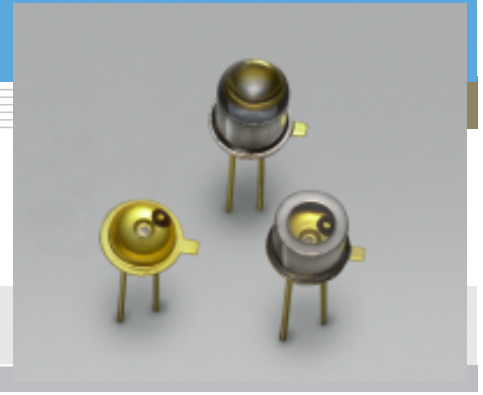


Infrared LED

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)

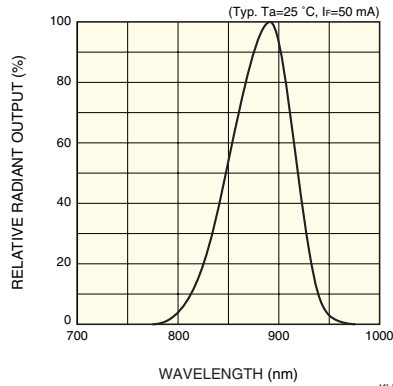
Parameter	Symbol	Condition	Value	Unit
Forward current	I _F		100	mA
Reverse voltage	V _R		5	V
Pulse forward current	I _{FP}	Pulse width=10 μs Duty ratio=1 %	1.5	A
Operating temperature	T _{opr}		-30 to +85	°C
Storage temperature	T _{stg}		-40 to +100 *	°C

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

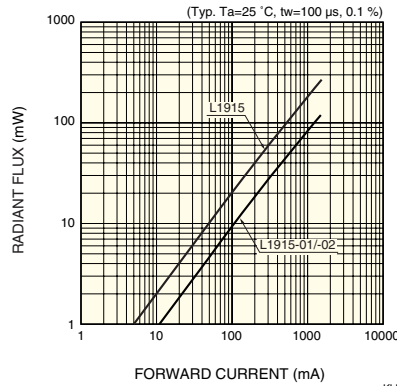
■ Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	L1915			L1915-01			L1915-02			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak emission wavelength	λ _p	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	φ _e	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	t _r	I _F =50 mA, 10 to 90 %	-	0.45	0.7	-	0.45	0.7	-	0.45	0.7	μs
Fall time	t _f	I _F =50 mA, 90 to 10 %	-	0.45	0.7	-	0.45	0.7	-	0.45	0.7	μs

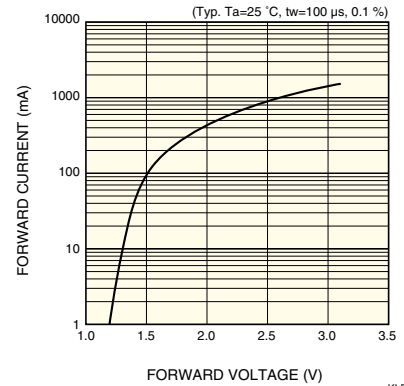
Emission spectrum



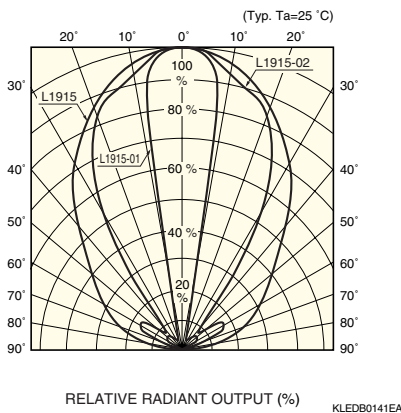
Radiant flux vs. forward current



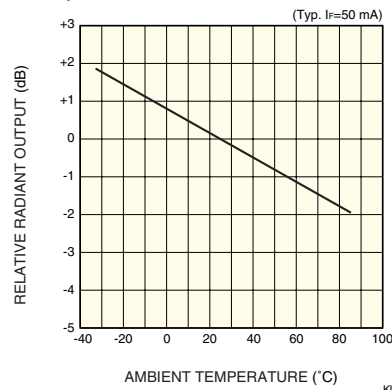
Forward current vs. forward voltage



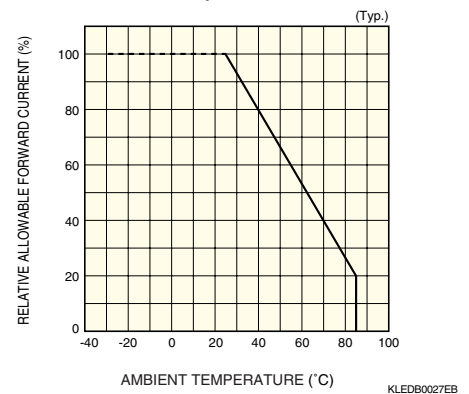
Directivity



Radiant output vs. ambient temperature

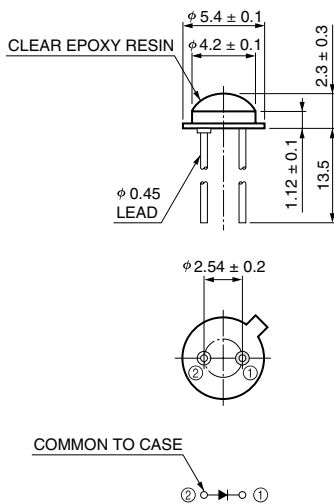


Allowable forward current vs. ambient temperature

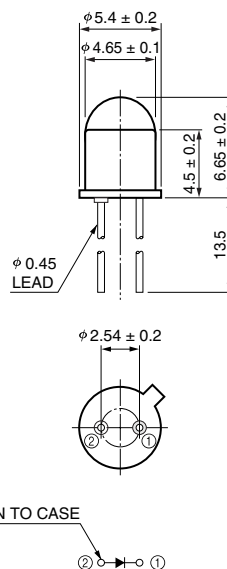


Dimensional outlines (unit: mm)

L1915



L1915-01



L1915-02

