

Infrared LED



L1915 series

TO-46 type GaAlAs infrared LED

The L1915 is mounted on a TO-46 metal stem potted with clear epoxy resin. The L1915-01 is encapsulated in a TO-46 package sealed with a glass lens window. The L1915-02 is also encapsulated in a TO-46 package but sealed with a flat glass window.

- Features

- High radiant output power
- Direct modulation possible
- → High reliability and long life

Applications

- **■** Automatic control systems
- Optical switches
- Mark sensors
- Optical remote control

➡ Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Condition	Value	Unit
Forward current	IF		100	mA
Reverse voltage	VR		5	V
Pulse forward current	1 1-0	Pulse width=10 µs Duty ratio=1%	1.5	А
Operating temperature	Topr		-30 to +85	°C
Storage temperature	Tstg		-40 to +100*	°C

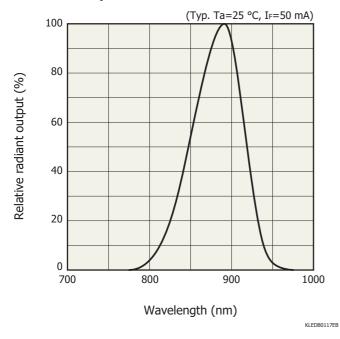
 $^{^{\}ast}$ The L1915 is guaranteed to resist temperature cycle test of up to 5 cycles.

Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

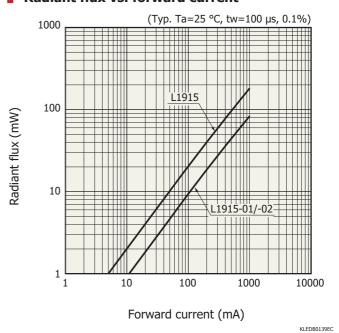
■ Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	L1915			L1915-01			L1915-02			Unit
			Min.	Тур.	Max.	Min.	Тур.	Max.	Min.	Тур.	Max.	UIIIL
Peak emission wavelength	λр	IF=50 mA	870	890	920	870	890	920	870	890	920	nm
Spectral half width	Δλ	IF=50 mA	-	80	-	-	80	-	-	80	-	nm
Forward voltage	VF	IF=50 mA	-	1.4	1.5	-	1.4	1.5	-	1.4	1.5	V
Pulse forward voltage	VFP	IF=1.5 A	-	3.1	3.8	-	3.1	3.8	-	3.1	3.8	V
Reverse current	IR	VR=5 V	-	-	5	-	-	5	-	-	5	μΑ
Radiant flux	фе	IF=50 mA	8	10	-	3.6	4.5	-	3.6	4.5	-	mW
Radiant illuminance	PE	IF=50 mA	-	1.0	-	-	2.7	-	-	1.0	-	mW/cm ²
Rise time	tr	IF=50 mA, 10 to 90%	-	0.45	0.7	-	0.45	0.7	-	0.45	0.7	μs
Fall time	tf	IF=50 mA, 90 to 10%	-	0.45	0.7	-	0.45	0.7	-	0.45	0.7	μs

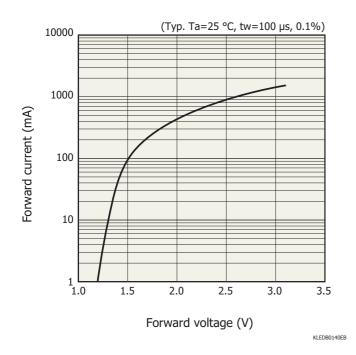
Emission spectrum



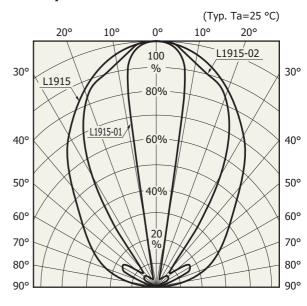
- Radiant flux vs. forward current



Forward current vs. forward voltage



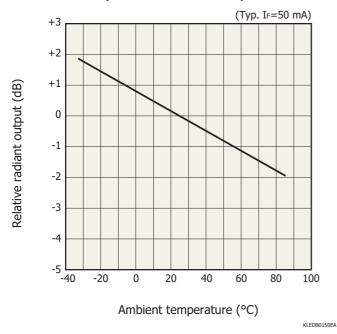
Directivity



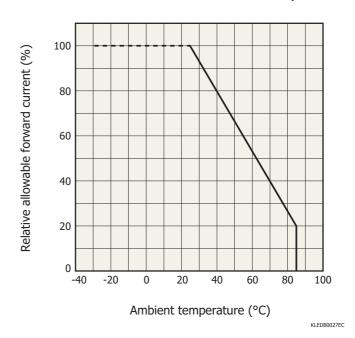
Relative radiant output (%)

KLEDB0141EA

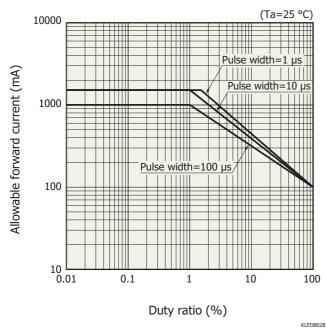
- Radiant output vs. ambient temperature



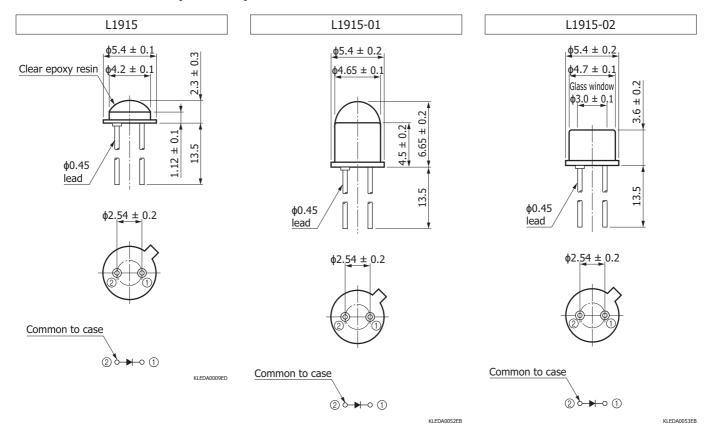
Allowable forward current vs. ambient temperature



Allowable forward current vs. duty ratio



Dimensional outlines (unit: mm)



- Related information

www.hamamatsu.com/sp/ssd/doc_en.html

- Precautions
- · Disclaimer
- · Metal, ceramic, plastic products

Information described in this material is current as of November, 2015.

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HAMAMATSU

www.hamamatsu.com

HAMAMATSU PHOTONICS K.K., Solid State Division

1126-1 Ichino-cho, Higashi-ku, Hamamatsu City, 435-8558 Japan, Telephone: (81) 53-434-3311, Fax: (81) 53-434-5184
U.S.A.: Hamamatsu Corporation: 360 Foothill Road, Bridgewater, N.J. 08807, U.S.A., Telephone: (1) 908-231-0960, Fax: (1) 908-231-1218
Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49) 8152-375-0, Fax: (49) 8152-265-8
France: Hamamatsu Photonics France S.A.R.L.: 19, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: 33-(1) 69 53 71 00, Fax: 33-(1) 69 53 71 00
United Kingdom: Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire AL7 1BW, United Kingdom, Telephone: (44) 1707-294888, Fax: (44) 1707-325777
North Europe: Hamamatsu Photonics Norden AB: Torshamnsgatan 35 16440 Kista, Sweden, Telephone: (46) 8-509-031-01
Italy: Hamamatsu Photonics Italia S.r.l.: Strada della Moia, 1 int. 6, 20020 Arese (Milano), Italy, Telephone: (39) 02-93581733, Fax: (39) 02-93581741
China: Hamamatsu Photonics (China) Co., Ltd.: B1201, Jiaming Center, No.27 Dongsanhuan Beilu, Chaoyang District, Beijing 100020, China, Telephone: (86) 10-6586-6006, Fax: (86) 10-6586-6006, Fax: (87) 10-6586-2866