

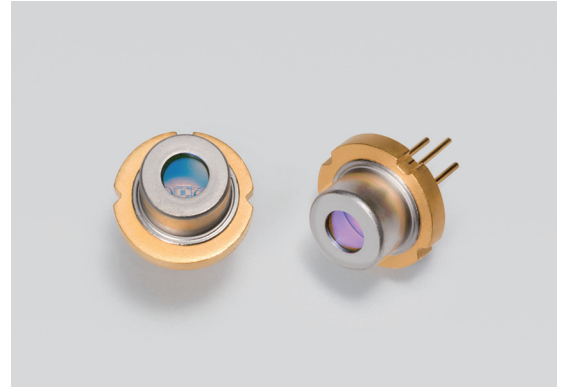
Photonic Crystal Surface Emitting Laser Diode L13395-04

■ Features

- Low beam radiation angle: under 1 deg
- Narrow spectrum width: under 1 nm

■ Applications

- Pumping source for solid status lasers
- Light source for frequency conversion
- Fine processing
- Object sensing



■ Outline

This semiconductor LD that has photonic structure gets excellent characteristic, small beam pattern and narrow spectrum width.

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

Parameter	Symbol	Value	Unit
Radiant output power	Φ_e	200	mW
Forward current	I_f	900	mA
Reverse voltage	V_r	2	V
Operating temperature	$T_{op(c)}$	0 to +30	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-30 to +85	$^{\circ}\text{C}$

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

Parameter	Symbol	Conditions	Value			Unit	
			Min.	Typ.	Max.		
Operating current	I_{op}	$\Phi_e=150\text{ mW}$	-	650	850	mA	
Operating voltage	V_{op}		-	1.6	2	V	
Peak emission wavelength	λ_p		930	940	950	nm	
Spectral radiation half bandwidth	$\Delta\lambda$		-	-	1	nm	
Beam spread angle	Horizontal	$\theta_{//}$	$\Phi_e=150\text{ mW}$ FWHM	-	-	1	degree
	Vertical	θ_{\perp}		-	-	1	
Lasing threshold current	I_{th}	-	-	250	400	mA	
Emitting area size	-	Value at designing	-	200	-	$\mu\text{m} \times \mu\text{m}$	

* Example of temperature characteristic of peak emission wavelength (condition: 940 nm, 25 $^{\circ}\text{C}$)

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Figure1: Radiant output power vs. Forward current (typ.)

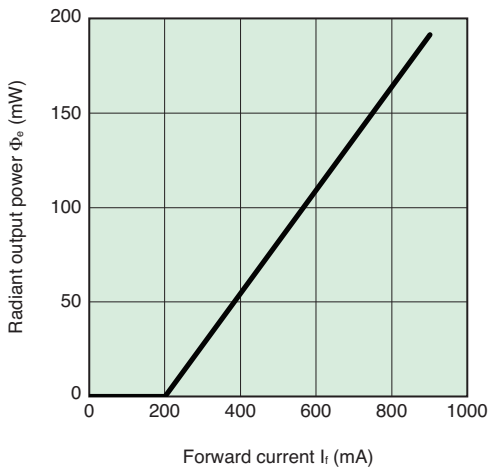


Figure2: Typical emission spectrum

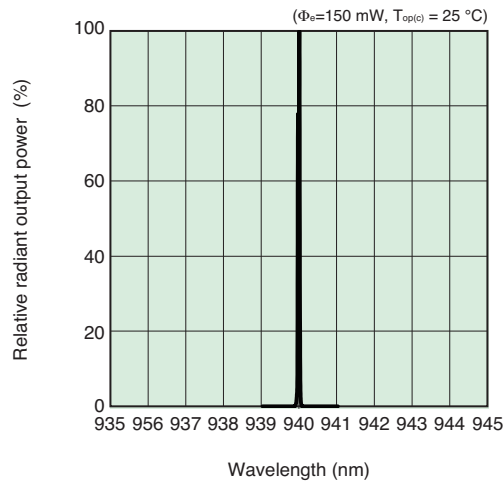


Figure3: Directivity (typ.)

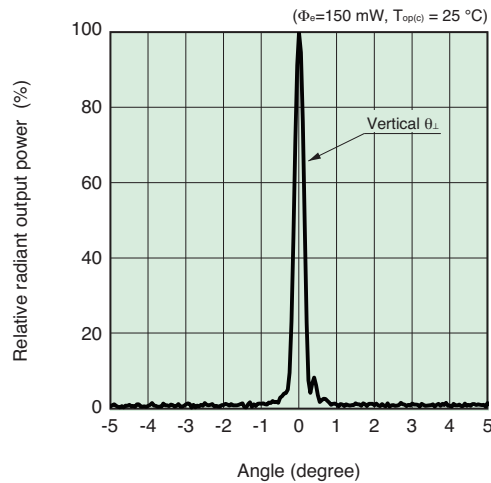
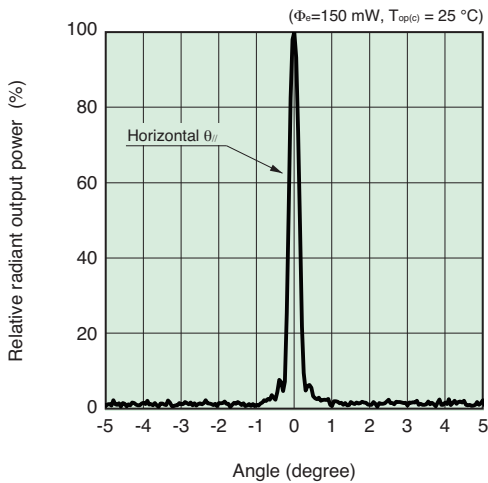
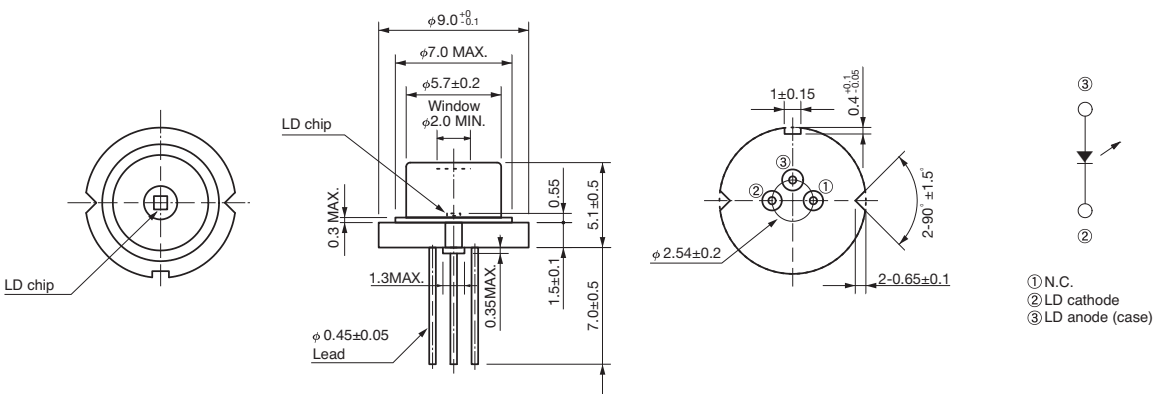


Figure4: Dimensional outline (unit:mm)



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