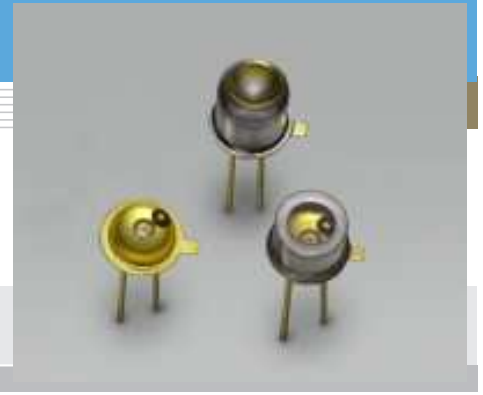


Infrared LED

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)

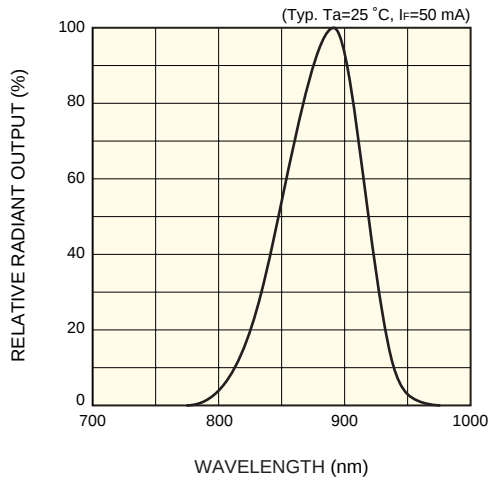
Parameter	Symbol	Condition	Value	Unit
Forward current	IF		100	mA
Reverse voltage	VR		5	V
Pulse forward current	IFP	Pulse width=10 μs Duty ratio=1 %	1.5	A
Operating temperature	Topr		-30 to +85	°C
Storage temperature	Tstg		-40 to +100 *	°C

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

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

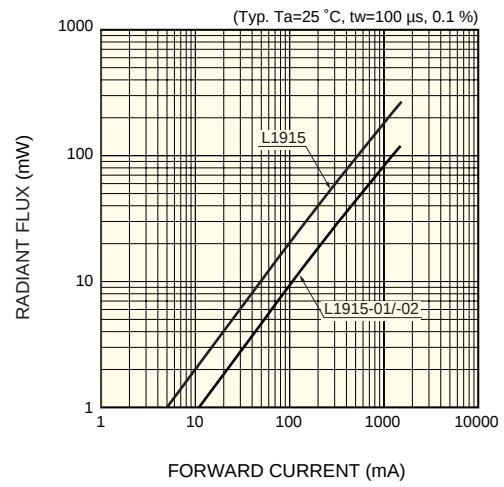
Parameter	Symbol	Condition	L1915			L1915-01			L1915-02			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak emission wavelength	λ_p	IF=50 mA	870	890	920	870	890	920	870	890	920	nm
Spectral half width	$\Delta\lambda$	IF=50 mA	-	80	-	-	80	-	-	80	-	nm
Forward voltage	VF	IF=50 mA	-	1.4	1.5	-	1.4	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	μA
Radiant flux	ϕ_e	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



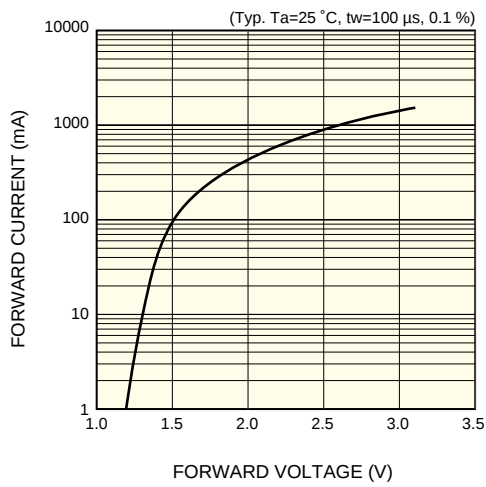
KLEDB0117EB

Radiant flux vs. forward current



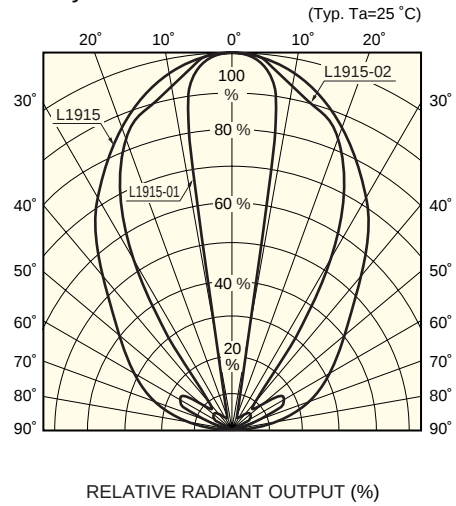
KLEDB0139EB

Forward current vs. forward voltage



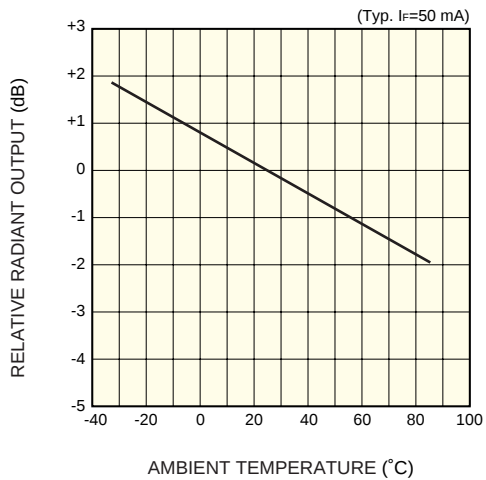
KLEDB0140EB

Directivity



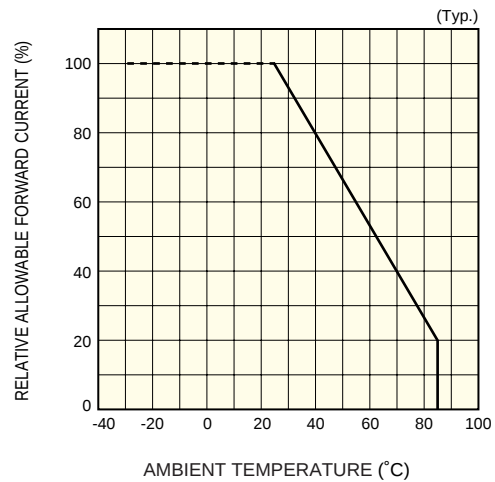
KLEDB0141EA

Radiant output vs. ambient temperature



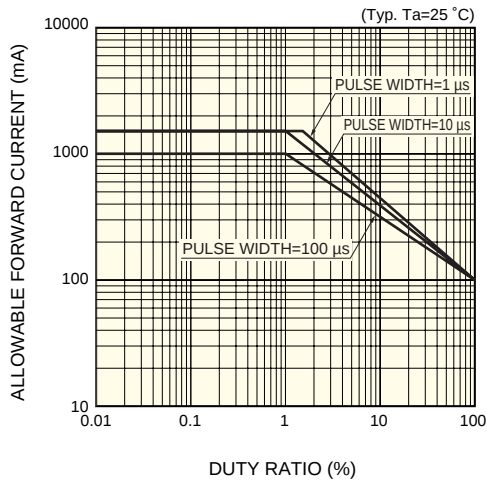
KLEDB0150EA

Allowable forward current vs. ambient temperature



KLEDB0027EB

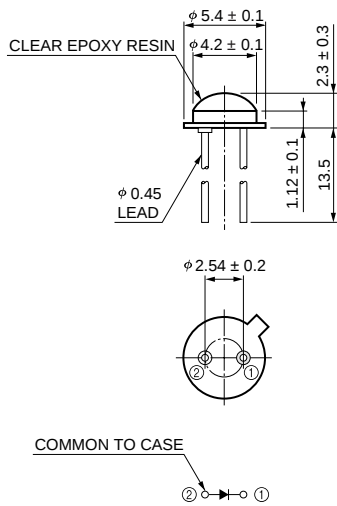
■ Allowable forward current vs. duty ratio



KLEDB0287EA

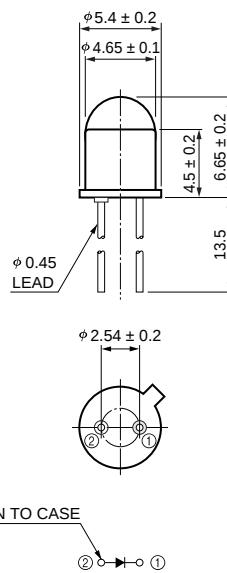
■ Dimensional outlines (unit: mm)

L1915



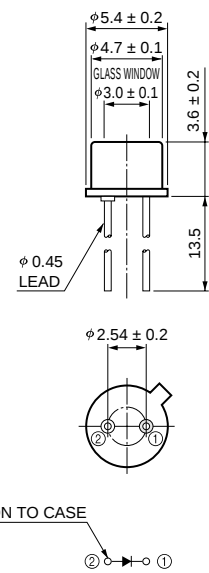
KLEDA0009ED

L1915-01



KLEDA0052EB

L1915-02



KLEDA0053EB