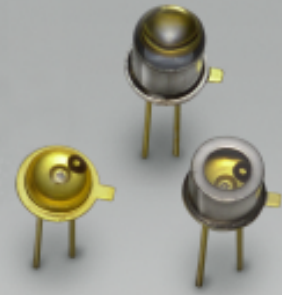


Infrared LED

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)

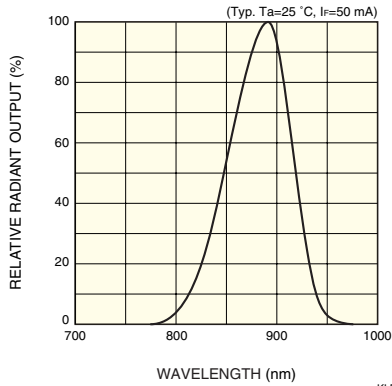
Parameter	Symbol	Condition	Value	Unit
Forward current	I _F		100	mA
Reverse voltage	V _R		5	V
Pulse forward current	I _{FP}	Pulse width=10 μs Duty ratio=1 %	1.5	A
Operating temperature	T _{opr}		-30 to +85	°C
Storage temperature	T _{stg}		-40 to +100 *	°C

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

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

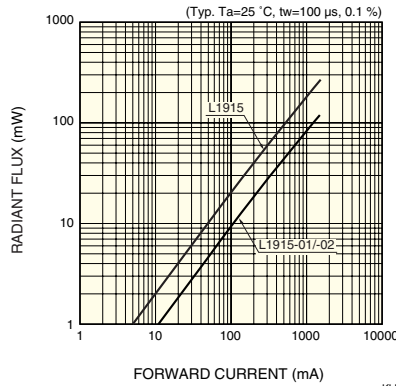
Parameter	Symbol	Condition	L1915			L1915-01			L1915-02			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak emission wavelength	λ _p	I _F =50 mA	870	890	920	870	890	920	870	890	920	nm
Spectral half width	Δλ	I _F =50 mA	-	80	-	-	80	-	-	80	-	nm
Forward voltage	V _F	I _F =50 mA	-	1.4	1.5	-	1.4	1.5	-	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



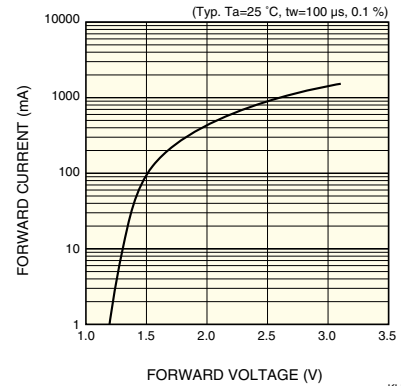
KLEDB0117EB

Radiant flux vs. forward current



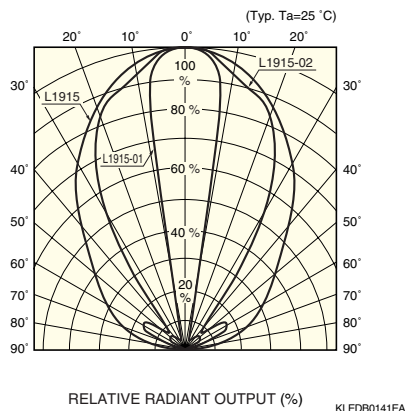
KLEDB0139EB

Forward current vs. forward voltage



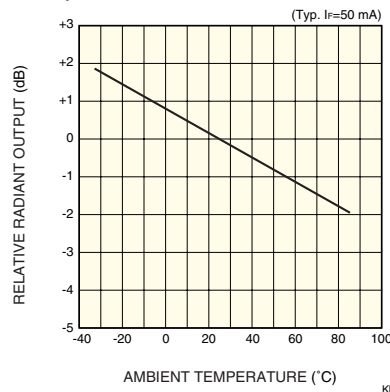
KLEDB0140EB

Directivity



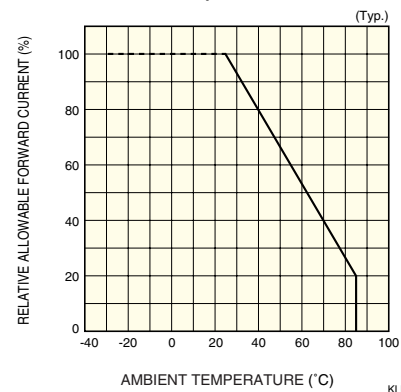
KLEDB0141EA

Radiant output vs. ambient temperature



KLEDB0150EA

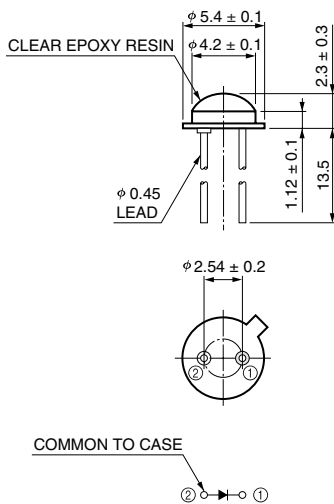
Allowable forward current vs. ambient temperature



KLEDB0027EB

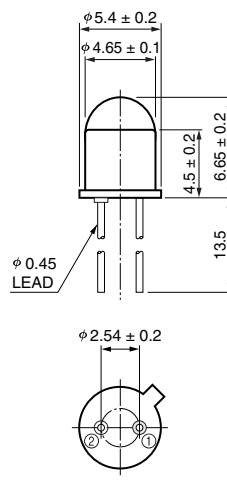
Dimensional outlines (unit: mm)

L1915



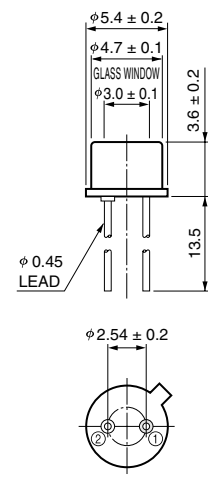
KLEDA009ED

L1915-01



KLEDA0052EB

L1915-02



KLEDA0053EB