

■ **Features**

- Lateral multimode (broad stripe)
- Radiant output power (CW): 1 W
- Peak emission wavelength: 830 nm
- Emitting area size: 50 μm \times 1 μm



■ **Applications**

- Pumping source for solid state laser
- Processing
- Medical instrument
- Measure instrument

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

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	$T_{\text{op}(c)}$	0 to +30	$^{\circ}\text{C}$
Storage temperature	T_{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	Φ_e	$\Phi_e = 1\text{ W}$	0.8	1	—	W	
Operating voltage	I_{op}		—	1.2	1.38	A	
Peak emission wavelength	λ_p		820	830	840	nm	
Spectral half-width	$\Delta\lambda$		—	2	4	nm	
Operating voltage	V_f		—	2	3	V	
Beam spread angle	Horizontal		$\theta_{//}$	4	8	12	degree
	Vertical		θ_{\perp}	27	32	37	degree
Emitting area	—		—	50 \times 1	—	μm	
Lasing threshold current	I_{th}		—	—	0.35	0.45	A

CW Laser Diode L9277-42

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

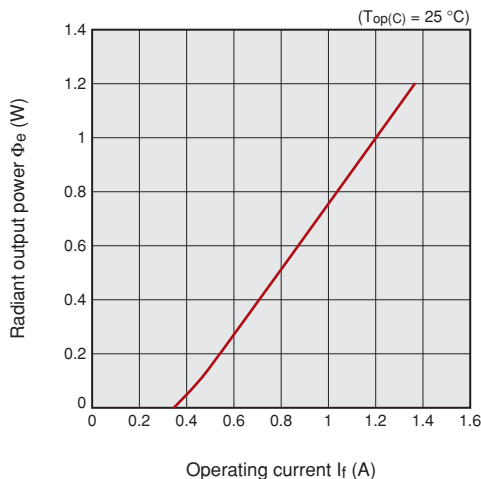


Figure 2: Typical emission spectrum

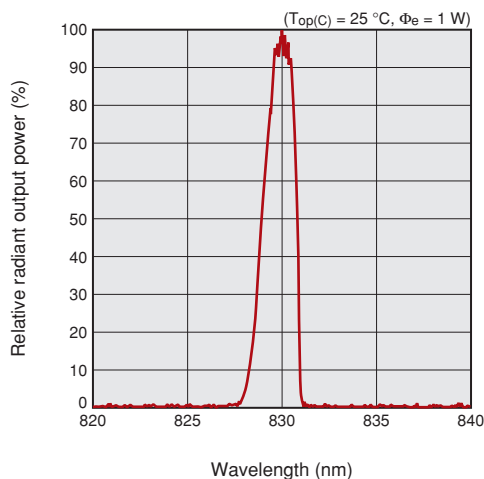


Figure 3: Directivity (typ.)

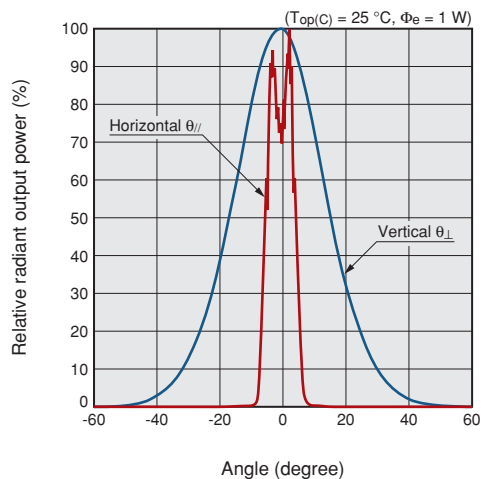
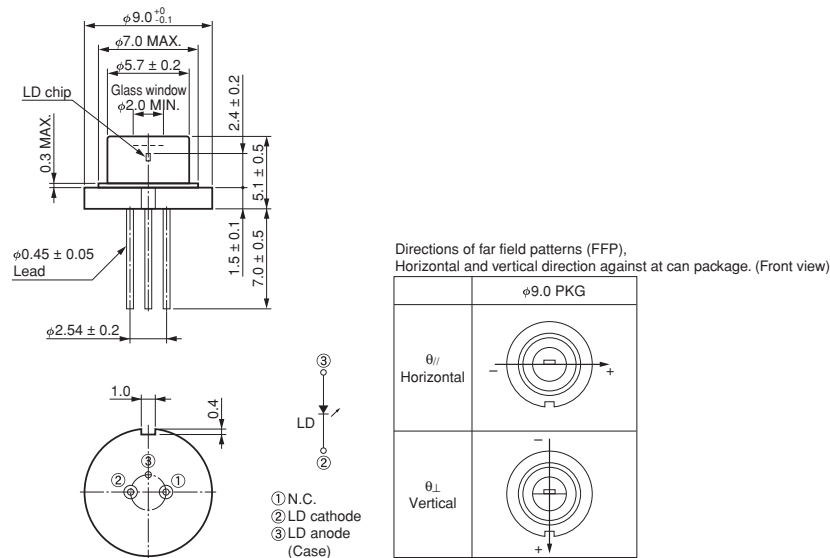


Figure 4: Dimensional outline (unit: mm)



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

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