

L11767

High output power red emitting diode

The L11767 is a high output red LED that delivers light output more than twice that of our previous products. Electric power required to provide the same brightness as the previous products is reduced by as much as 70%. The L11767 also offers high reliability since it is a 4-element (AlGaInP) LED.

Features

- High radiant output power (more than twice compared to previous products)
13 mW (I_F=20 mA typ.)
- High reliability

Applications

- Optical switches, etc.

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

Parameter	Symbol	Condition	Value	Unit
Reverse voltage	V _R		5	V
Forward current	I _F		60	mA
Derating rate of forward current		T _a > 25 °C	0.8	mA/°C
Pulse forward current	I _{FP}	Pulse width=10 μs Duty ratio=1%	0.5	A
Derating rate of pulse forward current		T _a > 25 °C	6.7	mA/°C
Power dissipation	P		180	mW
Operating temperature	T _{opr}		-30 to +85	°C
Storage temperature	T _{stg}	*1	-40 to +100	°C
Soldering condition	-		Less than 260 °C, within 5 seconds *2	-

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.

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

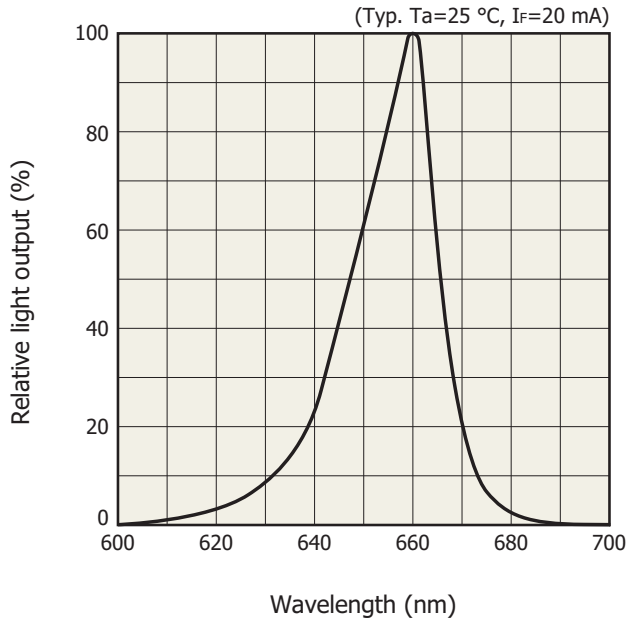
*2: At a position at least 1 mm away from the lead base

Electrical and optical characteristics (T_a=25 °C)

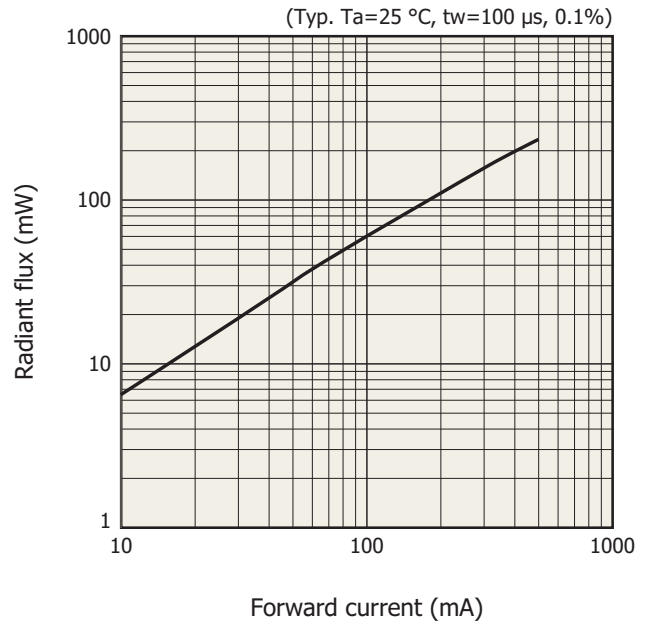
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak emission wavelength	λ _p	I _F =20 mA	650	660	670	nm
Spectral half-width	Δλ	I _F =20 mA	-	18	30	nm
Forward voltage	V _F	I _F =20 mA	-	2.1	2.5	V
Reverse current	I _R	V _R =5 V	-	-	20	μA
Radiant flux	φ _e	I _F =20 mA	10	13	-	mW
Cutoff frequency*3	f _c	I _F =20 mA ± 1 mA _{p-p}	3	6	-	MHz

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

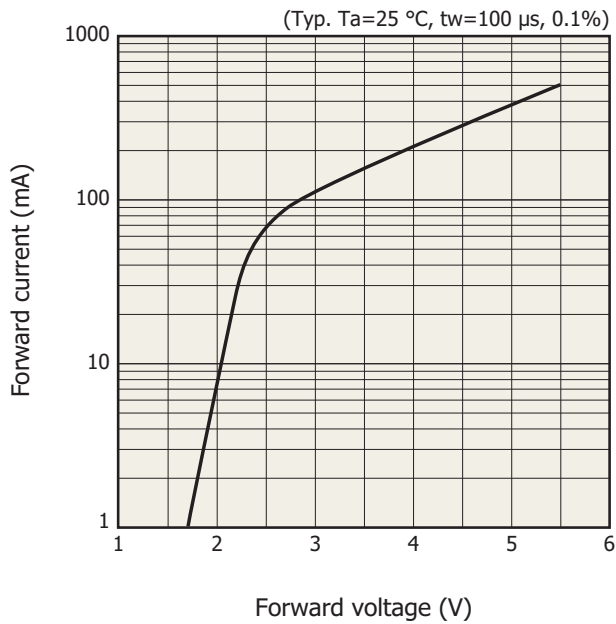
Emission spectrum



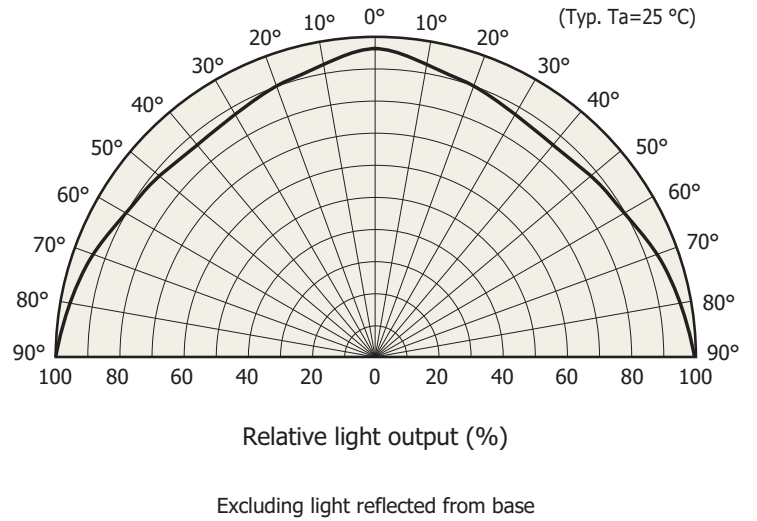
Radiant flux vs. forward current



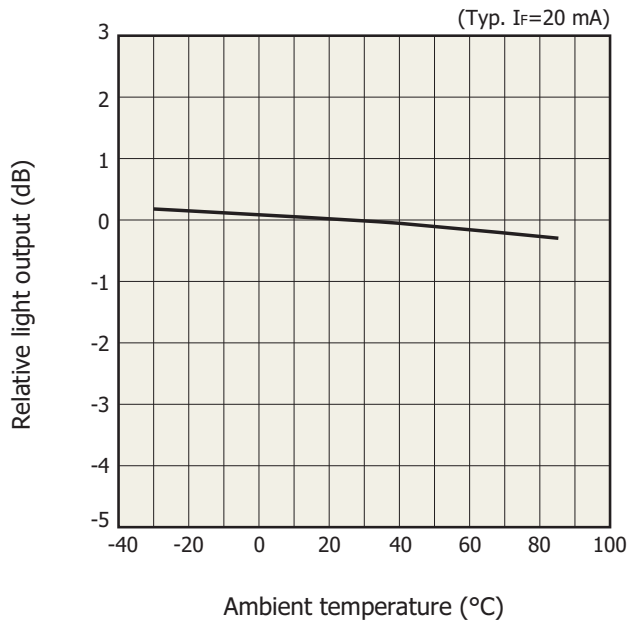
Forward current vs. forward voltage



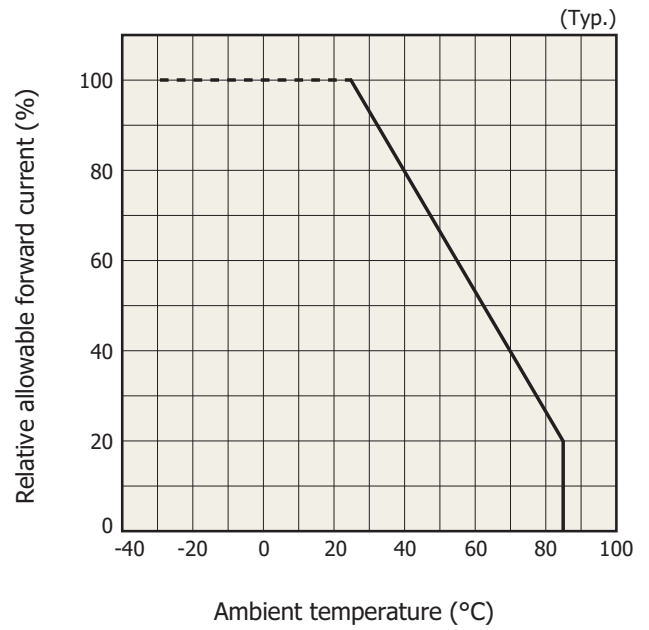
Directivity



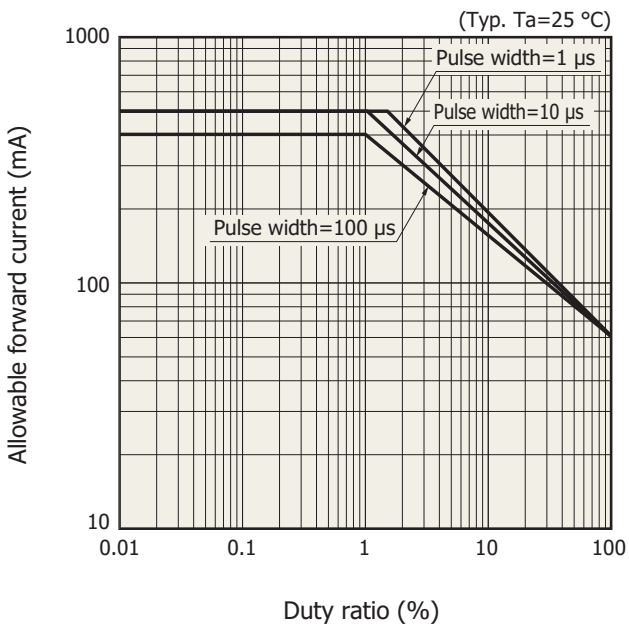
Light output vs. ambient temperature



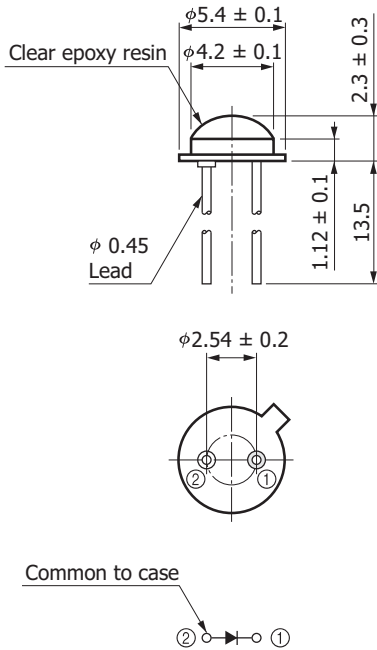
Allowable forward current vs. ambient temperature



Allowable forward current vs. duty ratio



Dimensional outline (unit: mm)



KLEDA0009ED

Information described in this material is current as of March, 2012.

Product specifications are subject to change without prior notice due to improvements or other reasons. Before assembly into final products, please contact us for the delivery specification sheet to check the latest information.

Type numbers of products listed in the delivery specification sheets or supplied as samples may have a suffix "(X)" which means preliminary specifications or a suffix "(Z)" which means developmental 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.

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