



**THE DATASHEET OF
AN1111C-TR**





Product Guide

1111C Series Ultra Compact SMT LED



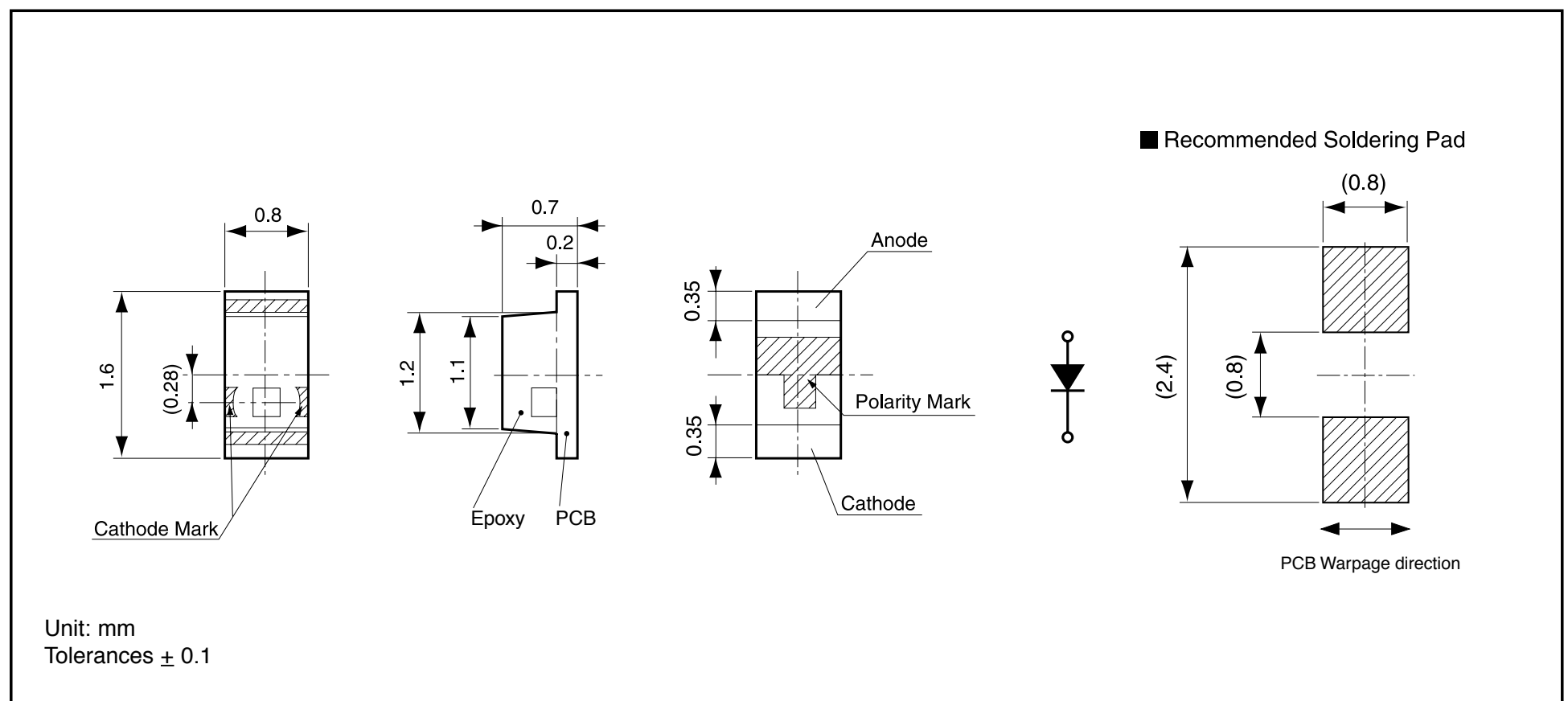
■ Features

- Meets industry standards for 1608 (0603) footprint
- Provides bright, wide and uniform spatial distribution
- Excellent for cellular telephone key pads, LCD backlighting and pager display application.

■ Applications

- Mobile devices (cellular telephones, PDAs, pagers)
- Industrial / Medical instrumentation

■ Outline Dimensions



■ Electro-Optical Characteristics

(Ta=25°C)

| Type No. | Material | Emitted Color | Lens Color | Luminous Intensity I_V | | | Wavelength | | | | Forward Voltage V_F | | | Reverse Current I_R | | Viewing Angle (2 θ 1/2) | |
|----------|----------|---------------|-------------|--------------------------|------|-------|--------------------------|------------------------------|--|-------|-----------------------|------|-------|-----------------------|---------|-----------------------------------|---|
| | | | | MIN. | TYP. | I_F | Peak λ_p TYP. | Dominant λ_d TYP. | Spectral Line Half Width $\Delta\lambda$ TYP. | I_F | TYP. | MAX. | I_F | MAX. | V_R | | |
| BR1111C | GaAlAs | Red | Milky White | 7.0 | 11.7 | 20 | 660 | 647 | 30 | 20 | 1.7 | 2.3 | 20 | 100 | 4 | 140° | |
| AA1111C | GaAsP | Orange | | 2.0 | 3.4 | 20 | 605 | 606 | 30 | 20 | 2.2 | 2.8 | 20 | 100 | 4 | | |
| AY1111C | GaAsP | Yellow | | 2.0 | 3.4 | 20 | 580 | 590 | 30 | 20 | 2.2 | 2.8 | 20 | 100 | 4 | | |
| PY1111C | GaP | Yellow Green | | 7.0 | 11.7 | 20 | 570 | 572 | 30 | 20 | 2.1 | 2.8 | 20 | 100 | 4 | | |
| PG1111C | GaP | Green | | 3.8 | 6.4 | 20 | 560 | 567 | 30 | 20 | 2.1 | 2.8 | 20 | 100 | 4 | | |
| BG1111C | GaP | Pure Green | | 1.4 | 2.4 | 20 | 555 | 558 | 30 | 20 | 2.1 | 2.8 | 20 | 100 | 4 | | |
| Units | | | | mcd | mA | | nm | | | mA | | V | mA | | μ A | | V |

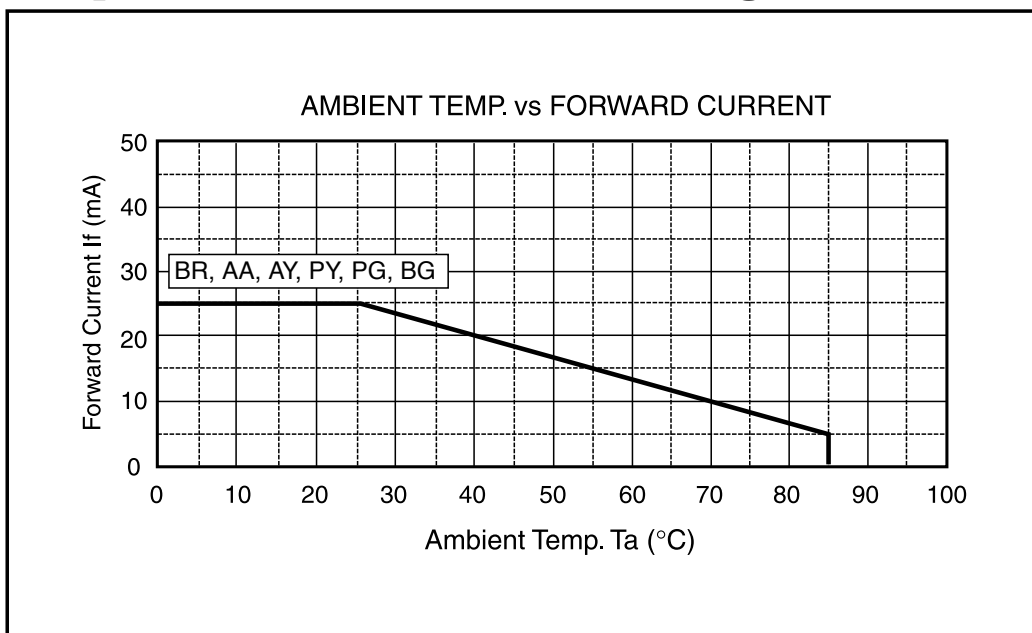
Absolute Maximum Ratings

(Ta=25°C)

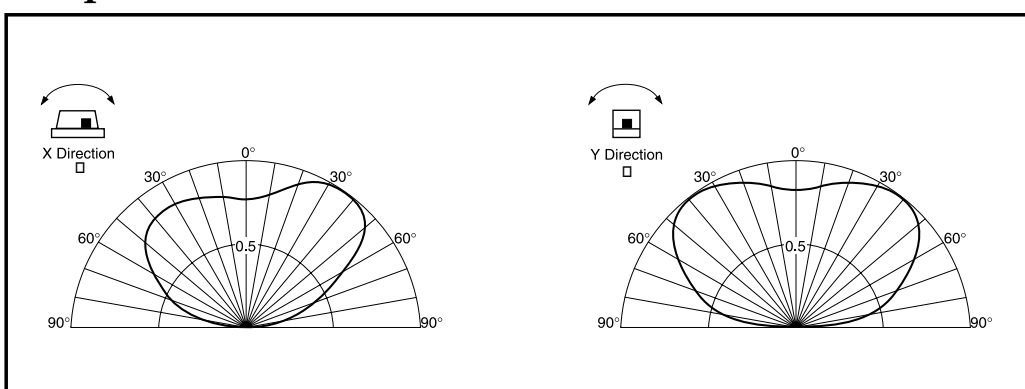
| Item | Symbol | Red | Orange | Yellow | Yellow Green | Green | Pure Green | Units |
|-----------------------|-----------------|------------------------|--------|--------|--------------|-------|------------|-------|
| | | BR | AA | AY | PY | PG | PY | |
| Power Dissipation | Pd | 57.5 | 70 | 70 | 70 | 70 | 70 | mW |
| Forward Current | I _F | 25 | 25 | 25 | 25 | 25 | 25 | mA |
| Peak Forward Current | I _{FM} | 60 | 60 | 60 | 60 | 60 | 60 | mA |
| Reverse Voltage | V _R | 4 | 4 | 4 | 4 | 4 | 4 | V |
| Operating Temperature | Topr | -30 to +85 | | | | | | °C |
| Storage Temperature | Tstg | -40 to +100 | | | | | | °C |
| Derating* | ΔI _F | 0.36 (DC) 0.86 (Pulse) | | | | | | mA/°C |

* Ta=25°C, I_{FM} applies for the pulse width ≤ 1msec. and duty cycle ≤ 1/20.

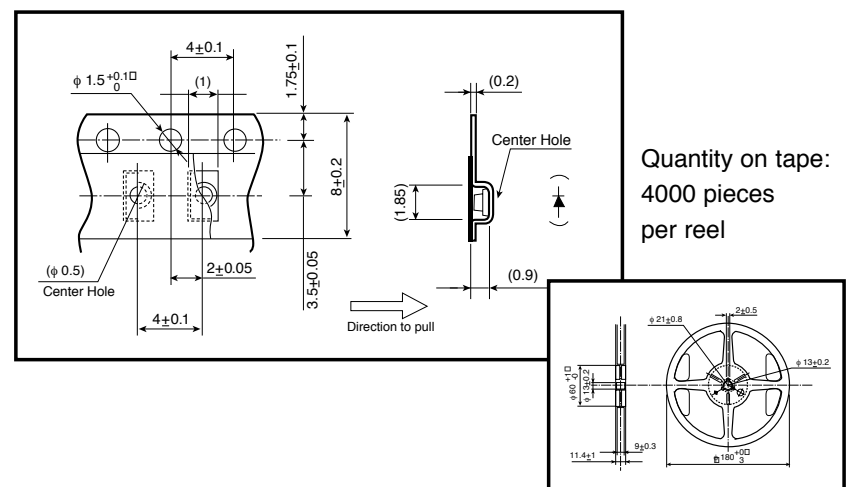
Operation Current Derating Chart (DC)



Spatial Distribution



Taping Specifications

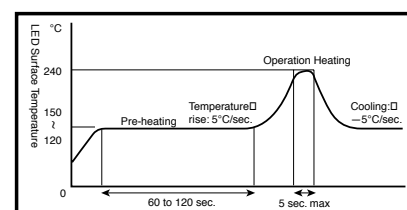


Precautions

Please follow these handling precautions to prevent damage to the chip and ensure its reliability.

1. Soldering conditions:

- **Soldering iron:** Temperature at tip of iron: 280°C max. (30W max.)
Soldering time: 3 sec. max.
- **Dip soldering:** Preheating: 120 ~ 150°C max. (resin surface temp.)
60 ~ 120 sec. max. Bath temperature: 260°C max. Dipping Time: 5 sec. max.
- **Reflow Soldering:**



2. Cleaning:

- If cleaning is required, use the following solutions for less than 1 minute, at less than 40°C.
- Appropriate chemicals: Ethyl alcohol and isopropyl alcohol.
- Effect of ultrasonic cleaning on the LED resin body differs depending on such factors as the oscillator output, size of PCB and LED mounting method. The use of ultrasonic cleaning should be enforced at proper output after confirming there is no problem.

Product specifications subject to change without notice. PG1111C-0301

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