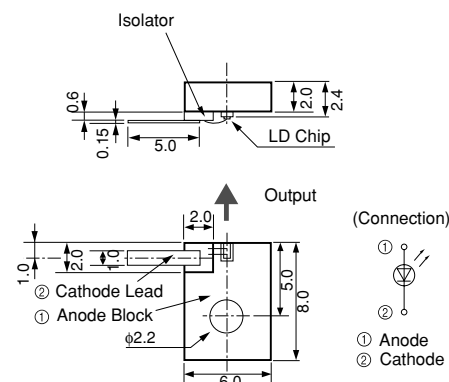
1) L9418-04
φ 9.0 CD Package



2) L9418-06
Side-out OHS Package



3) L9418-07
Head-out OHS Package



HAMAMATSU

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