

FEATURES

- 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
- Measuring instrument



ABSOLUTE MAXIMUM RATINGS (T_{op}(C) = 25 °C)

Parameter	Symbol	Value	Unit
Radiant output power	Φ_e	35	mW
Forward current	I_f	140	mA
Reverse voltage	V_r	1.5	V
Operating temperature	$T_{op}(c)$	0 to +50	°C
Storage temperature	T_{stg}	-20 to +80	°C

ELECTRICAL AND OPTICAL CHARACTERISTICS (T_{op}(C) = 25 °C)

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Radiant output power	Φ_e	$I_f = 1.2 \text{ A}$	—	1	—	W
Forward current	I_{op}	$\Phi_e = 1 \text{ W}$	—	1.2	—	A
Peak emission wavelength	λ_c		—	830	—	nm
Spectral radiation half bandwidth	$\Delta\lambda$		—	2	—	nm
Forward voltage	V_{op}		—	2	—	V
Beam spread angle	Parallel	$\Phi_e = 1 \text{ W}$ FWHM	—	8	—	degree
	Vertical		θ_{\perp}	—	32	—
Emitting area	—	Value at designing	—	50 \times 1	—	μm
Lasing threshold current	I_{th}	—	—	0.35	—	A

Lateral multimode (broad stripe) CW Laser Diode L9277 Series

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

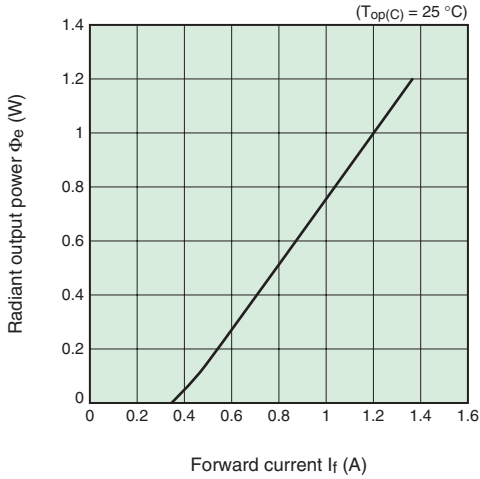


Figure 2: Typical emission spectrum

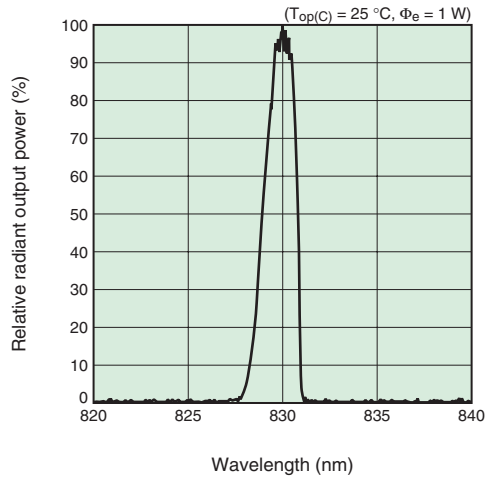


Figure 3: Directivity (typ.)

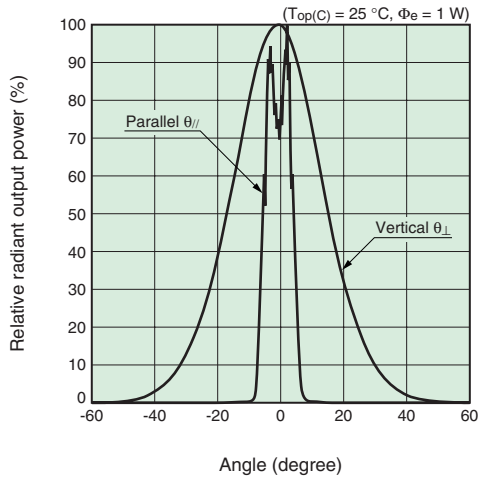
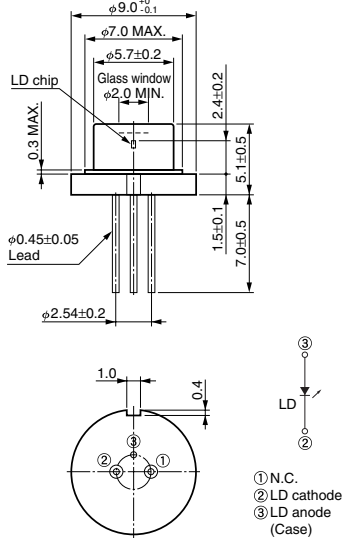
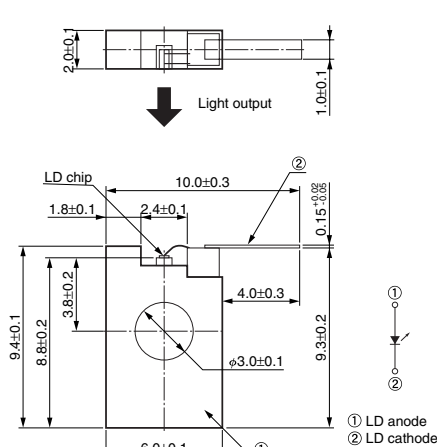


Figure 4: Dimensional outline (unit: mm)

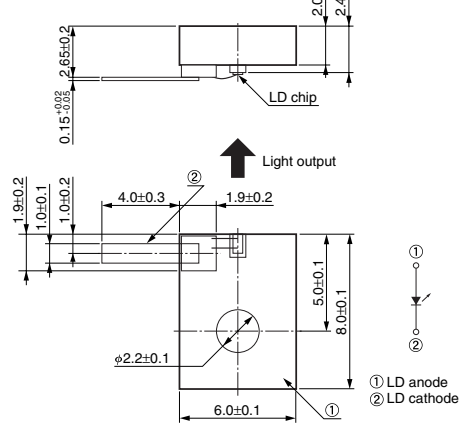
● L9277-42
φ9.0CD



● L9277-62
Side Out OHS



● L9277-72
Head Out OHS



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