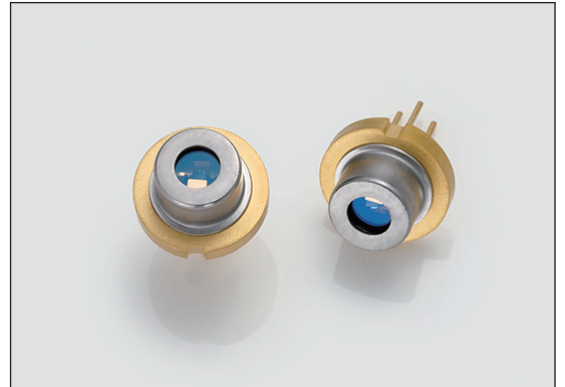


■ Features

- Single emitter PLD
- Peak output power: ≥ 20 W
- Peak emission wavelength: 870 nm
- Emitting area size: $230 \mu\text{m} \times 1 \mu\text{m}$

■ 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}	25	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}	$I_{\text{fp}} = 20 \text{ A}$	19	22	—	W
Peak emission wavelength	λ_{p}		860	870	880	nm
Forward voltage	V_{f}		—	7	—	V
Spectral radiation half bandwidth	$\Delta\lambda$		—	4	—	nm
Rise time	t_{r}		—	—	2	ns
Beam spread angle	Horizontal	$I_{\text{fp}} = 20 \text{ A}$ FWHM	7	10	13	degree
	Vertical		θ_{\perp}	25	30	35
Lasing threshold current	I_{th}	—	—	0.8	—	A
Emitting area size	—	Value at designing	—	230×1	—	$\mu\text{m} \times \mu\text{m}$

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

Pulsed Laser Diode L11649-120-04

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

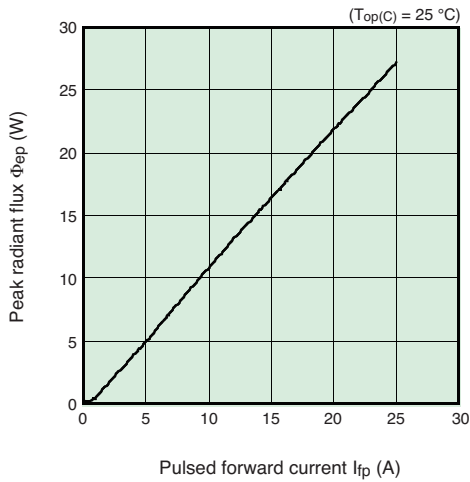


Figure 2: Emission spectrum (Typ.)

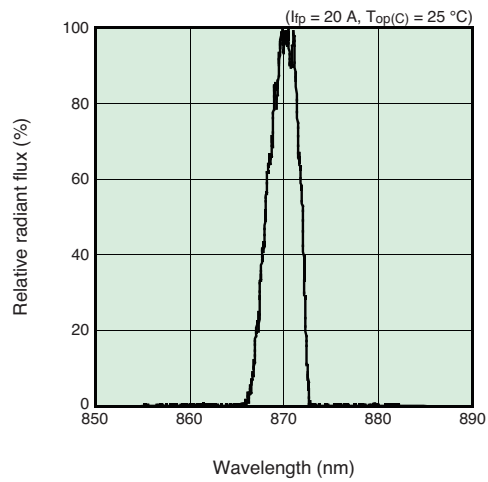


Figure 3: Directivity (Typ.)

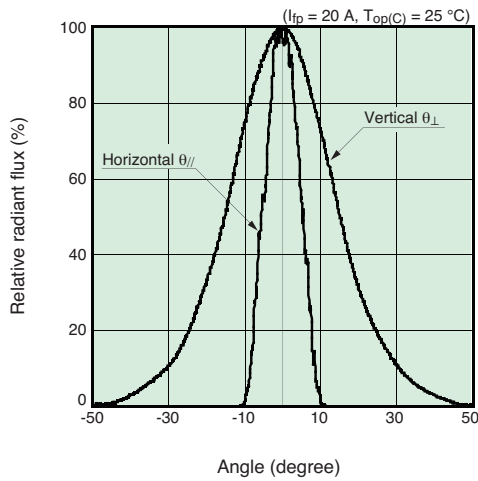
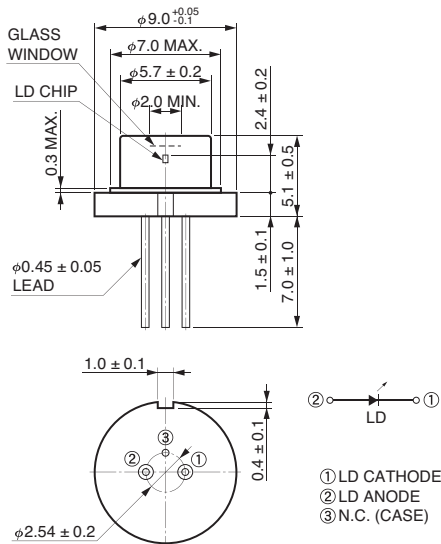
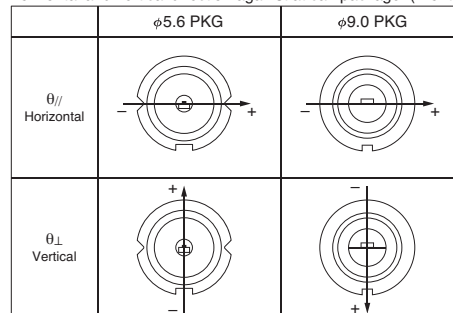


Figure 4: Dimensional outline (unit: mm)



Directions of far field patterns (FFP), horizontal and vertical direction against at can package. (Front of view)



HAMAMATSU PHOTONICS K.K. www.hamamatsu.com

HAMAMATSU PHOTONICS K.K., Laser Promotion Division, Business Promotion G.

1-8-3, Shinmiyakoda, Kita-ku, Hamamatsu City, Shizuoka, 431-2103, Japan, Telephone: (81)53-484-1301, Fax: (81)53-484-1302, E-mail: sales-laser@lpd.hpk.co.jp

U.S.A.: Hamamatsu Corporation, 360 Foothill Road, Bridgewater, NJ 08807, U.S.A., Telephone: (1)908-231-0960, Fax: (1)908-231-1218 E-mail: usa@hamamatsu.com

Germany: Hamamatsu Photonics Deutschland GmbH, Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-265-8 E-mail: info@hamamatsu.de

France: Hamamatsu Photonics France S.A.R.L., 19, Rue du Saule Trappu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: (33)1 69 53 71 00, Fax: (33)1 69 53 71 10 E-mail: info@hamamatsu.fr

United Kingdom: Hamamatsu Photonics UK Limited, 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire AL7 1BW, UK, Telephone: (44)1707-294888, Fax: (44)1707-325777 E-mail: info@hamamatsu.co.uk

North Europe: Hamamatsu Photonics Norden AB, Torshamnsgatan 35 16440 Kista, Sweden, Telephone: (46)8-509 031 00, Fax: (46)8-509 031 01 E-mail: info@hamamatsu.se

Italy: Hamamatsu Photonics Italia S.r.l., Strada della Moja, 1 int. 6, 20020 Arese (Milano), Italy, Telephone: (39)02-93 58 17 33, Fax: (39)02-93 58 17 41 E-mail: info@hamamatsu.it

China: Hamamatsu Photonics (China) Co., Ltd.: 1201 Tower B, Jiaming Center, 27 Dongsanhuan Beilu, Chaoyang District, 100020 Beijing, P.R.China, Telephone: (86)10-6586-6006, Fax: (86)10-6586-2866 E-mail: hpc@hamamatsu.com.cn

Taiwan: Hamamatsu Photonics Taiwan Co., Ltd.: 8F-3, No.158, Section2, Gongdao 5th Road, East District, Hsinchu, 300, Taiwan R.O.C. Telephone: (886)3-659-0080, Fax: (886)3-659-0081 E-mail: info@hamamatsu.com.tw

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