

■ **Features**

- 3 stack PLD
- Peak output power: ≥ 21 W
- Peak emission wavelength: 905 nm
- Emitting area size: $70 \mu\text{m} \times 10 \mu\text{m}$

■ **Applications**

- Laser range finder
- Security
- Measuring instruments



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

Parameter	Symbol	Value	Unit
Pulsed forward current	I_{fp}	10	A
Reverse voltage	V_{r}	2	V
Pulse duration	t_{w}	100	ns
Duty ratio	DR	0.1	%
Operating temperature	$T_{\text{op}(c)}$	-40 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +100	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Value			Unit	
			Min.	Typ.	Max.		
Pulsed radiant power (Peak power)	Φ_{ep}	$I_{\text{fp}} = 7 \text{ A}$	17	21	—	W	
Peak emission wavelength	λ_{p}		895	905	915	nm	
Forward voltage	V_{op}		—	11	14	V	
Spectral radiation half bandwidth	$\Delta\lambda$		—	6	10	nm	
Rise time	t_{r}		—	—	2	ns	
Beam spread angle	Parallel	$\theta_{//}$	$I_{\text{fp}} = 7 \text{ A}$ FWHM	7	11	15	degree
	Vertical	θ_{\perp}		18	23	28	degree
Lasing threshold current	I_{th}	—	—	0.4	1	A	
Emitting area size	—	Value at designing	—	70×10	—	$\mu\text{m} \times \mu\text{m}$	

Note: General operating condition: pulse width $t_{\text{w}} = 50 \text{ ns}$, repetition frequency $f_{\text{r}} = 1 \text{ kHz}$

Pulsed Laser Diode L11854-307-05

Figure 1: Radiant flux vs. Forward current (Typ.)

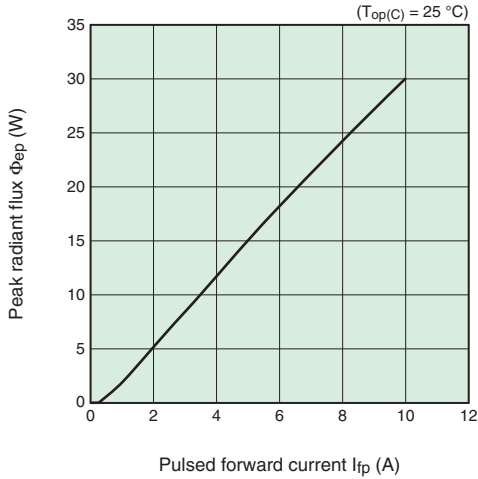


Figure 2: Emission spectrum (Typ.)

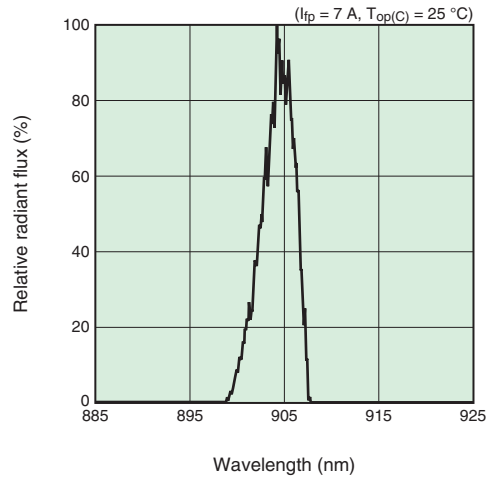


Figure 3: Directivity (Typ.)

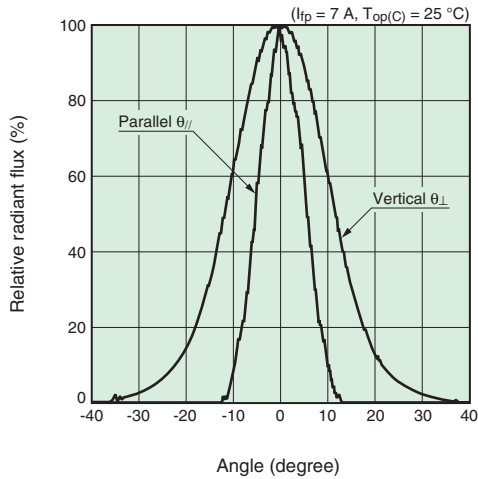


Figure 4: Emitting image of near filed pattern (NFP)

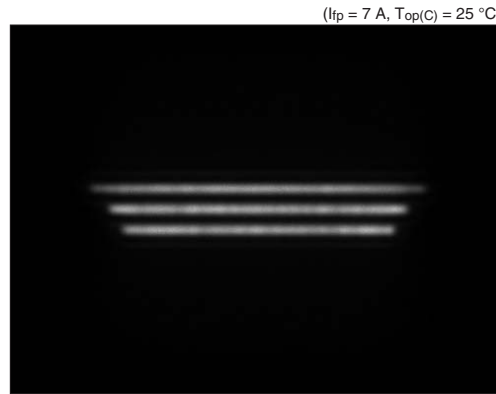
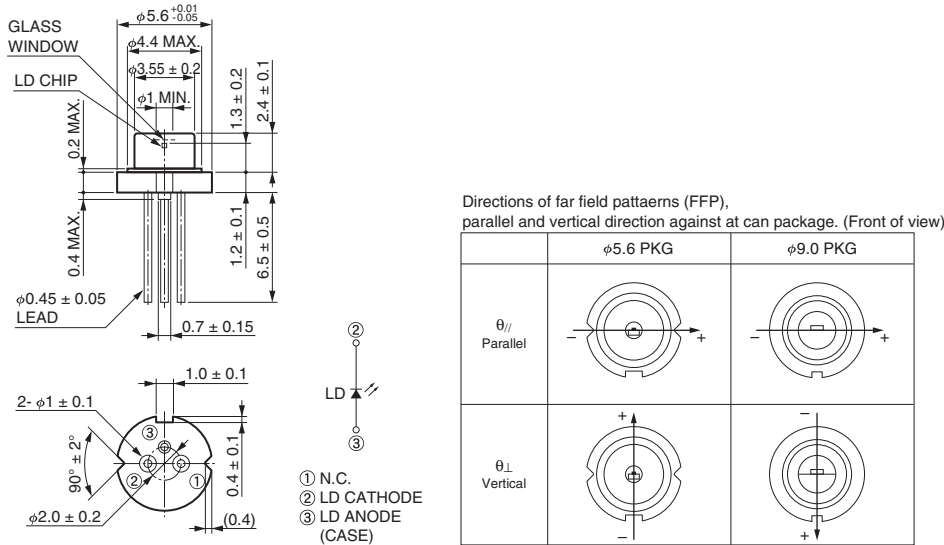


Figure 5: Dimensional outline (unit: mm)



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