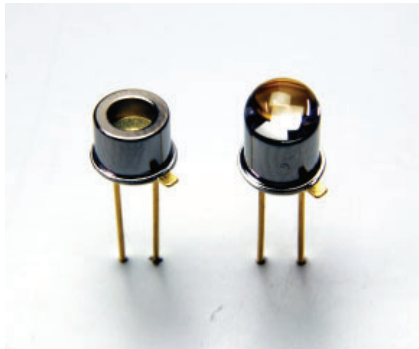


Infrared LED



L10822 series

Peak emission wavelength: 1.3 μm

The L10822 series is a long wavelength LED using an InGaAs chip. Peak emission occurs at 1.3 μm , making the L10822 series suitable for detection of moisture.

Features

- Peak emission wavelength: 1.3 μm
- High radiant output power
- Narrow directivity (L10822-01)

Applications

- Reference light source for moisture meter
- Light source for photosensitive material

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

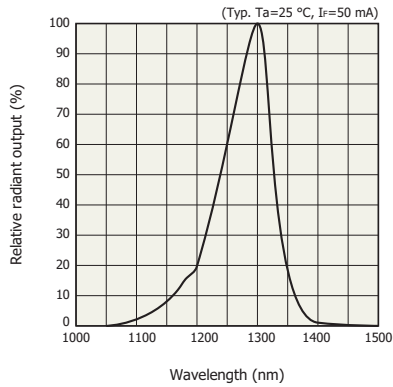
Parameter	Symbol	Condition	Value	Unit
Reverse voltage	VR		1	V
Forward current	IF		80	mA
Forward current derating rate	-	Ta > 25 °C	1.1	mA/°C
Pulse forward current	IFP	Pulse width=10 μs Duty ratio=1 %	1.0	A
Pulse forward current derating rate	-	Ta > 25 °C	13	mA/°C
Power dissipation	P		150	mW
Operating temperature	Topr		-30 to +85	°C
Storage temperature	Tstg		-40 to +100	°C

Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	L10822			L10822-01			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak emission wavelength	λ_p	IF=50 mA	1.25	1.3	1.35	1.25	1.3	1.35	μm
Spectral half width	$\Delta\lambda$	IF=50 mA	-	90	140	-	90	140	nm
Radiant flux	ϕ_e	IF=50 mA	2.0	2.8	-	2.2	3.1	-	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
Cut-off frequency *1	fc	IF=50 mA \pm 10 mAp-p	10	15	-	10	15	-	MHz

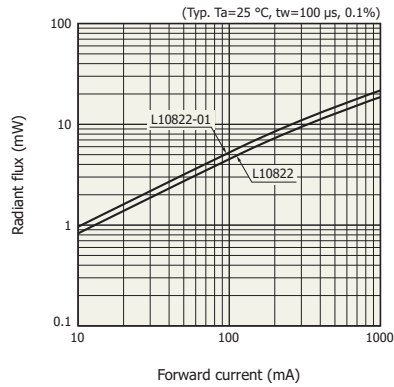
* Frequency at which the light output decreases by 3 dB from the light output at 100 kHz

Emission spectrum



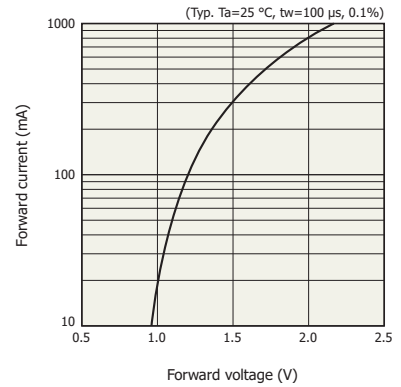
KLEDB0332EA

Radiant flux vs. forward current



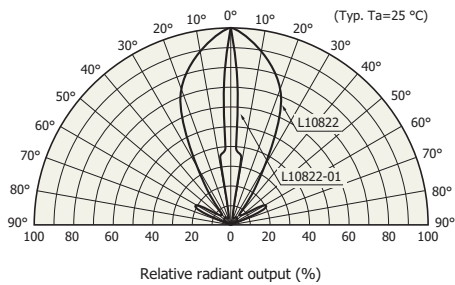
KLEDB0333EA

Forward current vs. forward voltage



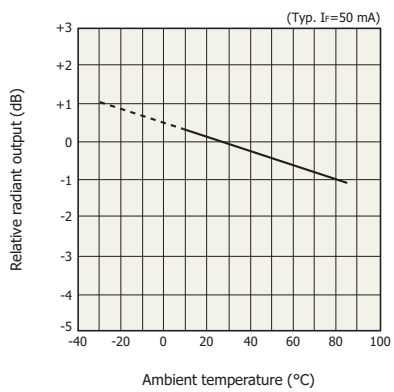
KLEDB0334EA

Directivity



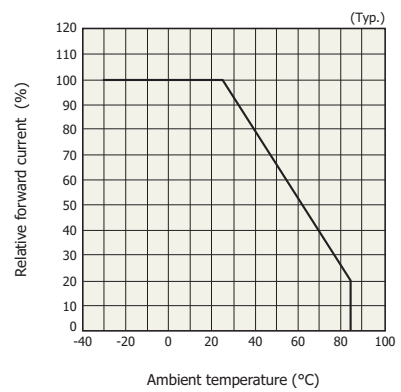
KLEDB0335EA

Radiant output vs. ambient temperature



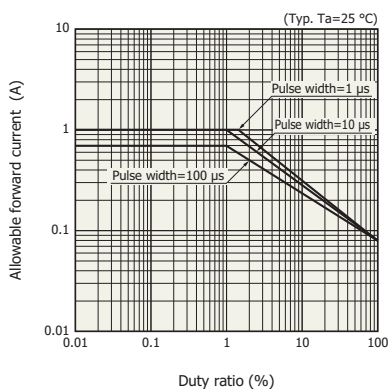
KLEDB0327EA

Allowable forward current vs. ambient temperature



KLEDB0328EA

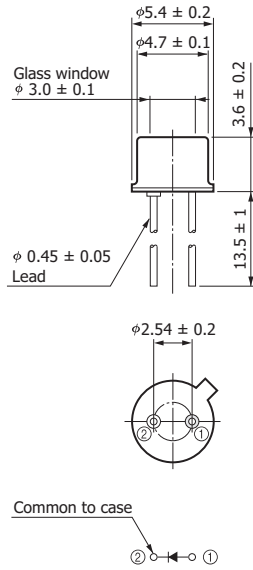
Allowable forward current vs. duty ratio



KLEDB0225EA

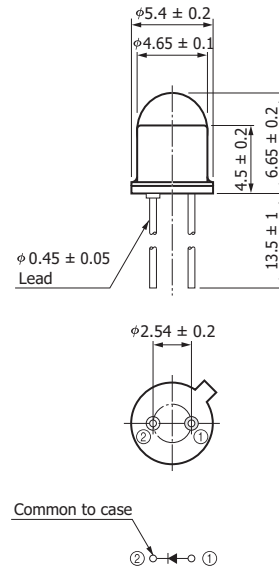
Dimensional outlines (unit: mm)

L10822



KLEDA0090EA

L10822-01



KLEDA0091EA

Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions.

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Type numbers of products listed in the specification sheets or supplied as samples may have a suffix "(X)" which means tentative specifications or a suffix "(Z)" which means developmental specifications. ©2009 Hamamatsu Photonics K.K.

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