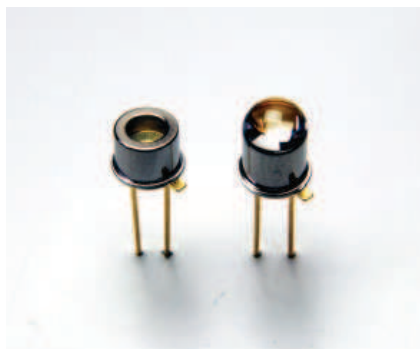


Infrared LED

L10660 series



Peak emission wavelength: 1.45 μm

The L10660 series is a high-power LED that emits infrared light at a peak wavelength of 1.45 μm . The LED is suitable for applications requiring use of infrared emitters with InGaAs photodiode.

Features

- ➔ Peak emission wavelength: 1.45 μm
- ➔ High radiant output power

Applications

- ➔ Light source for moisture meter
- ➔ Light source for foreign object screening

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

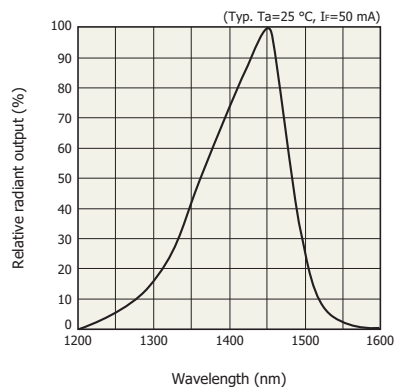
Parameter	Symbol	Condition	Value	Unit
Reverse voltage	V _R		1	V
Forward current	I _F		80	mA
Forward current decrease rate	-	T _a > 25 °C	1.1	mA/°C
Pulse forward current	I _{FP}	Pulse width=10 μs Duty ratio=1%	1.0	A
Pulse forward current decrease rate	-	T _a > 25 °C	13	mA/°C
Power dissipation	P		150	mW
Operating temperature	T _{opr}		-30 to +85	°C
Storage temperature	T _{stg}		-40 to +100	°C

Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	L10660			L10660-01			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak emission wavelength	λ_p	I _F =50 mA	1.4	1.45	1.5	1.4	1.45	1.5	μm
Spectral half width (FWHM)	$\Delta\lambda$	I _F =50 mA	-	120	170	-	120	170	nm
Radiant flux	ϕ_e	I _F =50 mA	1.8	2.4	-	2.0	2.8	-	mW
Forward voltage	V _F	I _F =50 mA	-	1.0	1.5	-	1.0	1.5	V
Reverse current	I _R	V _R =1 V	-	-	10	-	-	10	μA
Cut-off frequency *	f _c	I _F =50 mA $\pm$ 10 mAp-p	10	15	-	10	15	-	MHz

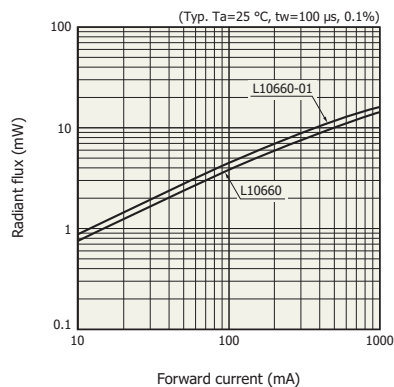
* Frequency at which the light output drops by -3 dB based on light output at 100 kHz.

Emission spectrum



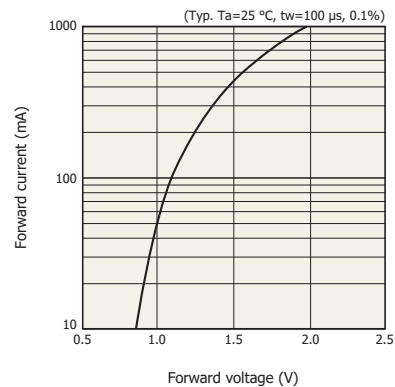
KLEDB0311EB

Radiant flux vs. forward current



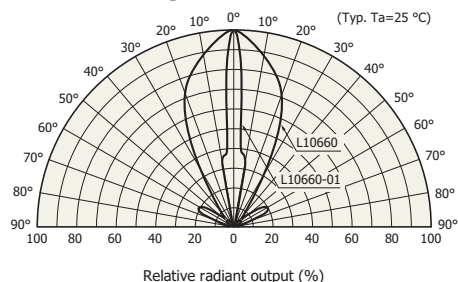
KLEDB0312EA

Forward current vs. forward voltage



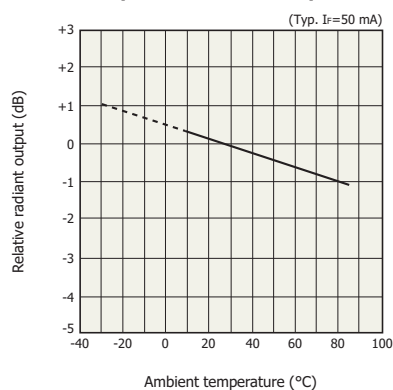
KLEDB0325EA

Directivity



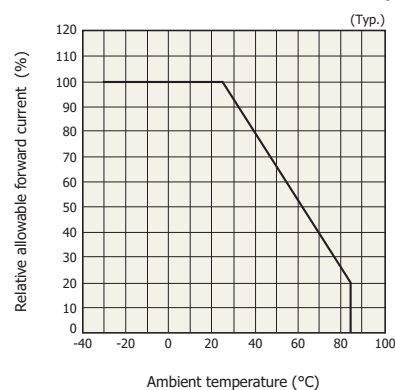
KLEDB0326EA

Radiant output vs. ambient temperature



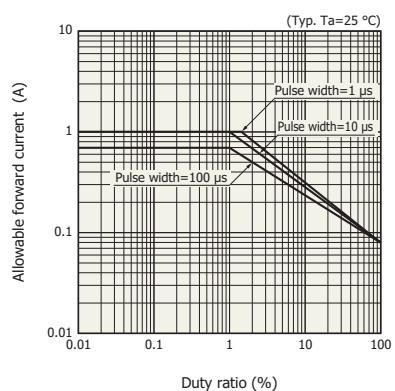
KLEDB0327EA

Allowable forward current vs. ambient temperature



KLEDB0328EA

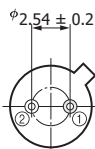
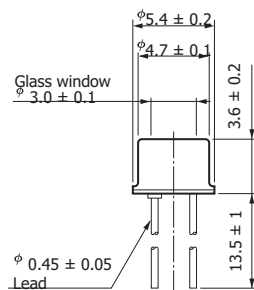
Allowable forward current vs. duty ratio



KLEDB0225EA

Dimensional outline (unit: mm)

L10660

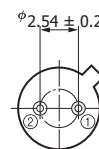
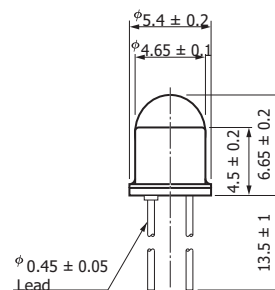


Common to case



KLEDA0090EA

L10660-01



Common to case



KLEDA0091EA

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

Specifications are subject to change without notice. No patent rights are granted to any of the circuits described herein.

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. ©2010 Hamamatsu Photonics K.K.

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