



Infrared LED

L2690 series

High power GaAlAs infrared LED

Features

- High radiant output power
- High reliability

Applications

- Optical switches
- 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

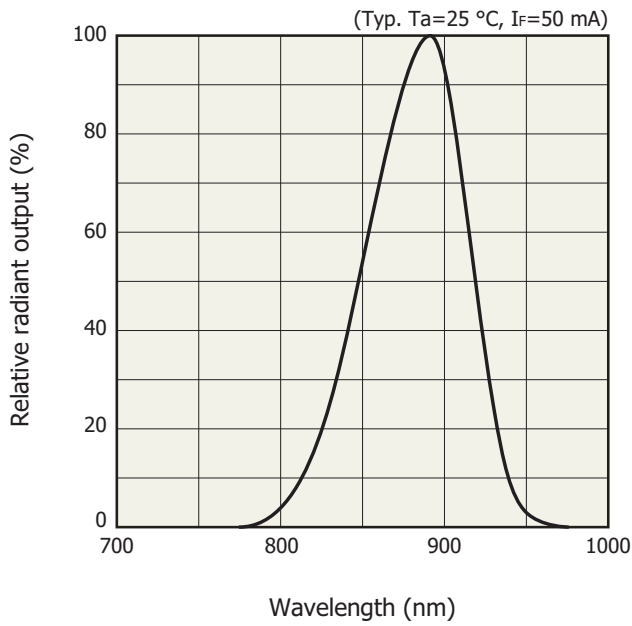
* Guaranteed to resist temperature cycle test of up to 5 cycles

Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

Electrical and optical characteristics (Ta=25 °C)

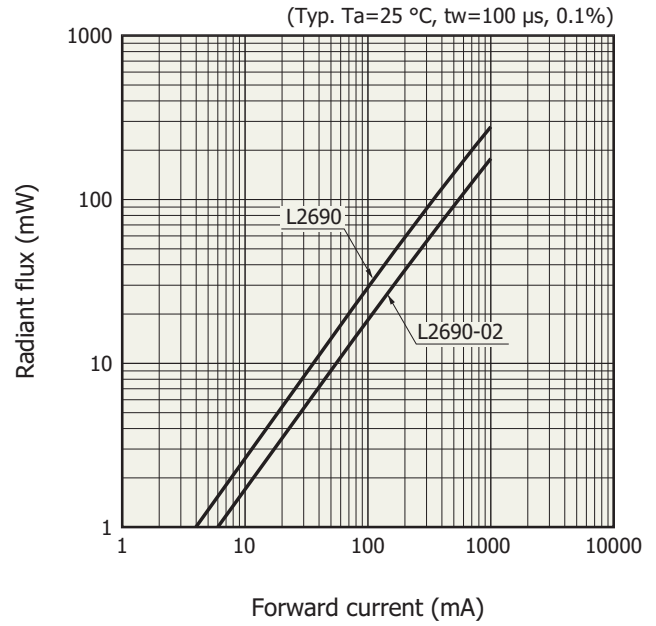
Parameter	Symbol	Condition	L2690			L2690-02			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak emission wavelength	λp	IF=50 mA	870	890	920	870	890	920	nm
Spectral half width	Δλ	IF=50 mA	-	50	-	-	50	-	nm
Forward voltage	VF	IF=50 mA	-	1.45	1.60	-	1.45	1.60	V
Pulse forward voltage	VFP	IF=1.5 A	-	3.3	4.0	-	3.3	4.0	V
Reverse current	IR	VR=5 V	-	-	5	-	-	5	μA
Radiant flux	φe	IF=50 mA	12.0	14.0	-	7.0	9.0	-	mW
Radiant illuminance	PE	IF=50 mA	-	0.6	-	-	4.4	-	mW/cm ²
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



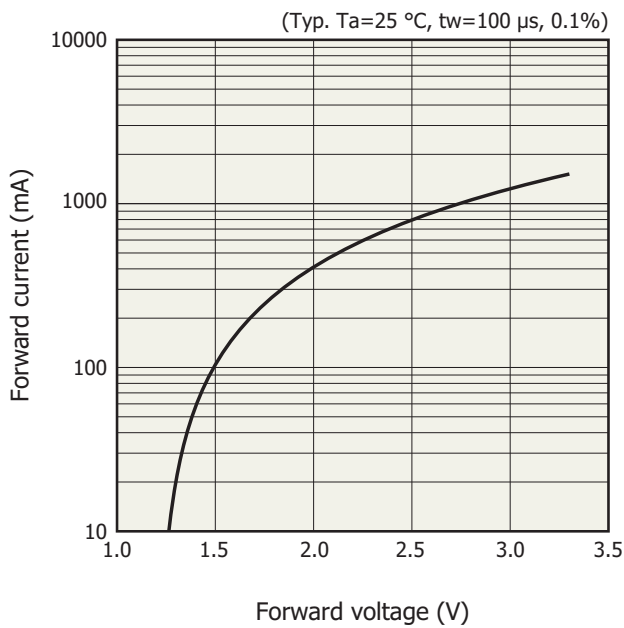
KLEDB0117EB

Radiant flux vs. forward current



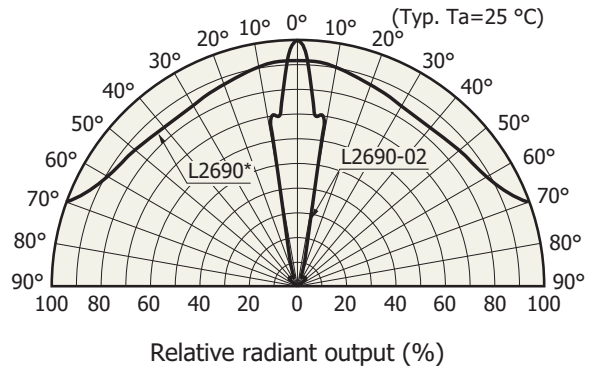
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Forward current vs. forward voltage



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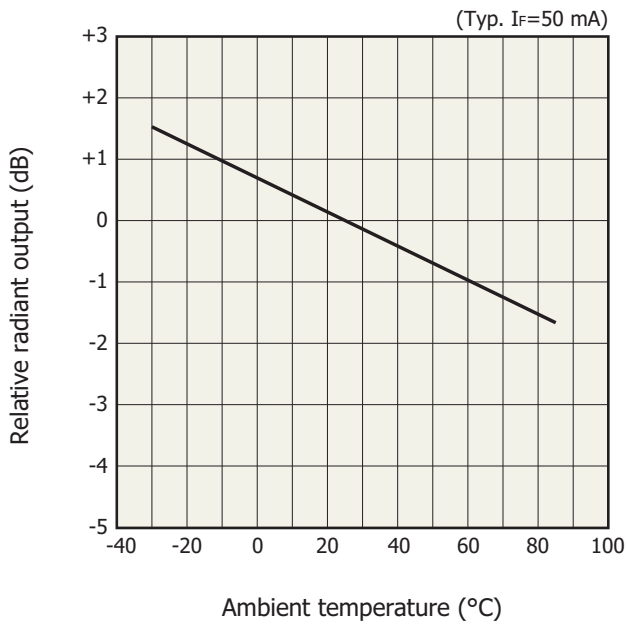
Directivity



* Within $\pm 70^\circ$ range while excluding reflective components

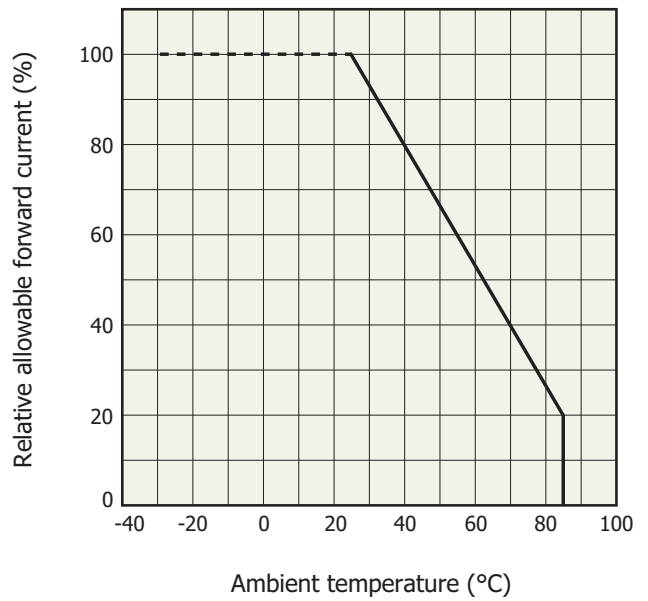
KLEDB0125EB

❑ Radiant output vs. ambient temperature



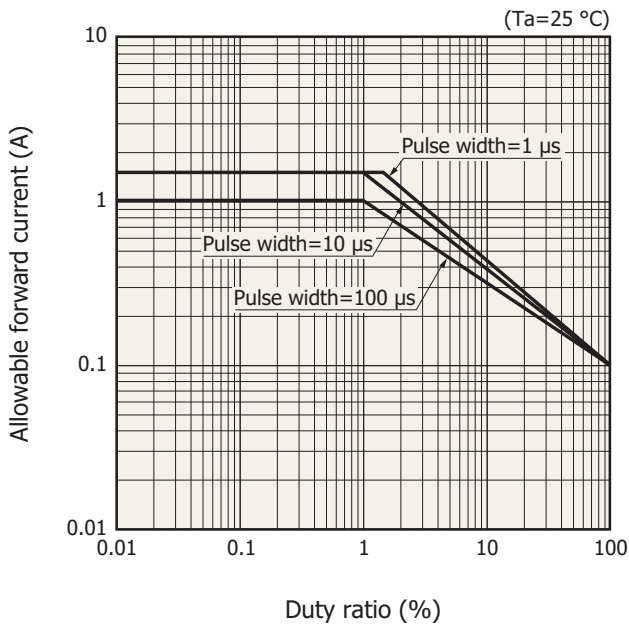
KLEDB0145EA

❑ Allowable forward current vs. ambient temperature



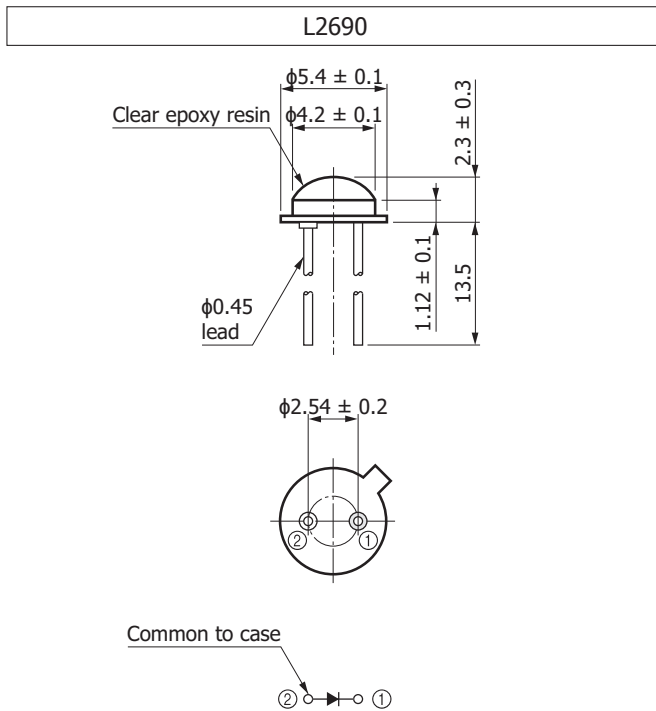
KLEDB0027EC

❑ Allowable forward current vs. duty ratio

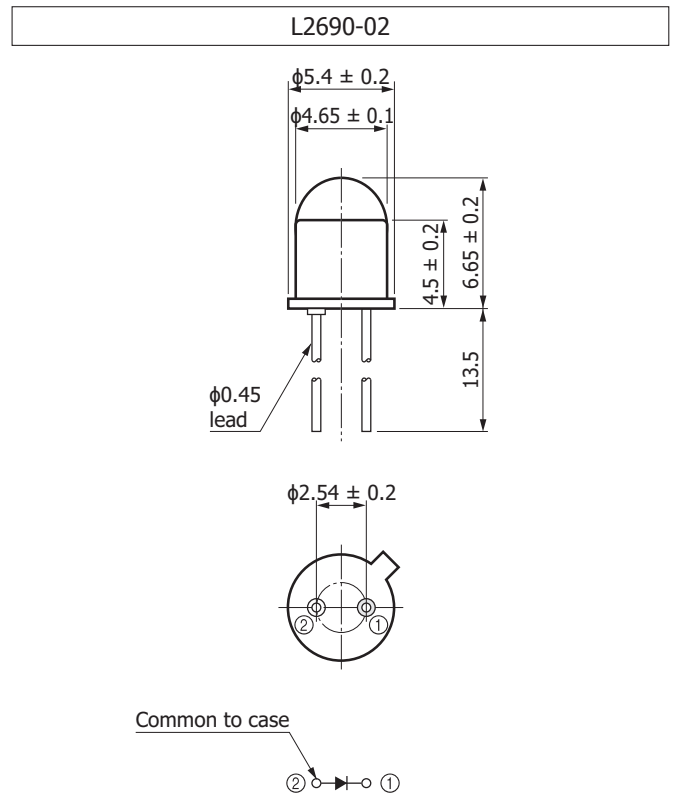


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Dimensional outlines (unit: mm)



KLEDA0009ED



KLEDA0052EB

Related information

www.hamamatsu.com/sp/ssd/doc_en.html

Precautions

- Disclaimer
- Metal, ceramic, plastic products

Information described in this material is current as of November, 2015.

Product specifications are subject to change without prior notice due to improvements or other reasons. This document has been carefully prepared and the information contained is believed to be accurate. In rare cases, however, there may be inaccuracies such as text errors. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

The product warranty is valid for one year after delivery and is limited to product repair or replacement for defects discovered and reported to us within that one year period. However, even if within the warranty period we accept absolutely no liability for any loss caused by natural disasters or improper product use. Copying or reprinting the contents described in this material in whole or in part is prohibited without our prior permission.

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