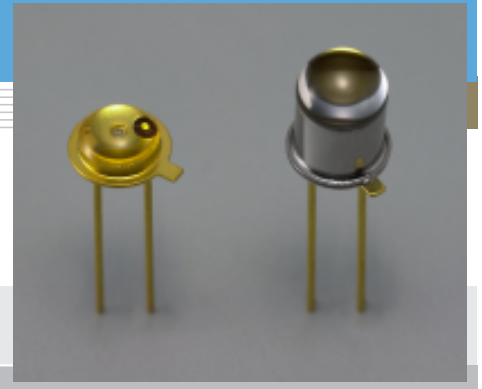


# Infrared LED

## L2690 series

High power GaAlAs infrared LED



### Features

- High radiant output power
- High reliability

### Applications

- Optical switch
- Automatic control system

#### ■ Absolute maximum ratings (Ta=25 °C)

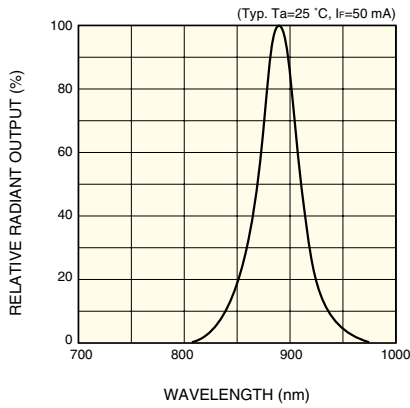
Parameter	Symbol	Condition	Value	Unit
Forward current	IF		100	mA
Reverse voltage	VR		5	V
Pulse forward current	IFP	Pulse width: 10 μs Duty ratio: 1 %	1.5	A
Operating temperature	Topr		-30 to 85	°C
Storage temperature	Tstg		-40 to 100 *	°C

\* Guaranteed to resist temperature cycle test of up to 5 cycles.

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

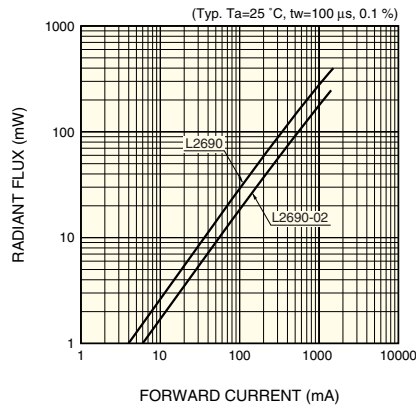
Parameter	Symbol	Condition	L2690			L2690-02			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak emission wavelength	$\lambda_p$	IF=50 mA	870	890	920	870	890	920	nm
Spectral half width	$\Delta\lambda$	IF=50 mA	-	50	-	-	50	-	nm
Forward voltage	VF	IF=50 mA	-	1.45	1.60	-	1.45	1.60	V
Pulse forward voltage	VFP	IF=1.5 A	-	3.3	4.0	-	3.3	4.0	V
Reverse current	IR	VR=5 V	-	-	5	-	-	5	μA
Radiant flux	$\phi_e$	IF=50 mA	12.0	14.0	-	7.0	9.0	-	mW
Radiant illuminance	PE	IF=50 mA	-	0.6	-	-	4.4	-	mW/cm <sup>2</sup>
Rise time	tr	IF=50 mA, 10 to 90 %	-	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	μs

## ■ Emission spectrum



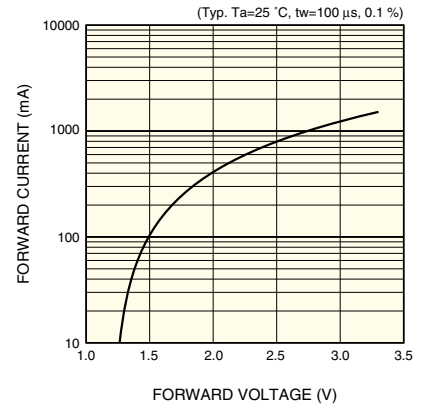
KLEDB0117EB

## ■ Radiant flux vs. forward current



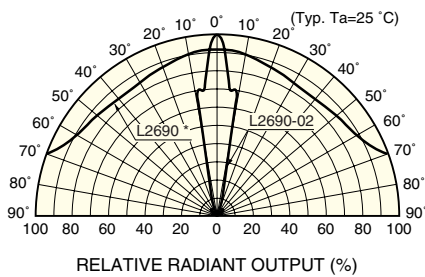
KLEDB0194EA

## ■ Forward current vs. forward voltage



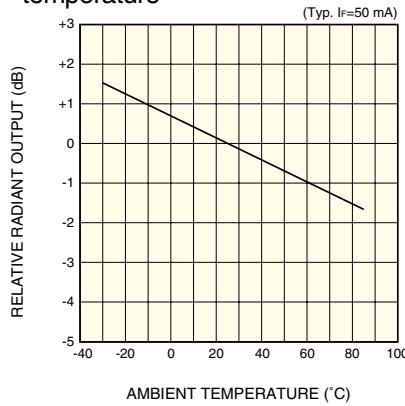
KLEDB0195EA

## ■ Directivity



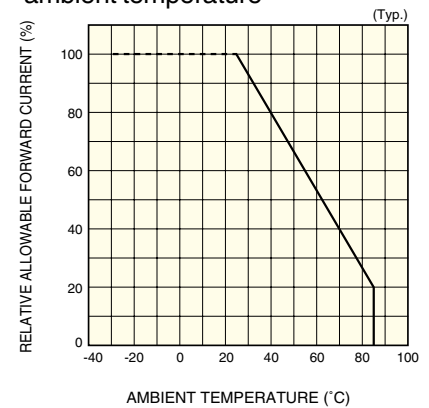
\* L2690: directivity is shown within the  $\pm 70^\circ$  range while excluding reflective components.

## ■ Radiant output vs. ambient temperature



KLEDB0125EA

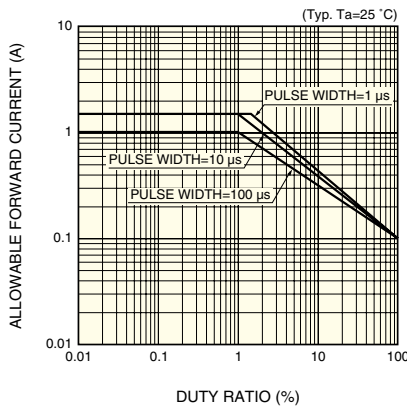
## ■ Allowable forward current vs. ambient temperature



KLEDB0145EA

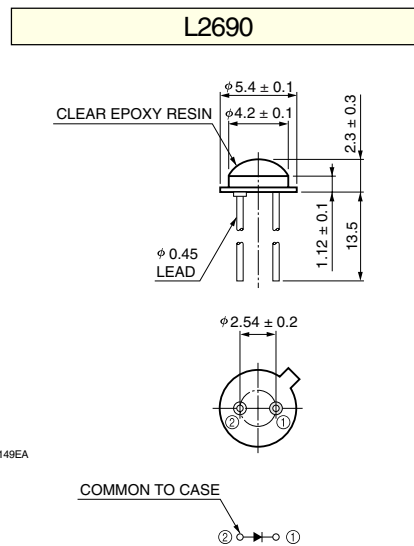
KLEDB0027EB

## ■ Allowable forward current vs. duty ratio

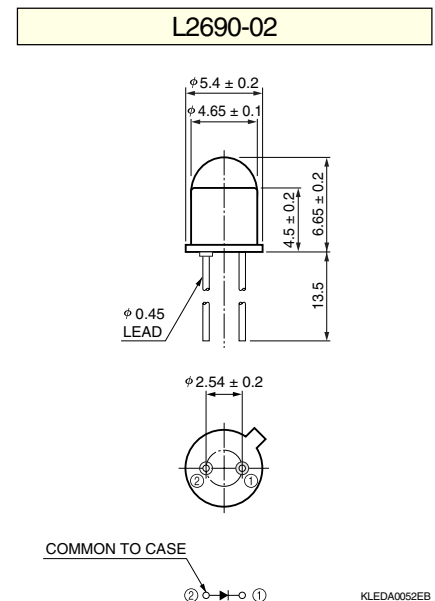


KLEDB0149EA

## ■ Dimensional outlines (unit: mm)



KLEDA0009ED



KLEDA0052EB

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