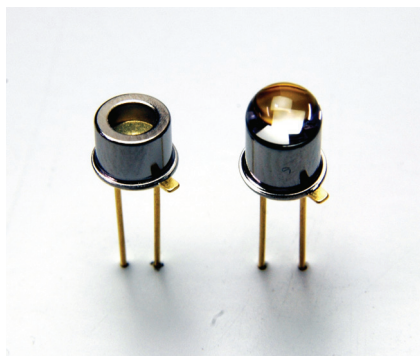


Infrared LED



L13072 series

Peak emission wavelength: 1.2 μm

The L13072 series is a high-power LED that emits infrared light at a peak wavelength of 1.2 μm . The LED is suitable for applications requiring use of an infrared emitter with InGaAs photodiode.

Features

- Peak emission wavelength: 1.2 μm
- High radiant output power
- TO-46 package
L13072-0120L: with lens

Applications

- Gas detection
- Analytical instruments

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

Parameter	Symbol	Condition	Value	Unit
Reverse voltage	VR		1	V
Forward current	IF		80	mA
Derating rate of forward current	-	Ta > 25 °C	1.1	mA/°C
Pulse forward current	IFP	Pulse width=10 μs Duty ratio=1%	1.0	A
Derating rate of pulse forward current	-	Ta > 25 °C	13	mA/°C
Power dissipation	P		150	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.

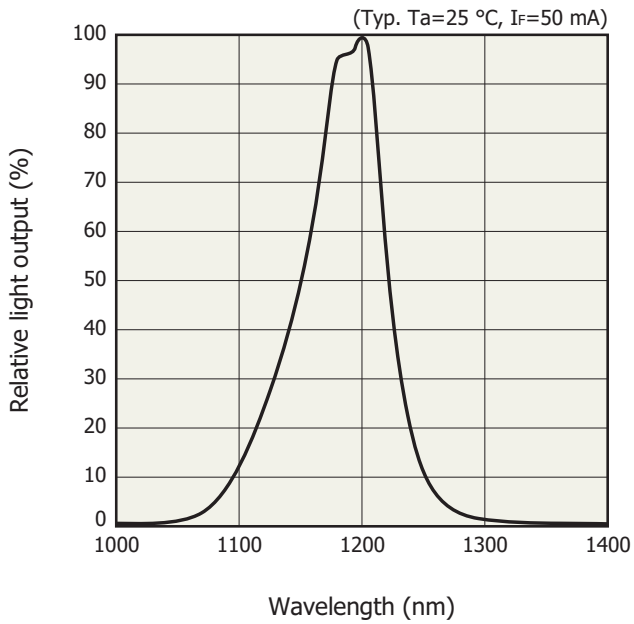
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	L13072-0120K			L13072-0120L			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak emission wavelength	λ_p	IF=50 mA	1150	1200	1250	1150	1200	1250	nm
Spectral half width	$\Delta\lambda$	IF=50 mA	-	80	-	-	80	-	nm
Radiant flux	ϕ_e	IF=50 mA	1.5	2.2	-	2.2	3.2	-	mW
Forward voltage	VF	IF=50 mA	-	1.1	1.6	-	1.1	1.6	V
Reverse current	IR	VR=1 V	-	-	10	-	-	10	μA
Cutoff frequency*2	fc	IF=50 mA \pm 10 mAp-p	10	15	-	10	15	-	MHz

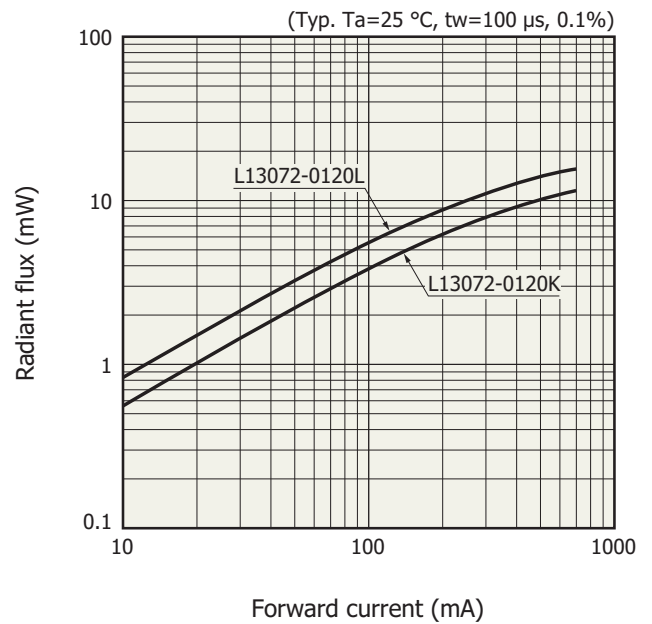
*2: Frequency at which the light output drops by 3 dB based on light output at 100 kHz.

Emission spectrum



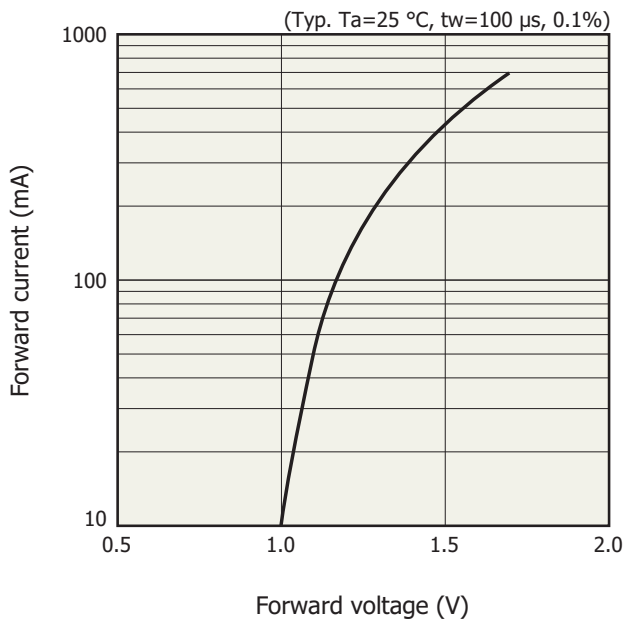
KLEDB0430EA

Radiant flux vs. forward current



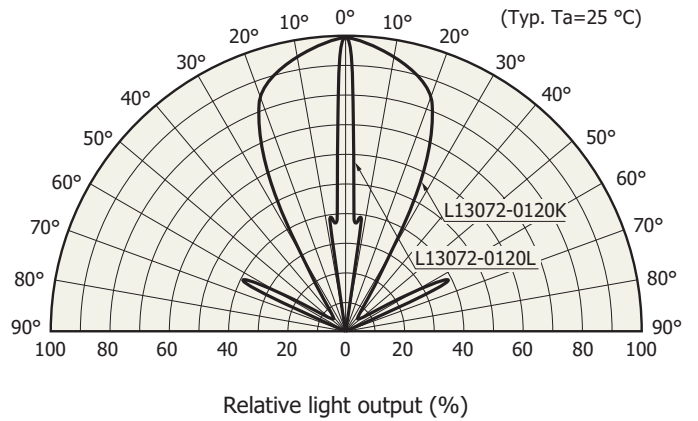
KLEDB0431EA

Forward current vs. forward voltage



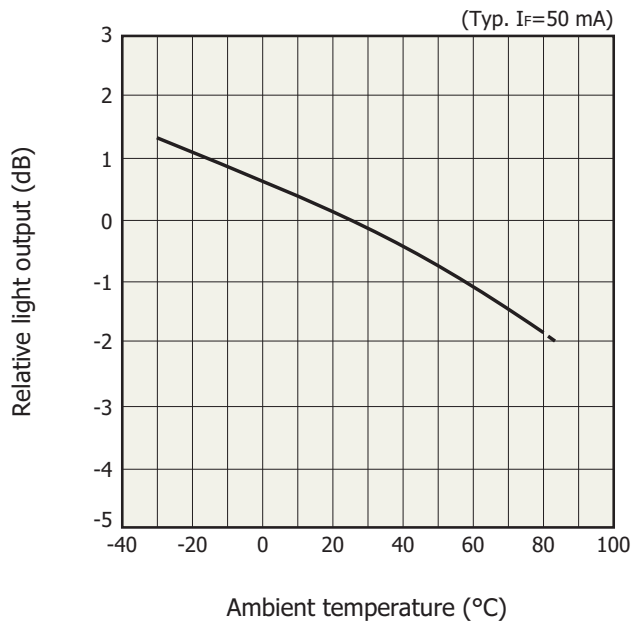
KLEDB0432EA

Directivity

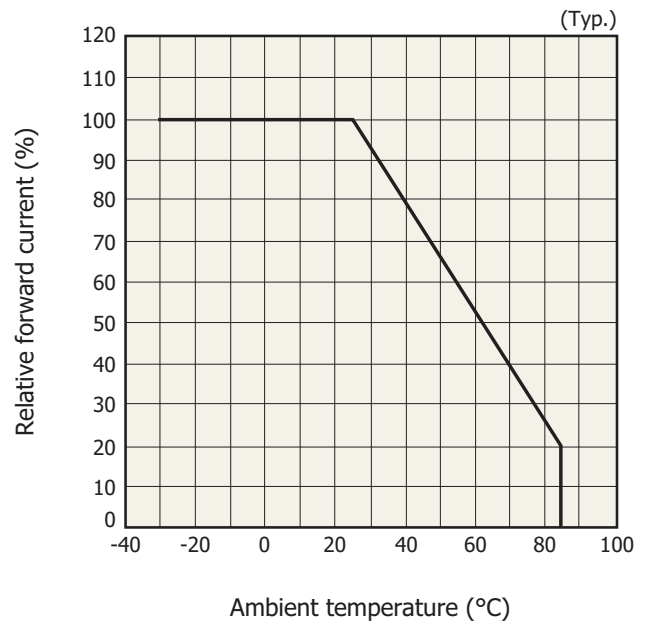


KLEDB0433EA

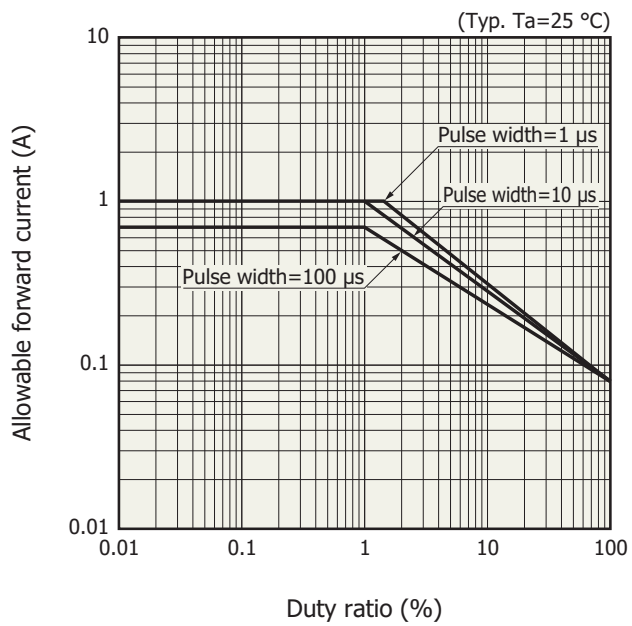
Light output vs. ambient temperature



Allowable forward current vs. ambient temperature

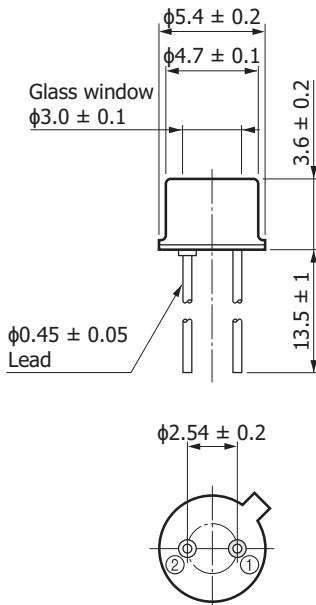


Allowable forward current vs. duty ratio



Dimensional outlines (unit: mm)

L13072-0120K



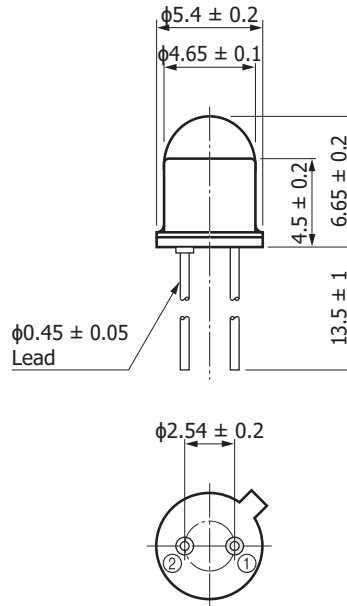
Common to case



Standard packing type:
paper box (200 pieces/box)

KLEDA0090EB

L13072-0120L



Common to case



Standard packing type:
paper box (200 pieces/box)

KLEDA0091EB

Related information

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

■ Precautions

- Disclaimer
- Metal, ceramic, plastic packages

Information described in this material is current as of May, 2016.

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.

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