

Data Sheet

Product Name: 215-Sideview

Product Model: IE-2810B-ST-C-08

Customer:

Customer Model:

Version: A.2

Date: 2017-10-11

1. Product Description:

Dimensions (L/W/H): $2.8 \times 0.8 \times 1.2$ mm

Color: High brightness blue light

Colloid: Transparent flat

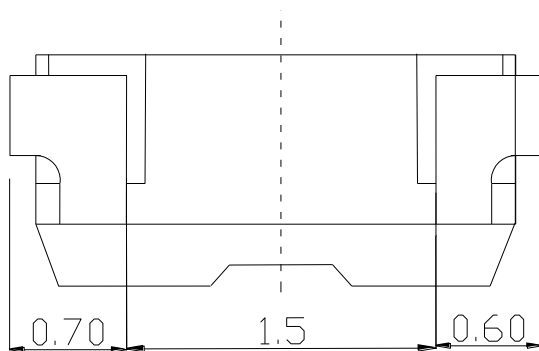
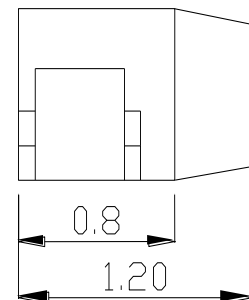
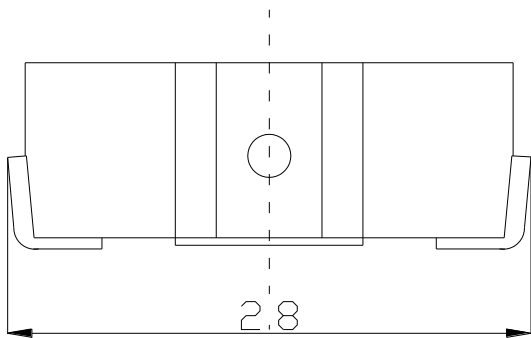
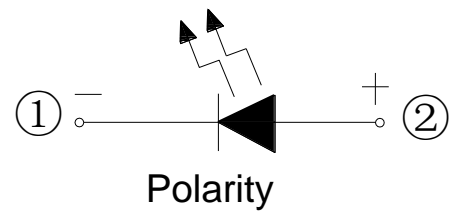
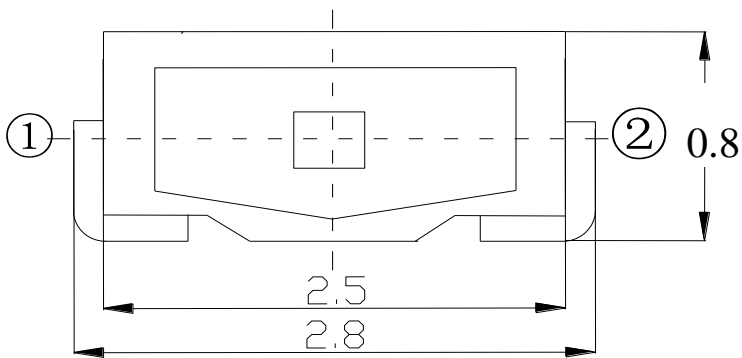
EIA standard packaging

Environmentally friendly products, compliant with ROHS requirements

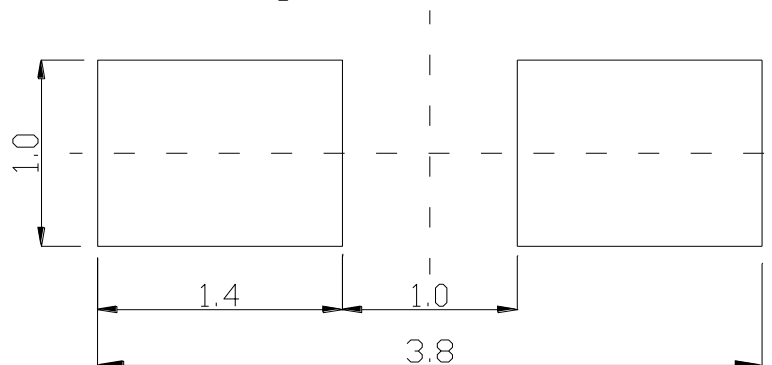
Suitable for automatic placement machines

Suitable for infrared reflow soldering process

2. Dimensions and recommended pad sizes:



Recommended pad size:

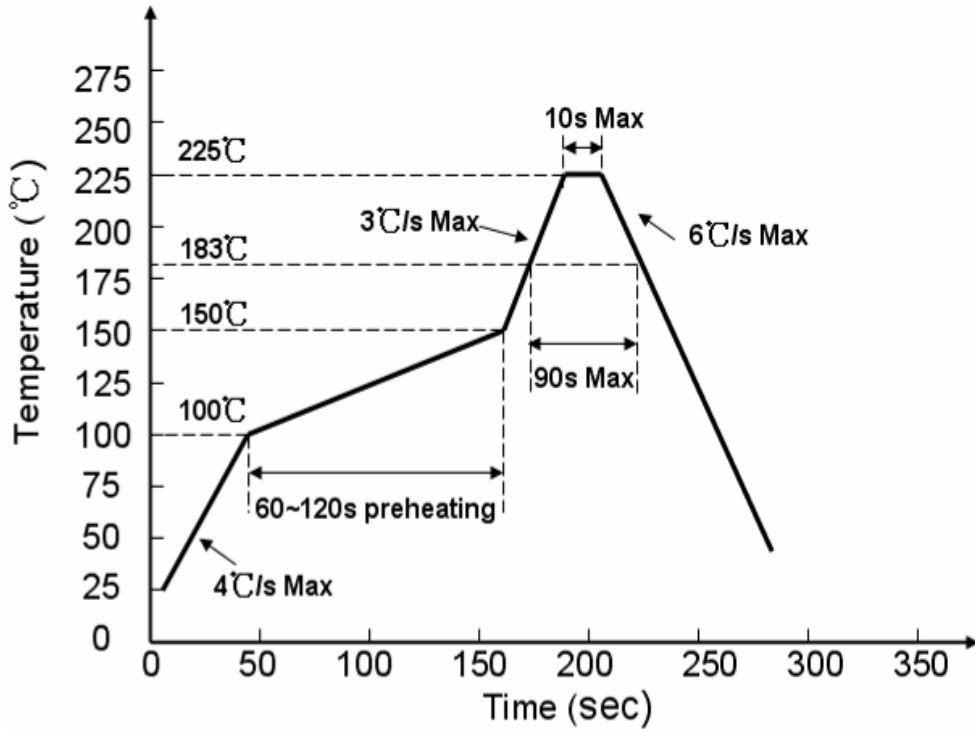


Unit: (mm);

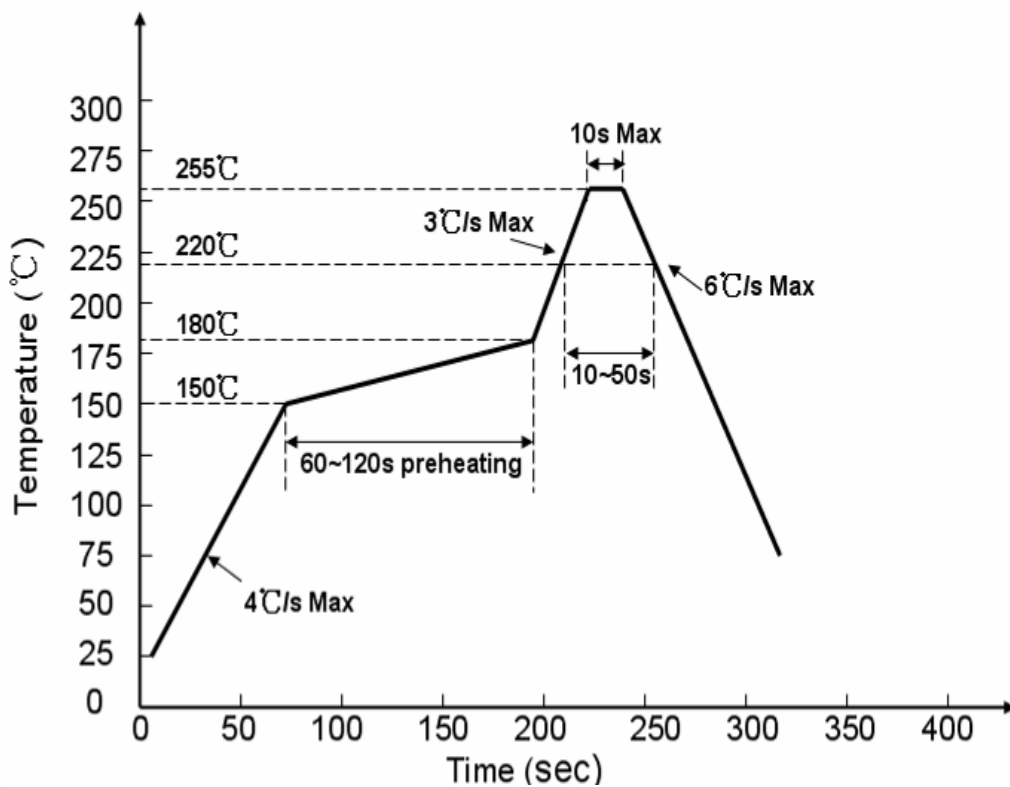
2、Tolerance: ± 0.10 mm;

3. Recommended welding temperature curve:

Lead Soldering:



Lead-free soldering:



4. Maximum Ratings (Ta=25°C):

| Parameters | Symbol | Maximum Ratings | Unit |
|-----------------------|--------|---------------------------|------|
| Power | Pd | 90 | mW |
| Maximum pulse current | IFP | 100 | mA |
| DC current | IF | 30 | mA |
| Reverse voltage | VR | 5 | V |
| Operating temperature | Topr | -30°C ~ +85°C | |
| Storage temperature | Tstg | -40°C ~ +90°C | |
| Soldering conditions | Tsol | 260°C , 10s 300°C , 3s | |
| Antistatic | ESD | 2000 | V |

Photoelectric parameters (Ta=25°C):

| parameter | symbol | Min | average | Max | unit | Test conditions |
|---------------------|--------|--------|---------|--------|------|-----------------|
| Light intensity | IV | --- | 230 | --- | mcd | IF = 20mA |
| viewing angle | 2θ1/2 | --- | 120 | --- | deg | IF = 20mA |
| Forward voltage | VF | 2.8 | | 3.4 | V | IF=20mA |
| Reverse current | IR | --- | --- | 5 | uA | VR=5V |
| wavelength | λP | --- | 472 | --- | nm | IF=20mA |
| Dominant wavelength | λD | --461- | | --473- | nm | |
| Half-wave | Δλ | --- | 30 | --- | nm | |

Brightness BIN Specifications

| Bin | Min | Max | Unit | Condition |
|------------|------------|------------|-------------|------------------|
| M1 | 180 | 230 | MCD | IF=20mA |
| M2 | 230 | 285 | | |
| N1 | 285 | 350 | | |
| N2 | 350 | 450 | | |

Voltage BIN Specifications

| Bin | Min | Max | Unit | Condition |
|------------|------------|------------|-------------|------------------|
| 6 | 2.8 | 3.0 | V | IF=20mA |
| 7 | 3.0 | 3.2 | | |
| 8 | 3.2 | 3.4 | | |

Wavelength BIN Specifications

| Bin | Min | Max | Unit | Condition |
|------------|------------|------------|-------------|------------------|
| B | 461 | 464 | nm | IF=20mA |
| C | 464 | 467 | | |
| D | 467 | 470 | | |
| E | 470 | 473 | | |

6. Photoelectric characteristic curve:

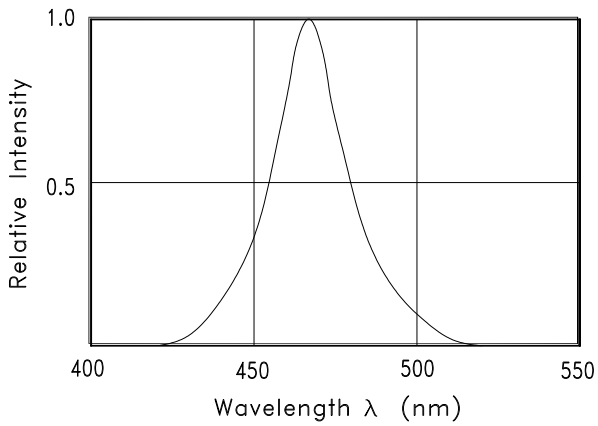


Fig.1. RELATIVE INTENSITY VS. WAVELENGTH

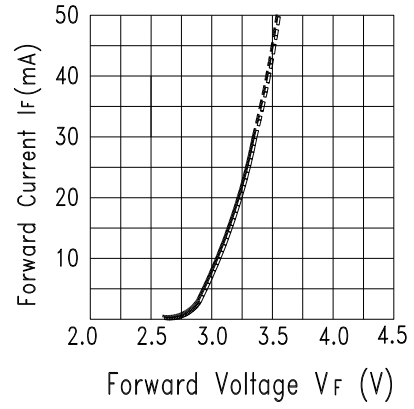


Fig.2 Forward Current vs. Forward Voltage

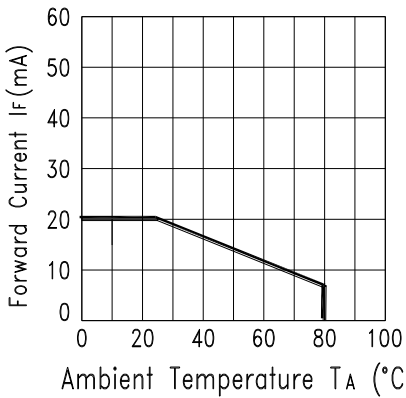


Fig.3 Forward Current Derating Curve

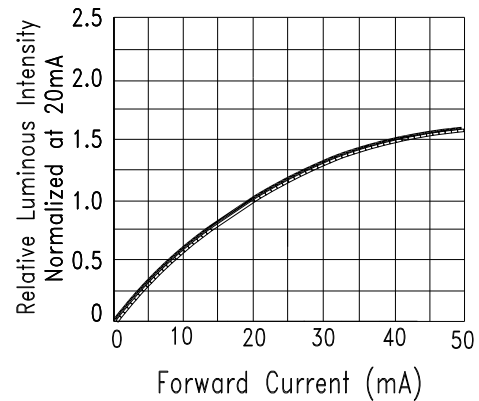


Fig.4 Relative Luminous Intensity vs. Forward Current

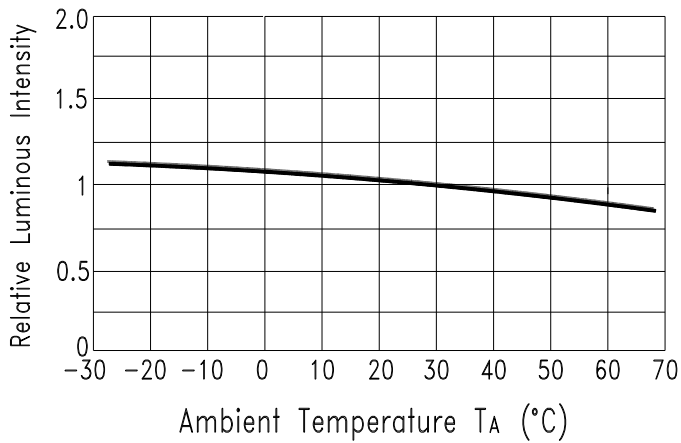


Fig.5 Luminous Intensity vs. Ambient Temperature

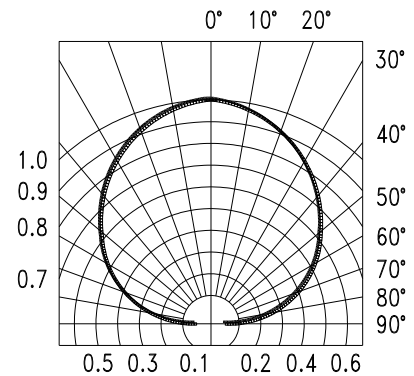
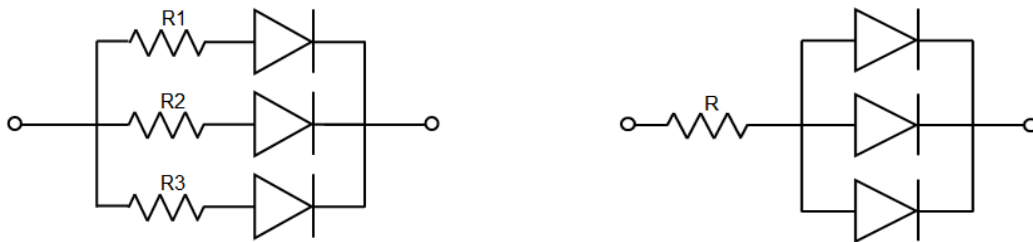


Fig.6 Spatial Distribution

Precautions

use:

1. LED is a current-driven component. Slight changes in voltage will produce large current fluctuations, causing damage to the component. Customers should use resistors in series for current limiting protection.
2. In order to ensure consistent light color when multiple LEDs are used in parallel, it is recommended to use a separate resistor for each branch, as shown in mode A below; If the circuit shown in mode B below is used, the LED light color may be different due to the different volt-ampere characteristics of each LED.



3. Too high ambient temperature will affect the brightness and other performance of LED, so in order to make the LED have better performance, it should be kept away from heat sources.
4. Photoelectric parameter tolerance:

Forward voltage REF / VF: + 0.02V

Brightness CAT / IV: + 11% Dominant

wavelength WLD: + 1 nm

storage:

1. If the original packaging is not opened, the recommended storage environment is: temperature: 5°C~30°C; humidity: below 85%RH. When the inventory exceeds 2 months, dehumidification should be performed before use, and the condition is 60°C/8 hours.
 2. After opening the original packaging, the recommended storage environment is: temperature 5~30° C; humidity below 60%.
 3. LED is a humidity-sensitive component. To avoid moisture absorption of the component, it is recommended to store it in a sealed container with a desiccant or in a nitrogen moisture-proof cabinet after opening the package.
 4. After opening the package, the component should be used within 48 hours (2 days); and soldering should be done as soon as possible after patching.
 5. If the desiccant fails or the component is exposed to the air for more than 48 hours (2 days), dehumidification should be performed.
- Baking conditions: 60°C, 24 hours.

ESD Protection

LEDs (especially blue, emerald green, purple, white, and pink LEDs with InGaN structures) are electrostatically sensitive components. Static electricity or current overload can damage the LED structure. Static electricity damage or current overload may cause abnormal performance of LEDs, such as excessive leakage current, low VF, or failure to light up. Please pay attention to the following matters:

1. Wear an anti-static wrist strap or anti-static gloves when touching LEDs.
2. All machines, tools, work tables, racks, etc. should be properly grounded (ground impedance value within 10Ω).
3. Antistatic bags, boxes and turnover boxes should be used to store or transport LEDs. Ordinary plastic products are strictly prohibited.
4. It is recommended to use ion fans to suppress the generation of static electricity during operation.
5. The static field voltage within the environment 1 foot away from the LED component is less than 100V.

Cleaning

It is recommended to use alcohol solutions such as isopropyl alcohol to clean the LED. It is strictly forbidden to use corrosive solutions to clean it.

welding

1. Refer to the temperature curve on the first page for reflow soldering conditions.
2. The number of reflow soldering should not exceed two times.
3. Manual soldering is only recommended for repair and rework; the maximum soldering temperature should not exceed 300 degrees and must be completed within 3 seconds. The maximum power of the soldering iron should not exceed 30W.
4. During the soldering process, it is strictly forbidden to touch the colloid under high temperature.
5. After soldering, it is forbidden to apply external force to the colloid, and it is forbidden to bend the PCB to avoid impact on the components.

Other

1. The LEDs described in this specification are defined for use in general electronic equipment (e.g. office equipment, communication equipment, etc.). If there are more stringent reliability requirements, especially when component failure or malfunction may directly endanger life and health (e.g. aerospace, transportation, traffic, medical equipment, safety protection, etc.), please inform our sales staff in advance.
2. High-brightness LED products may cause damage to the human eye when lit, and should be avoided from looking directly above.
3. For the purpose of continuous improvement, product appearance and parameter specifications may be modified without prior notice.
4. When 335 is used in soft light strips, the bending angle cannot exceed 60 degrees.
5. Please avoid using materials containing sulfur to avoid affecting the electroplating surface.
6. Corrosive gases can deteriorate the LED electroplating surface, affecting solderability and optical properties. For example: sulfur.