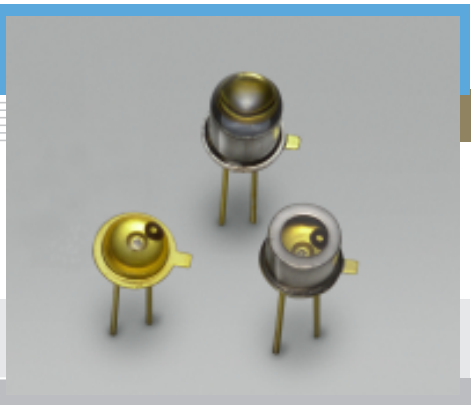
Infrared LED
L1915 series

TO-46 type GaAlAs infrared LED



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

- Auto-focus
- Automatic control systems
- Optical switches
- Mark sensors
- Optical remote control

■ Absolute maximum ratings (Ta=25 °C)

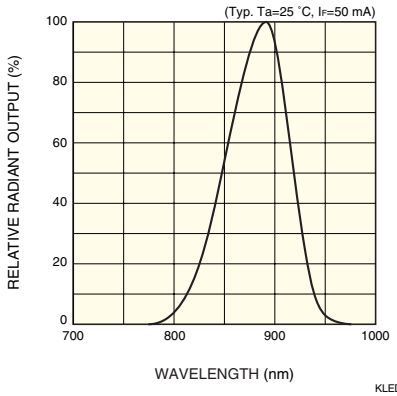
Parameter	Symbol	Condition	Value	Unit
Forward current	I_F		100	mA
Reverse voltage	V_R		5	V
Pulse forward current	I_{FP}	Pulse width=10 µs Duty ratio=1 %	1.5	A
Operating temperature	Topr		-30 to +85	°C
Storage temperature	Tstg		-40 to +100 *	°C

* L1915 is guaranteed to resist temperature cycle test of up to 5 cycles.

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

Parameter	Symbol	Condition	L1915			L1915-01			L1915-02			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak emission wavelength	λp	I_F=50 mA	870	890	920	870	890	920	870	890	920	nm
Spectral half width	Δλ	I_F=50 mA	-	80	-	-	80	-	-	80	-	nm
Forward voltage	V_F	I_F=50 mA	-	1.4	1.5	-	1.4	1.5	-	1.4	1.5	V
Pulse forward voltage	V_{FP}	I_F=1.5 A	-	3.1	3.8	-	3.1	3.8	-	3.1	3.8	V
Reverse current	I_R	V_R=5 V	-	-	5	-	-	5	-	-	5	µA
Radiant flux	φe	I_F=50 mA	8	10	-	3.6	4.5	-	3.6	4.5	-	mW
Radiant illuminance	P_E	I_F=50 mA	-	1.0	-	-	2.7	-	-	1.0	-	mW/cm^2
Rise time	tr	I_F=50 mA, 10 to 90 %	-	0.45	0.7	-	0.45	0.7	-	0.45	0.7	µs
Fall time	tf	I_F=50 mA, 90 to 10 %	-	0.45	0.7	-	0.45	0.7	-	0.45	0.7	µs

■ Emission spectrum



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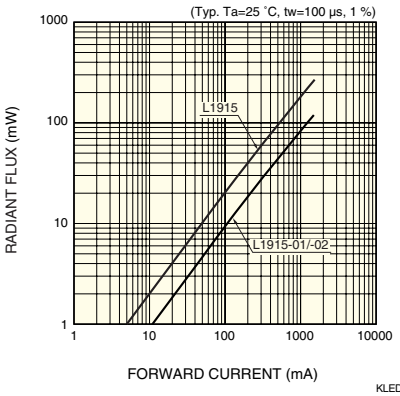
■ Radiant flux vs. forward current



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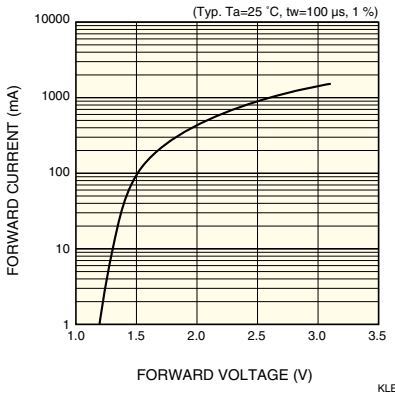
■ Forward current vs. forward voltage



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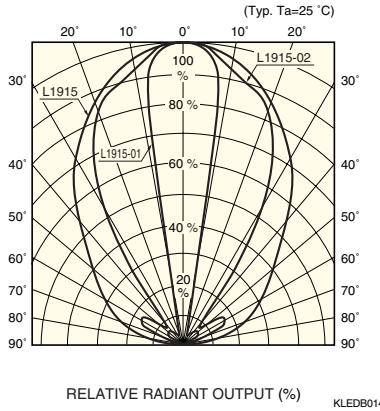
■ Directivity



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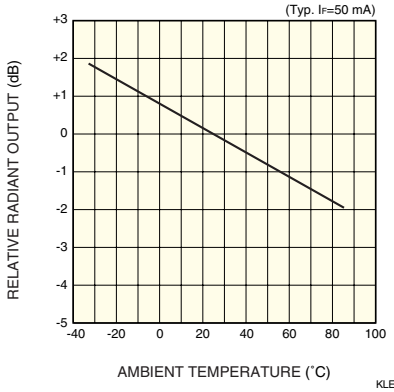
■ Radiant output vs. ambient temperature



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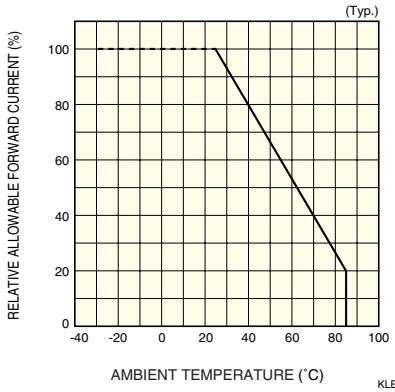
■ Allowable forward current vs. ambient temperature



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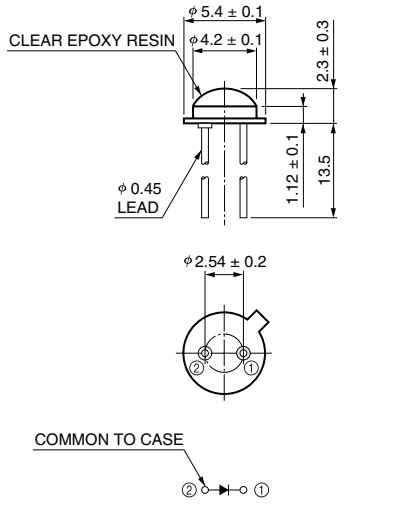
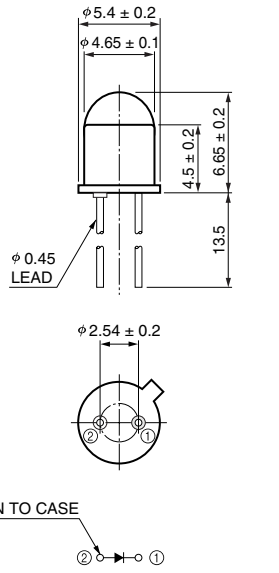
■ Dimensional outlines (unit: mm)

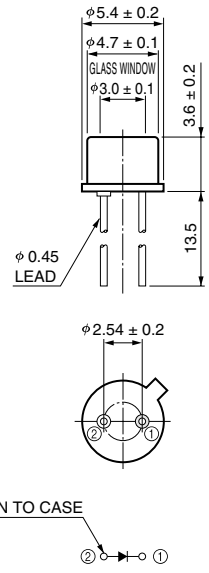
L1915



L1915-01



L1915-02



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HAMAMATSU PHOTONICS K.K., Solid State Division
1126-1 Ichino-cho, Hamamatsu City, 435-8558 Japan, Telephone: (81) 053-434-3311, Fax: (81) 053-434-5184, http://www.hamamatsu.com
U.S.A.: Hamamatsu Corporation: 360 Foothill Road, P.O.Box 6910, Bridgewater, N.J. 08807-0910, 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) 08152-3750, Fax: (49) 08152-2658
France: Hamamatsu Photonics France S.A.R.L.: 8, 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 10
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: Smidesvägen 12, SE-171 41 Solna, Sweden, Telephone: (46) 8-509-031-00, Fax: (46) 8-509-031-01
Italy: Hamamatsu Photonics Italia S.R.L.: Strada della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39) 02-935-81-733, Fax: (39) 02-935-81-741

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