

L3882, L6108, L6112 series

High output red LED

Features

- High reliability
- High radiant output power

Applications

- Optical switches, etc.

Absolute maximum ratings (Ta=25 °C)

| Type no. | Forward current IF (mA) | Reverse voltage VR (V) | Pulse forward current*1 IFP (A) | Operating temperature*2 Topr (°C) | Storage temperature*2,3 Tstg (°C) |
|----------|-------------------------------|------------------------------|--|--|--|
| L3882 | 80 | 5 | 0.8 | -30 to +85 | -40 to +100 |
| L6108 | 70 | | 0.6 | | |
| L6112 | | | | | |
| L6112-01 | | | | | |
| L6112-02 | | | | | |

*1: Pulse width=10 μs, duty ratio=1%

*2: No dew condensation. When there is a temperature difference between a product and the surrounding area in high humidity environments, dew condensation may occur on the product surface. Dew condensation on the product may cause deterioration in characteristics and reliability.

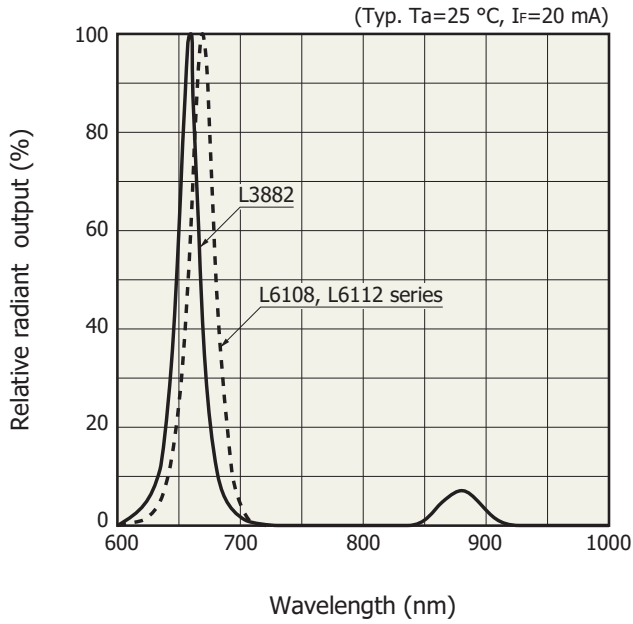
*3: Guaranteed to resist temperature cycle test of up to 5 cycles

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 (Typ. Ta=25 °C, unless otherwise noted)

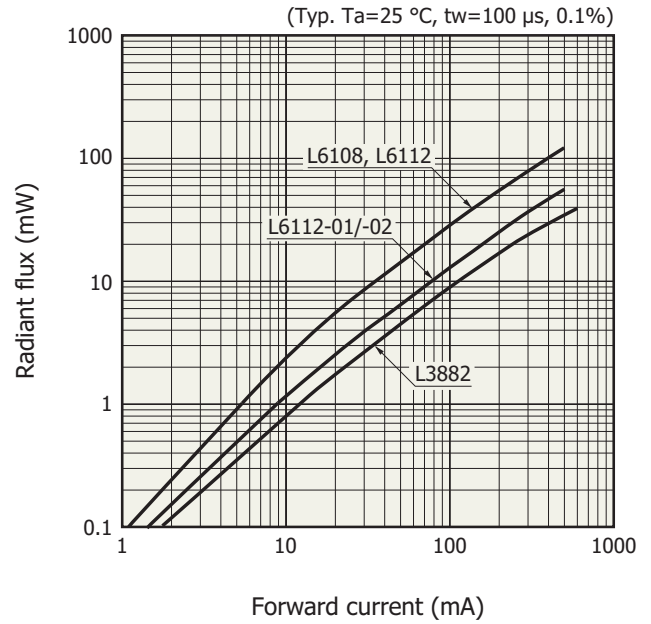
| Type no. | Peak emission wavelength λp IF=20 mA | | | Spectral half width Δλ IF=20 mA (nm) | Forward voltage VF IF=20 mA | | Pulse forward voltage VFP IF=IFP | | Radiant flux φe IF=20 mA | | Radiant illuminance PE IF=50 mA (mW/cm²) | Cutoff frequency fc IF=20 mA + 1 mA _{p-p} (MHz) |
|----------|--|--------------|--------------|---|-----------------------------------|-------------|--|-------------|--------------------------------|--------------|---|--|
| | Min. (nm) | Typ. (nm) | Max. (nm) | | Typ. (V) | Max. (V) | Typ. (V) | Max. (V) | Min. (mW) | Typ. (mW) | | |
| L3882 | 640 | 660 | 685 | 20 | 1.8 | 2.0 | 5.0 | 7.0 | 1.4 | 1.8 | 0.3 | 4.0 |
| L6108 | 650 | 670 | 700 | 25 | | 2.1 | 4.9 | | 4.0 | 5.5 | 1.5 | |
| L6112 | | | | | | | | | | | | |
| L6112-01 | | | | | | | | | | | | |
| L6112-02 | | | | | | | | | | | | |

Emission spectrum



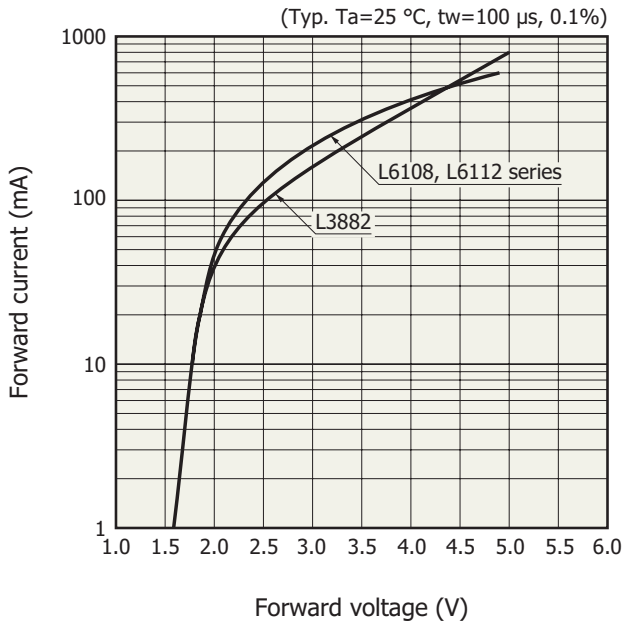
KLEDB0185EA

Radiant flux vs. forward current



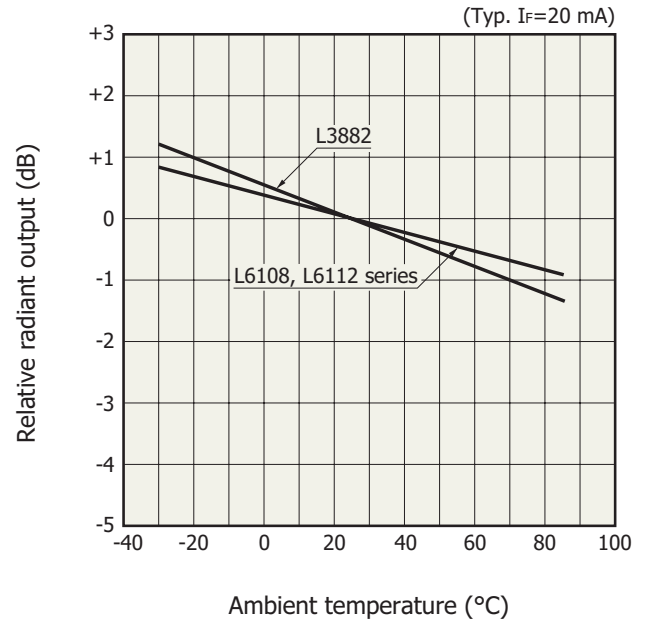
KLEDB0186EB

Forward current vs. forward voltage



KLEDB0187EA

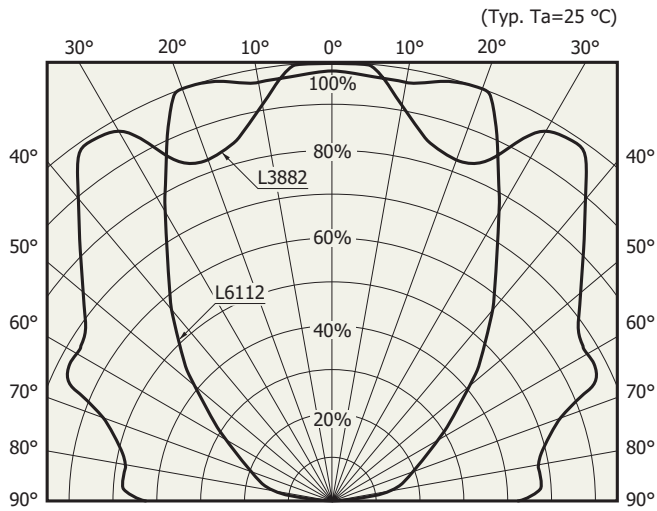
Radiant output vs. ambient temperature



KLEDB0188EA

Directivity

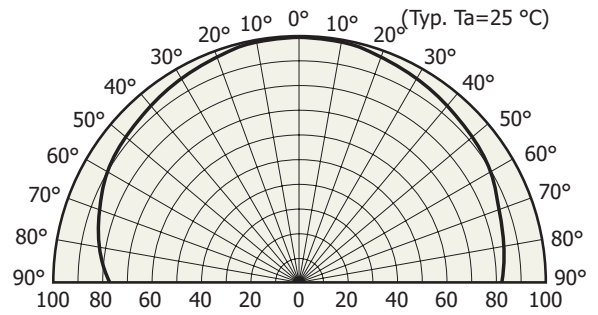
L3882, L6112



Relative radiant output (%)

KLEDB0189EA

L6108

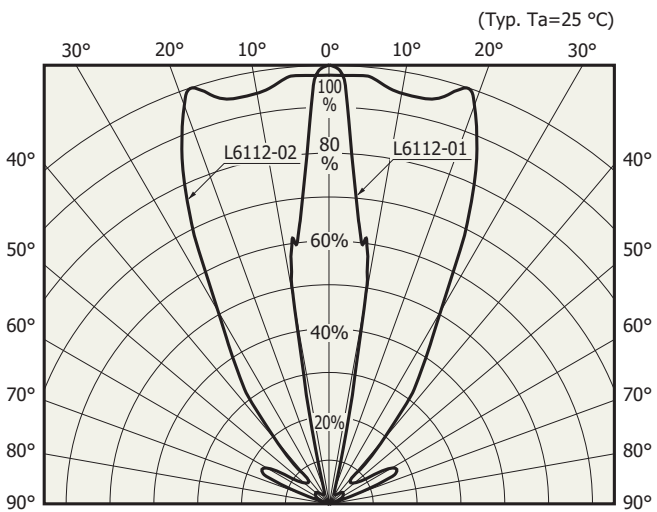


Relative radiant output (%)

Except for reflection ingredient of the base

KLEDB0190EA

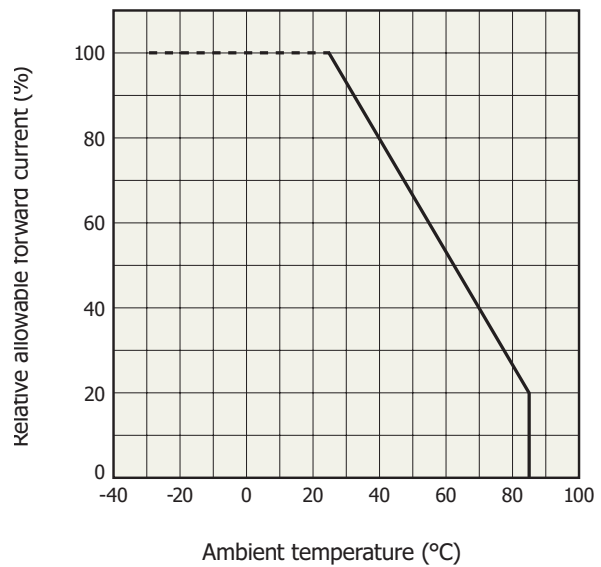
L6112-01/-02



Relative radiant output (%)

KLEDB0191EA

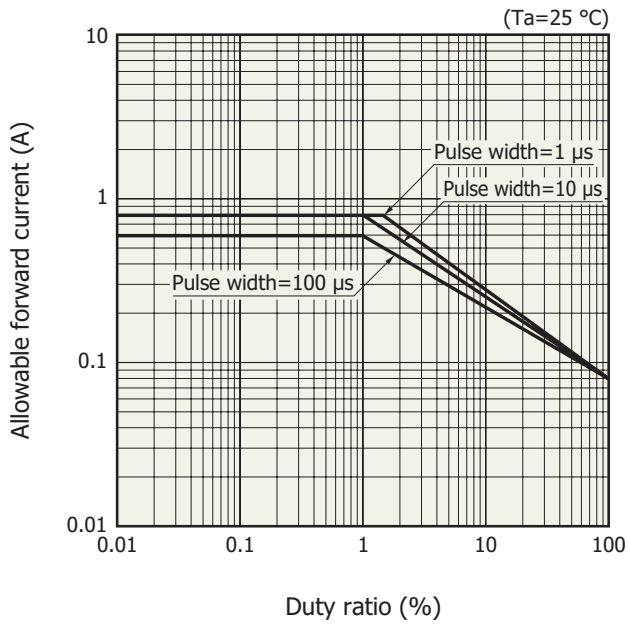
Allowable forward current vs. ambient temperature



KLEDB0027EC

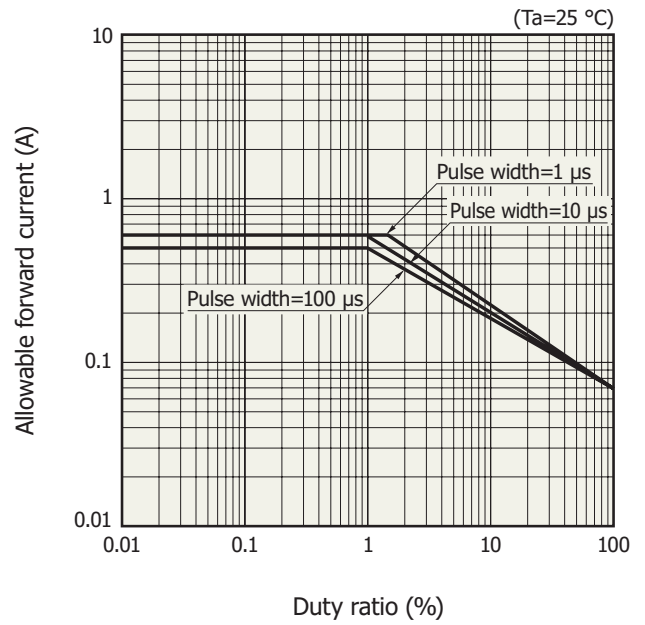
Allowable forward current vs. duty ratio

L3882



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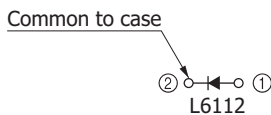
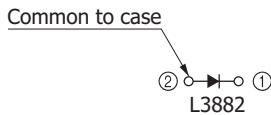
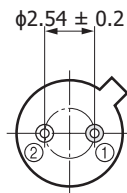
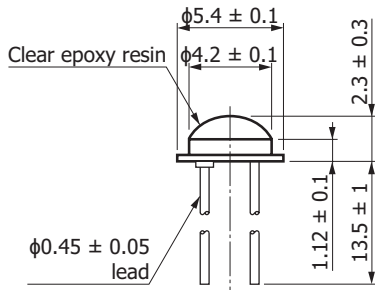
L6108, L6112 series



KLEDB0193EB

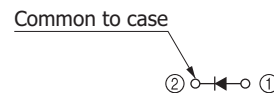
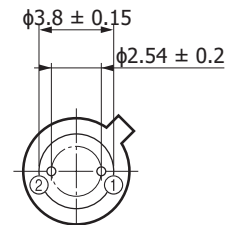
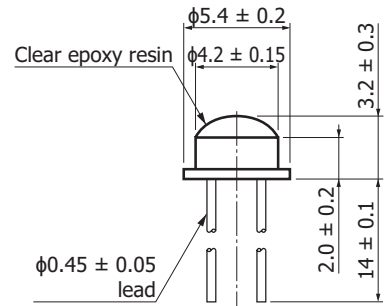
Dimensional outlines (unit: mm)

L3882, L6112



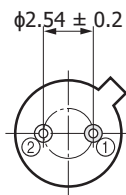
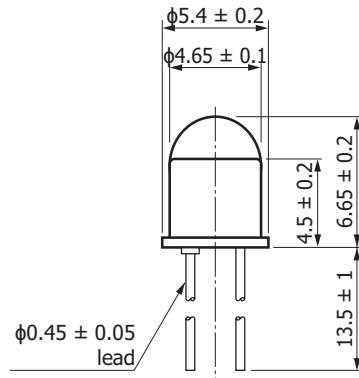
KLEDA0063EB

L6108



KLEDA0030ED

L6112-01

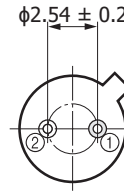
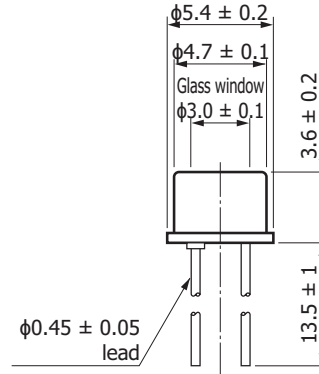


Common to case



KLEDA0064EC

L6112-02



Common to case



KLEDA0065EB

Recommended soldering condition

Solder temperature: 260 °C, 5 s or less, once

Solder the leads at a point at least 1 mm away from the package body.

Note: When you set soldering conditions, check that problems do not occur in the product by testing out the conditions in advance.

Related information

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

■ Precautions

- Disclaimer
- Safety consideration
- Compound opto-semiconductors (photosensors, light emitters)

■ Technical information

- LED / Technical note

Information described in this material is current as of December 2020.

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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