

Infrared point source LED chip

These LEDs are high temperature, highly reliable, current confinement infrared LED chips. They are small light emitting parts and are suitable for applications such as encoders and optical switches.

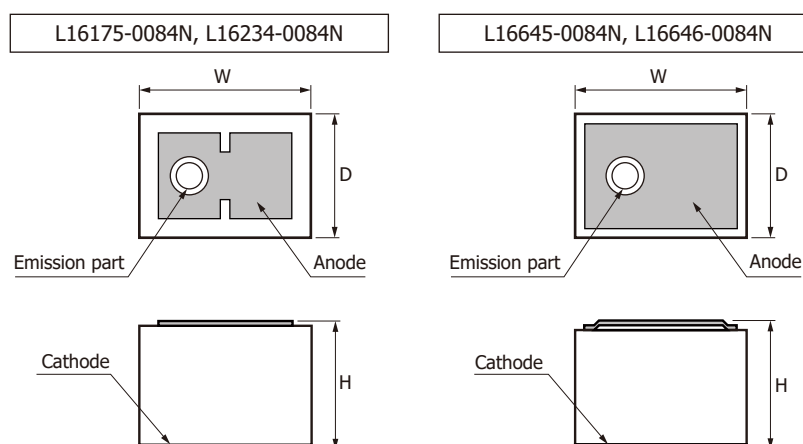
Features

- Small light spot
- High temperature support
- High reliability

Applications

- Encoders
- Optical switches
- Optical sensors etc.

Dimensional outlines



Structure

| Type no. | Material | Electrode | Emission section (μm) | Chip size W x D x H (μm) | Side light-shielding |
|-------------------------|------------------|-----------------|-----------------------|--------------------------|----------------------|
| L16175-0084N | AlGaAs/GaAs sub. | Au alloy (p, n) | φ55 | 360 × 260 × 250 | No |
| L16645-0084N NEW | | | | | Yes |
| L16234-0084N | | | φ155 | 480 × 300 × 250 | No |
| L16646-0084N NEW | | | | | Yes |

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

| Type no. | Reverse voltage V _R (V) | Forward current I _F (mA) | Operating temperature (°C) | Storage temperature (°C) |
|-------------------------|------------------------------------|-------------------------------------|----------------------------|--------------------------|
| L16175-0084N | 3 | 80 | -40 to +105 | -40 to +110 |
| L16645-0084N NEW | | | | |
| L16234-0084N | | 100 | | |
| L16646-0084N NEW | | | | |

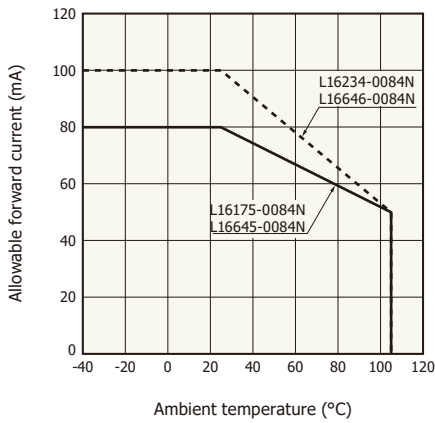
Electrical and optical characteristics* (Ta=25 °C, unless otherwise noted)

| Type no. | Peak emission wavelength λ _p I _F =50 mA | | | Forward voltage V _F I _F =50 mA | Forward current decrease rate Ta>25 °C (mA/°C) | Reverse current I _R V _R =3 V | Radiant flux φ _e I _F =50 mA |
|-------------------------|---|-----------|-----------|--|--|--|---|
| | Min. (nm) | Typ. (nm) | Max. (nm) | Typ. (V) | | Max. (μA) | Typ. (mW) |
| L16175-0084N | 820 | 840 | 860 | 1.8 | 0.375 | 10 | 1.8 |
| L16645-0084N NEW | | | | | | | |
| L16234-0084N | | | | 1.6 | 0.625 | | 2.6 |
| L16646-0084N NEW | | | | | | | |

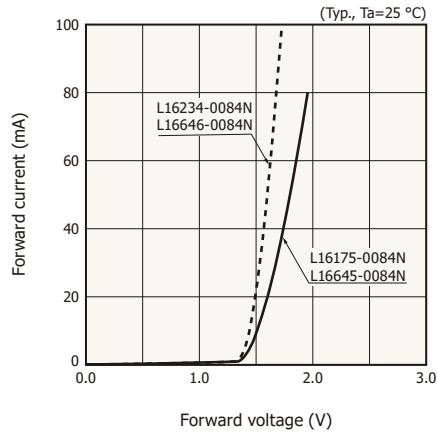
* Measured assembled in TO-46 package

L16175-0084N, L16645-0084N, L16234-0084N, L16646-0084N

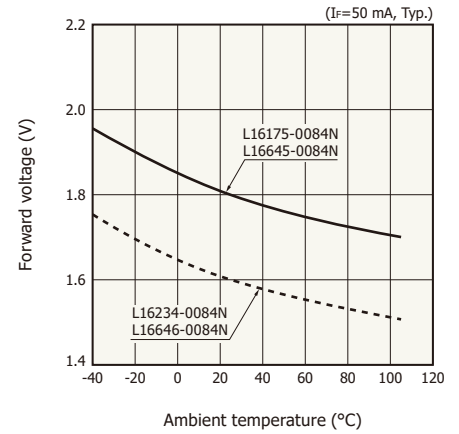
■ Allowable forward current vs. ambient temperature



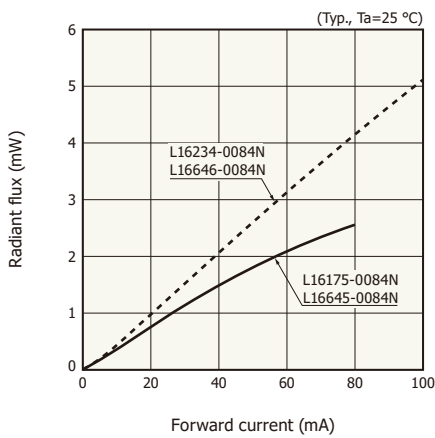
■ Forward current vs. forward voltage



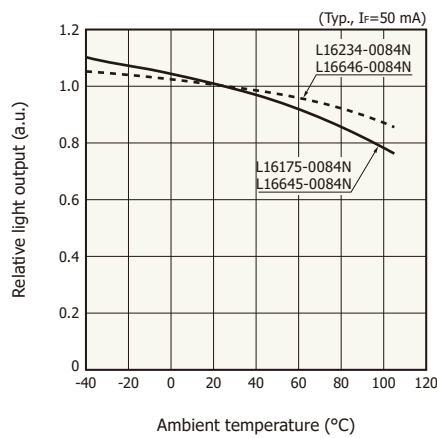
■ Forward voltage vs. ambient temperature



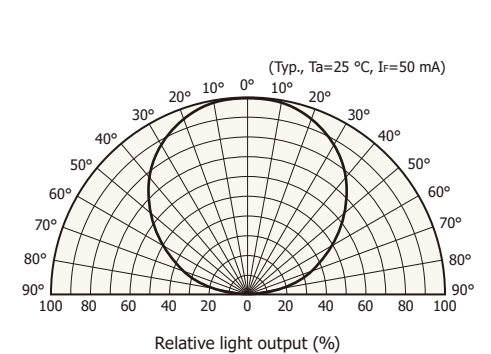
■ Radiant flux vs. forward current



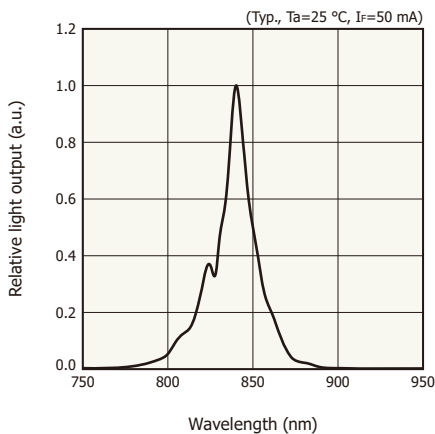
■ Relative light output vs. ambient temperature



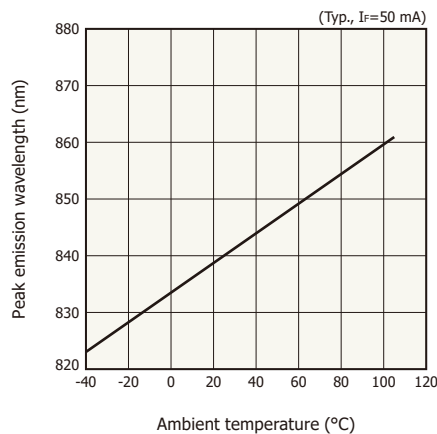
■ Directivity



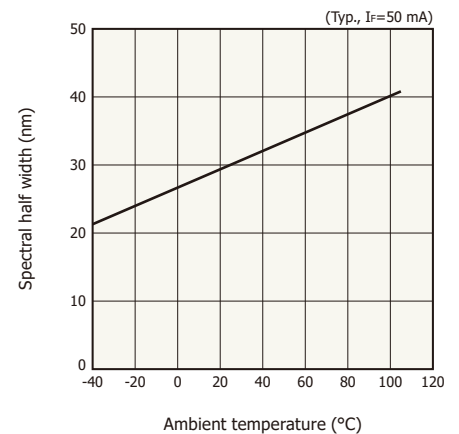
■ Emission spectrum



■ Peak emission wavelength vs. ambient temperature



■ Spectral half width vs. ambient temperature



Note: Measured assembled in TO-46 package. Directivity was measured without a cap.

The content of this document is current as of October 2024. Product specifications are subject to change without prior notice due to improvements or other reasons. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

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