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Red LED

L10363

High-power red light emission diode

The L10363 is a red LED with a peak emission wavelength of 700 nm. The hermetic seal package provides high reliability, and the lens cap provides narrow directivity.

Features

- **High reliability**
- **Narrow directivity**

Applications

- **Optical switches**

Structure

Parameter	Specification
Package	TO-46
Reflector	Yes
Window material	Lens type borosilicate glass

Absolute maximum ratings (Ta=25 °C unless otherwise noted)

Parameter	Symbol	Condition	Value	Unit
Reverse voltage	V_R		5	V
Forward current	I_F		70	mA
Forward current decrease rate	-	Ta > 25 °C	0.9	mA/°C
Pulse forward current	I_{FP}	Pulse width=10 µs Duty ratio=1%	0.5	A
Pulse forward current decrease rate	-	Ta > 25 °C	7	mA/°C
Power dissipation	P		160	mW
Operating temperature	Topr	No dew condensation*1	-30 to +85	°C
Storage temperature	Tstg	No dew condensation*1	-40 to +100	°C
Soldering conditions	-		260 °C or less, within 5 s, at least 1 mm away from lead roots	

*1: When there is a temperature difference between a product and the surrounding area in high humidity environment, dew condensation may occur on the product surface. Dew condensation on the product may cause deterioration in characteristics and reliability.

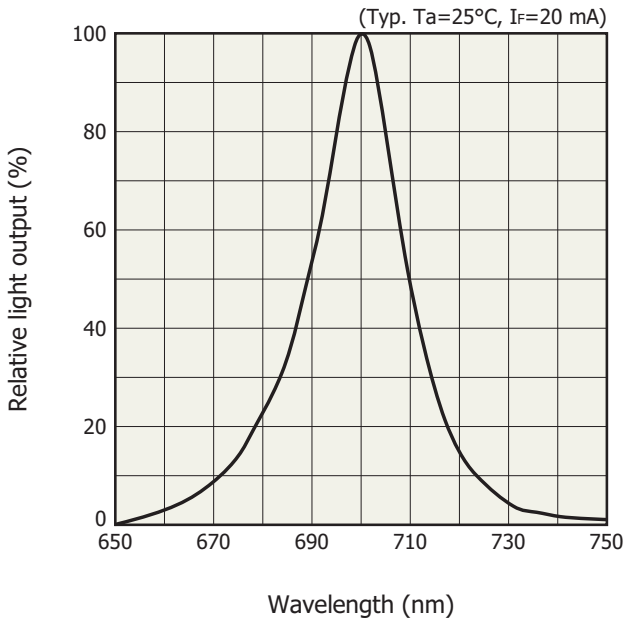
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak emission wavelength	λp	I_F=20 mA	685	700	715	nm
Spectral half width	Δλ	I_F=20 mA	-	20	-	nm
Forward voltage	V_F	I_F=20 mA	-	1.7	2.1	V
Reverse current	I_R	V_R=5 V	-	-	10	µA
Radiant flux	ϕe	I_F=20 mA	1.0	1.4	-	mW
Cutoff frequency*2	fc	I_F=20 mA ± 1 mAp-p	-	5	-	MHz

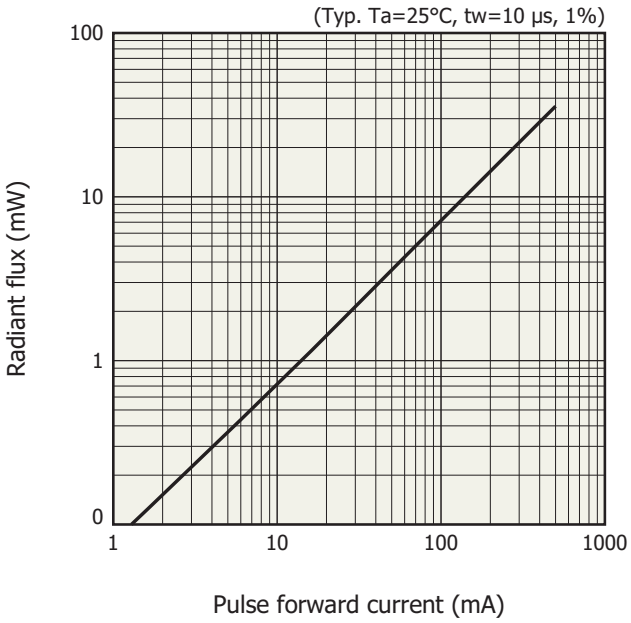
*2: Frequency at which the light output drops by 3 dB relative to the output at 100 kHz

Emission spectrum



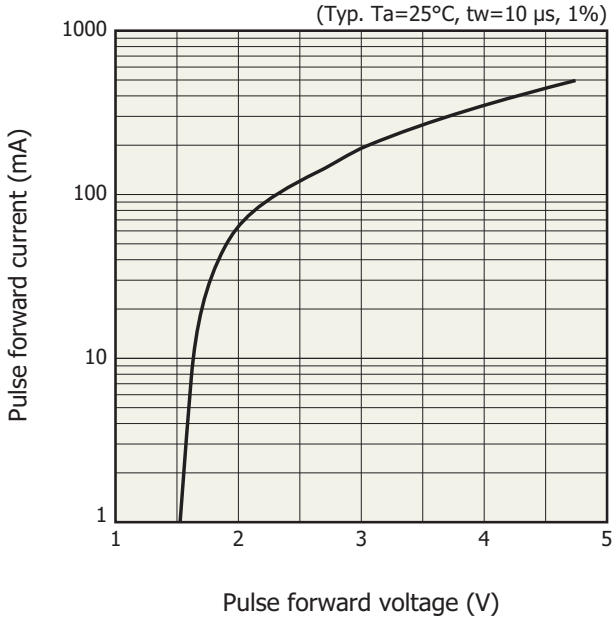
KLEDB0509EA

Radiant flux vs. pulse forward current



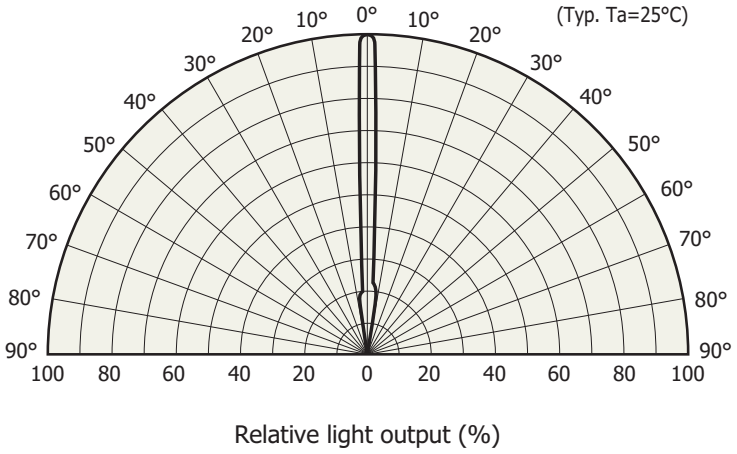
KLEDB0510JA

Pulse forward current vs. pulse forward voltage



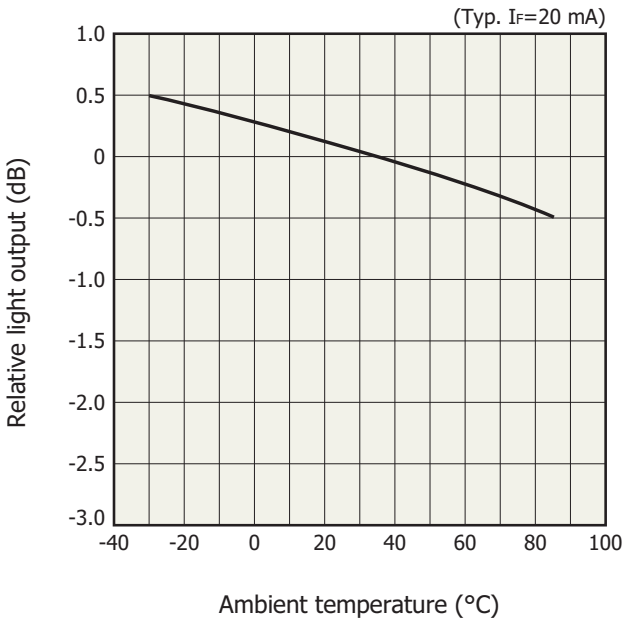
KLEDB0511EA

Directivity



KLEDB0512EA

Light output vs. ambient temperature



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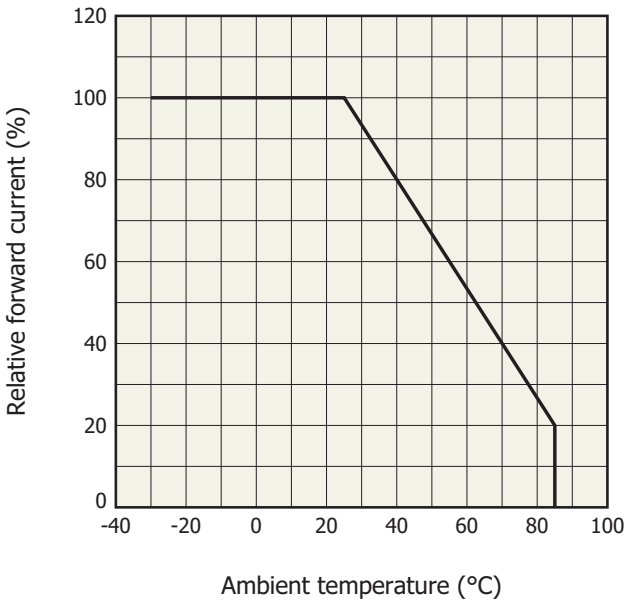
Allowable forward current vs. ambient temperature



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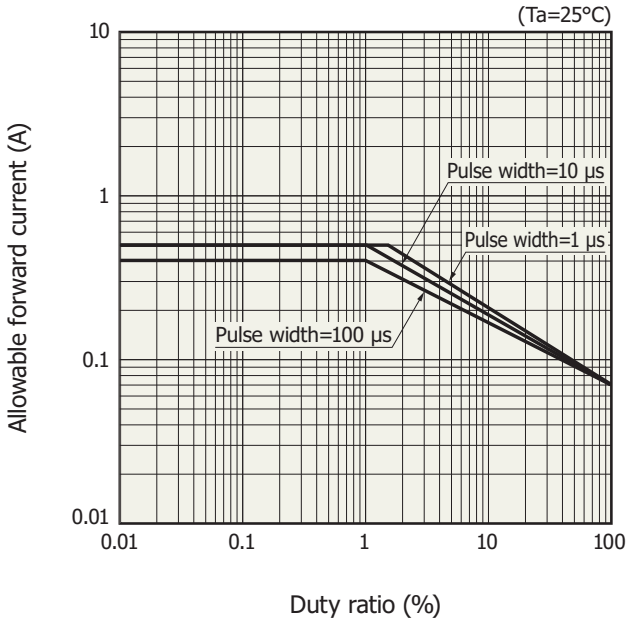
Allowable forward current vs. duty ratio



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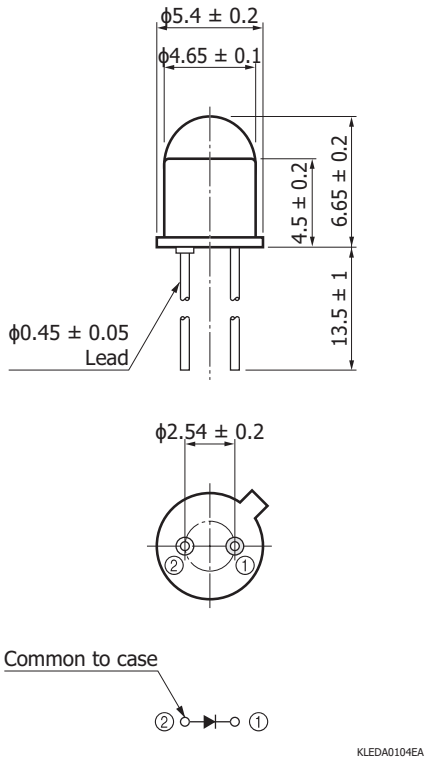
Dimensional outline (unit: mm)



Standard packing specifications

■ Packing state: Paper box (200 pieces/box)

Related information

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

■ Precautions
· Disclaimer
· Metal, ceramic, plastic packages

■ Technical information
· LED

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