

■ **Features**

- Lateral multimode (broad stripe)
- Radiant output power (CW): 1 W
- Peak emission wavelength: 980 nm
- Emitting area size: 100  $\mu\text{m} \times 1 \mu\text{m}$



■ **Applications**

- Pumping source for solid state laser
- Medical instrument
- Measure instrument
- Communication (EDFA)

■ **Absolute maximum ratings ( $T_{\text{op}(c)} = 25 \text{ }^\circ\text{C}$ )**

Parameter	Symbol	Value	Unit
Radiant output power	$\Phi_e$	1.2	W
Forward current	$I_f$	1.4	A
Reverse voltage	$V_r$	2	V
Operating temperature	$T_{\text{op}(c)}$	0 to +30	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-30 to +80	$^\circ\text{C}$

■ **Electrical and optical characteristics ( $T_{\text{op}(c)} = 25 \text{ }^\circ\text{C}$ )**

Parameter	Symbol	Conditions	Value			Unit	
			Min.	Typ.	Max.		
Radiant output power	$\Phi_e$	$\Phi_e = 1 \text{ W}$	0.8	1	—	W	
Operating voltage	$I_{\text{op}}$		—	1.2	1.38	A	
Peak emission wavelength	$\lambda_p$		970	980	990	nm	
Spectral half-width	$\Delta\lambda$		—	2	4	nm	
Operating voltage	$V_f$		—	2	3	V	
Beam spread angle	Horizontal		$\theta_{//}$	5	8	12	degree
	Vertical		$\theta_{\perp}$	27	32	37	degree
Emitting area	—		—	100 $\times$ 1	—	$\mu\text{m}$	
Lasing threshold current	$I_{\text{th}}$		—	—	0.25	0.35	A

# CW Laser Diode L9418-42

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

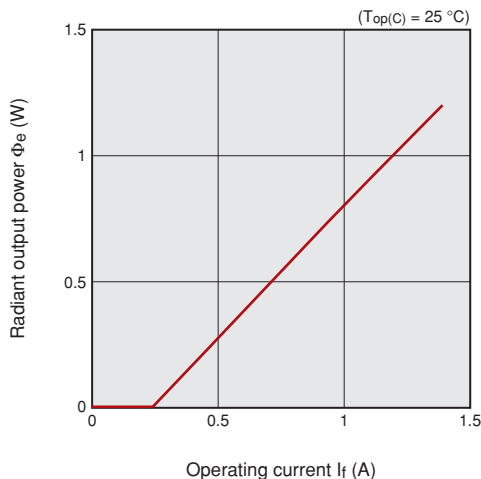


Figure 2: Typical emission spectrum

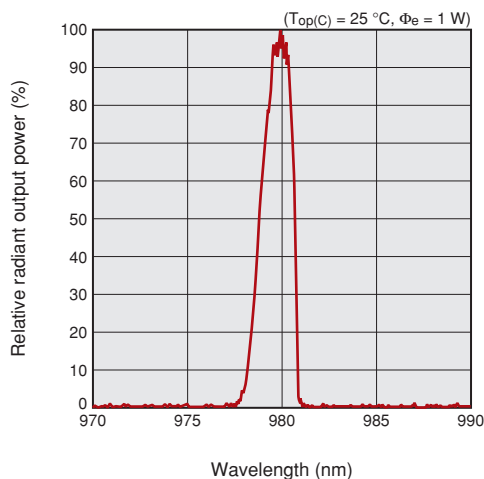


Figure 3: Directivity (typ.)

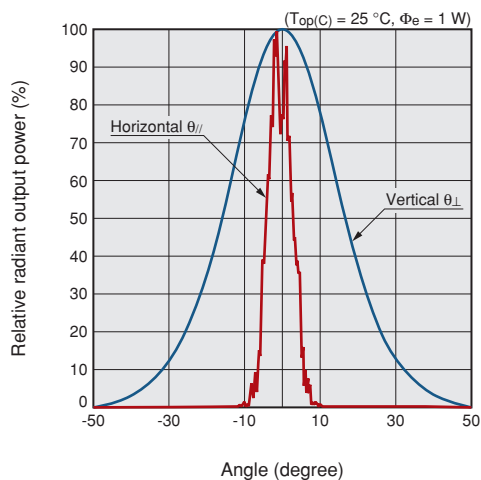
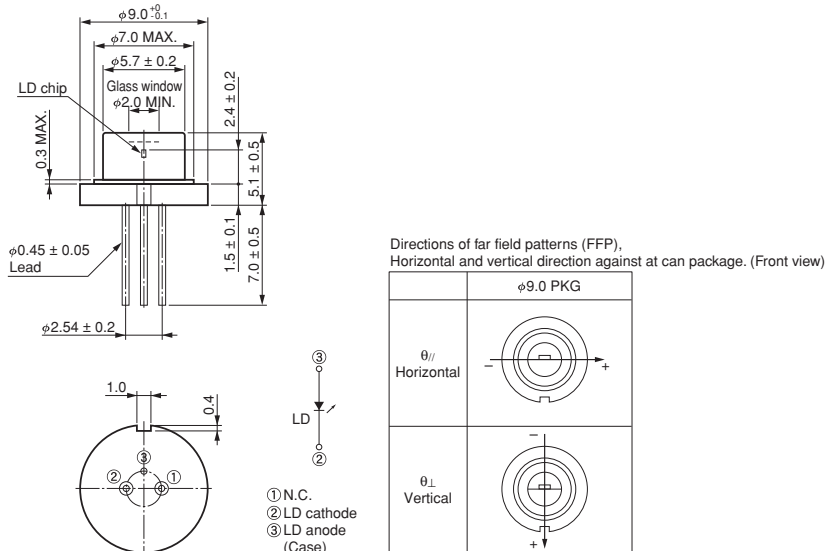


Figure 4: Dimensional outline (unit: mm)



Information described in this material current as of October 2023. Specifications are subject to change without notice.

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