

L10363



High-power red light emission diode

The L10363 is a red LED with a peak emission wavelength of 700 nm. The hermetic seal package provides high reliability, and the lens cap provides narrow directivity.

Features

- High reliability
- Narrow directivity

Applications

- Optical switches

Structure

| Parameter | Specification |
|-----------------|------------------------------|
| Package | TO-46 |
| Reflector | Yes |
| Window material | Lens type borosilicate glass |

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

| Parameter | Symbol | Condition | Value | Unit |
|-------------------------------------|--------|------------------------------------|--|-------|
| Reverse voltage | VR | | 5 | V |
| Forward current | IF | | 70 | mA |
| Forward current decrease rate | - | Ta > 25 °C | 0.9 | mA/°C |
| Pulse forward current | IFP | Pulse width=10 μs Duty ratio=1% | 0.5 | A |
| Pulse forward current decrease rate | - | Ta > 25 °C | 7 | mA/°C |
| Power dissipation | P | | 160 | 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.

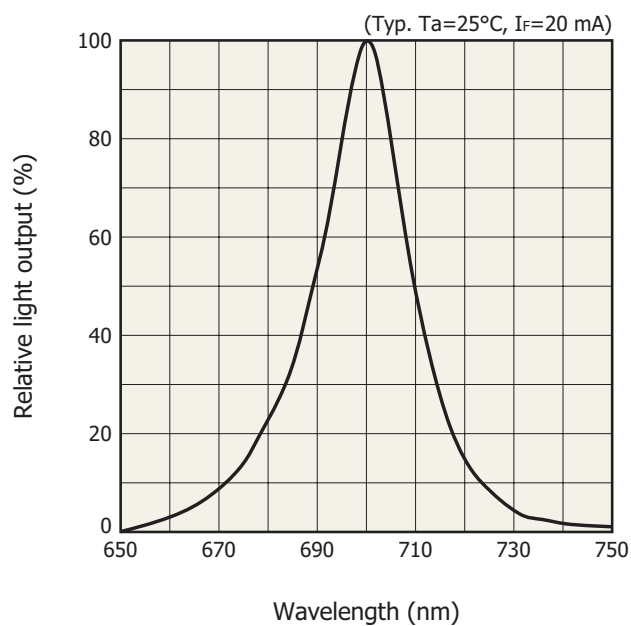
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

Electrical and optical characteristics (Ta=25 °C)

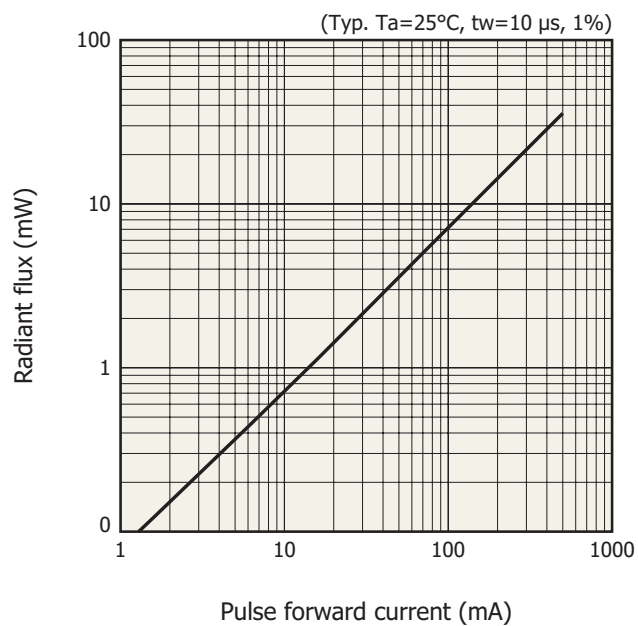
| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|--------------------------|-----------------|--------------------|------|------|------|------|
| Peak emission wavelength | λ_p | IF=20 mA | 685 | 700 | 715 | nm |
| Spectral half width | $\Delta\lambda$ | IF=20 mA | - | 20 | - | nm |
| Forward voltage | VF | IF=20 mA | - | 1.7 | 2.1 | V |
| Reverse current | IR | VR=5 V | - | - | 10 | μA |
| Radiant flux | ϕ_e | IF=20 mA | 1.0 | 1.4 | - | mW |
| Cutoff frequency*2 | fc | IF=20 mA ± 1 mAp-p | - | 5 | - | MHz |

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

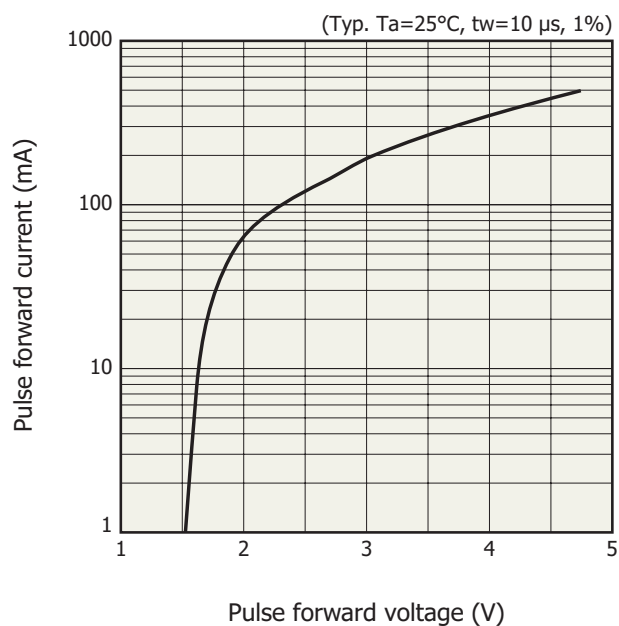
Emission spectrum



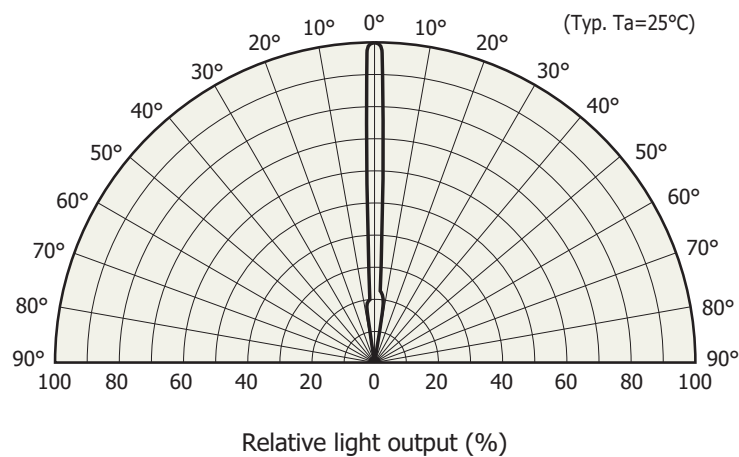
Radiant flux vs. pulse forward current



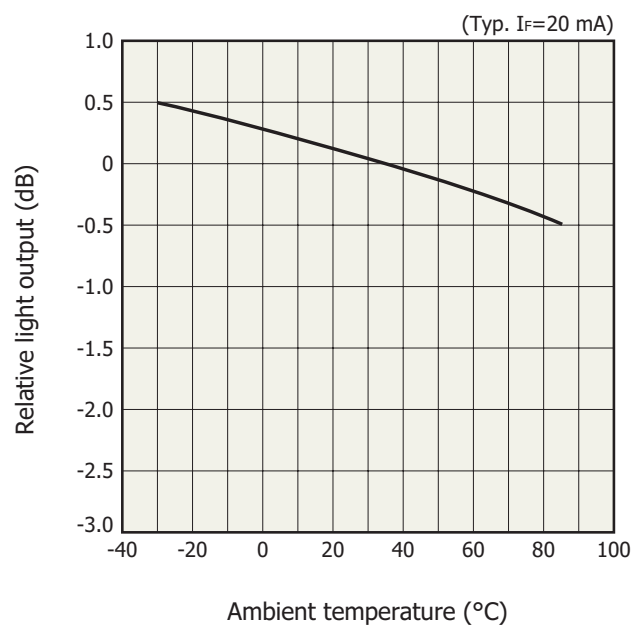
Pulse forward current vs. pulse forward voltage



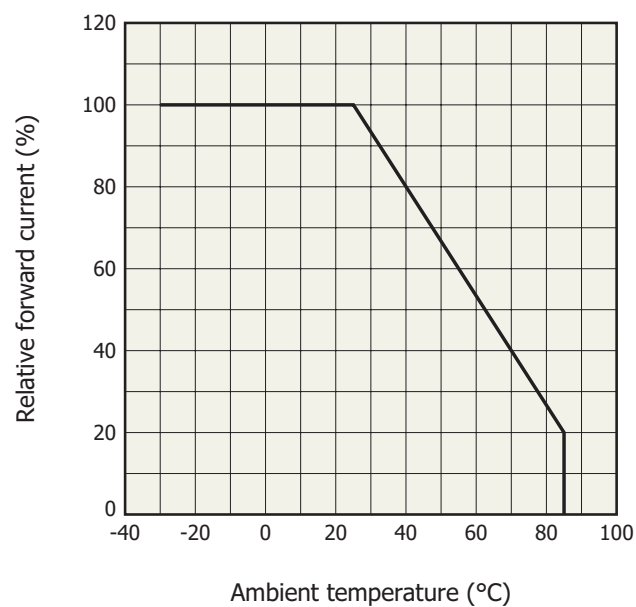
Directivity



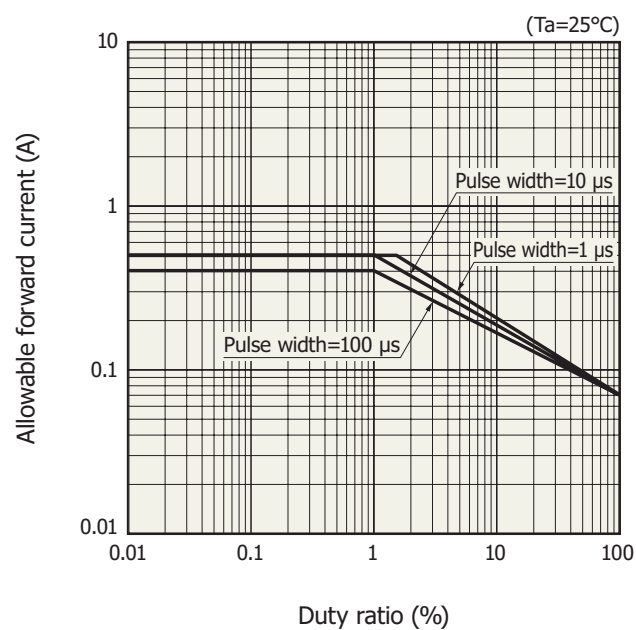
❖ Light output vs. ambient temperature



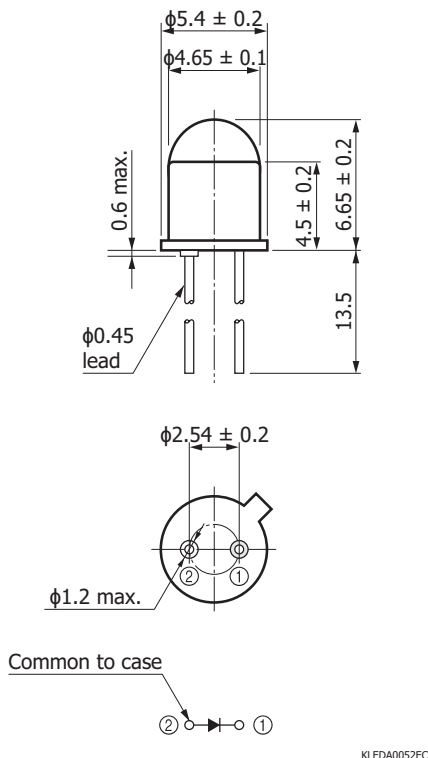
❖ Allowable forward current vs. ambient temperature



❖ Allowable forward current vs. duty ratio



Dimensional outline (unit: mm)



Standard packing specifications

- Packing state: Paper box (200 pieces/box)

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 May 2022.

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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