

2835 LED Data sheet

H2835-22/W2810XXX-XX

Packaged by ASM® equipments
Fit for LED tube, LED bulb, LED pannel,etc.

使用整套ASM设备进行封装
适用于LED灯管、LED球泡灯、LED面板灯及LED照明灯具的制造

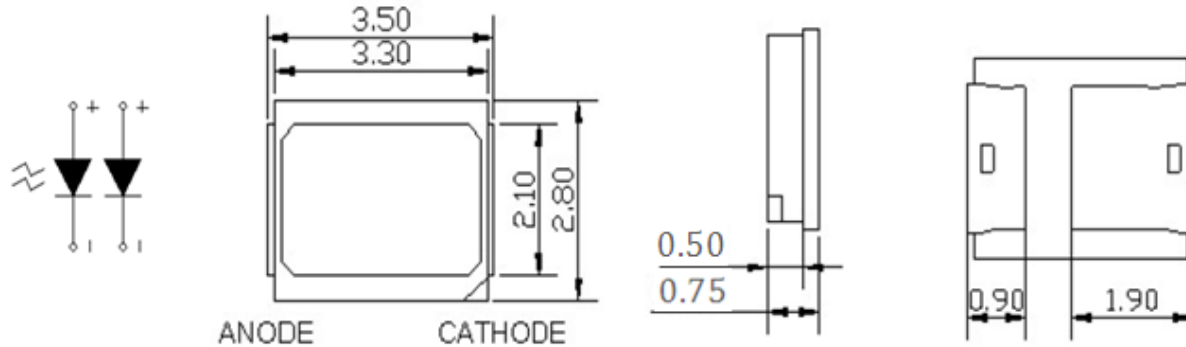


- Top view white LEDs.
- White SMT package.
- Lead frame package with individual 2 pins.
- Wide viweing angle.
- Soldering methods: IR reflow soldering.
- Pb-free.
- The product itself will remain within RoHS compliant version.

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Package Outline Dimensions



Note: Tolerances unless dimension are $\pm 0.1\text{mm}$, unit = mm.

Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

| Paramcter | Symbol | Rating | Unit |
|---|-----------|---|------------------|
| (反向电压) Reverse Voltage | V_R | 5 | V |
| (顺向电流) Forward Current | I_F | 60 | mA |
| (峰值正向电流) Peak Forward current(Duty 1/10 @1KHz) | I_{FP} | 100 | mA |
| (功率) Power Dissipation | pd | 200 | mW |
| (抗静电能力) Electrostatic Discharge (HBM) *1 | ESD | >4000 | V |
| (使用温度范围) Operation Temperature | T_{opr} | -40~+85 | $^\circ\text{C}$ |
| (保存温度) Storage Temperature | T_{stg} | -40~+100 | $^\circ\text{C}$ |
| (焊接温度) Soldering Temperature | T_{sol} | Reflow Soldering: 260 $^\circ\text{C}$ for 10 sec. Hand Soldering: 350 $^\circ\text{C}$ for 3 sec. | |

Note: The products are sensitive to static electricity and must be carefully taken when handling products.

Electro-Optical Charateristics ($T_a=25^\circ\text{C}$)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
|---------------------|-----------------|------|------|------|---------------|-------------------|
| Luminous Intensity | Φ | L3 | --- | L30 | lm | $I_F=60\text{mA}$ |
| Viewing Angle | $2\theta_{1/2}$ | --- | 120 | --- | deg | $I_F=60\text{mA}$ |
| Dominant Wavelength | λ_d | | | | | |
| Forward Voltage | V_F | 2.8 | --- | 3.6 | V | $I_F=60\text{mA}$ |
| Reverse Current | I_R | --- | --- | 10 | μA | $V_R=5\text{V}$ |

Bin Range of Forward Voltage

| Bin Code | Min. | Max. | Unit | Condition |
|----------|------|------|------|---------------------|
| V1 | 2.8 | 2.9 | V | $I_F = 60\text{mA}$ |
| V2 | 2.9 | 3.0 | | |
| V3 | 3.0 | 3.1 | | |
| V4 | 3.1 | 3.2 | | |
| V5 | 3.2 | 3.3 | | |
| V6 | 3.3 | 3.4 | | |
| V7 | 3.4 | 3.5 | | |
| V8 | 3.5 | 3.6 | | |

To lérance of Forward Voltage: $\pm 0.1\text{V}$

Bin Range of Luminous Intensity

| LM | | | LM | | | LM | | | LM | | |
|------|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|
| BIN | MIN | MAX | BIN | MIN | MAX | BIN | MIN | MAX | BIN | MIN | MAX |
| L3 | 3 | 4 | L7 | 7 | 7.5 | L11 | 11 | 12 | L18 | 18 | 20 |
| L4 | 4 | 5 | L7.5 | 7.5 | 8 | L12 | 12 | 13 | L20 | 20 | 22 |
| L5 | 5 | 5.5 | L8 | 8 | 8.5 | L13 | 13 | 14 | L22 | 22 | 24 |
| L5.5 | 5.5 | 6 | L8.5 | 8.5 | 9 | L14 | 14 | 15 | L24 | 24 | 26 |
| L6 | 6 | 6.5 | L9 | 9 | 10 | L15 | 15 | 16 | L26 | 26 | 28 |
| L6.5 | 6.5 | 7 | L10 | 10 | 11 | L16 | 16 | 18 | L28 | 28 | 30 |

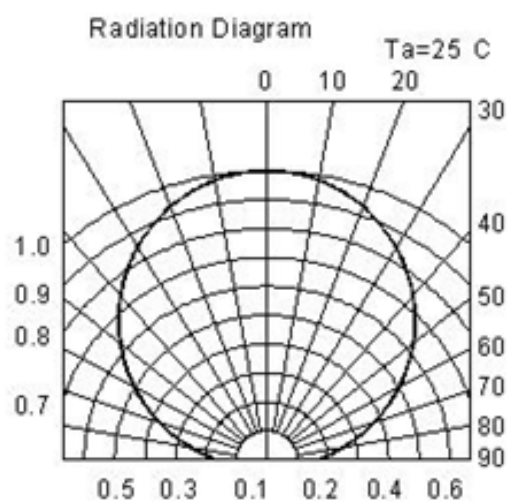
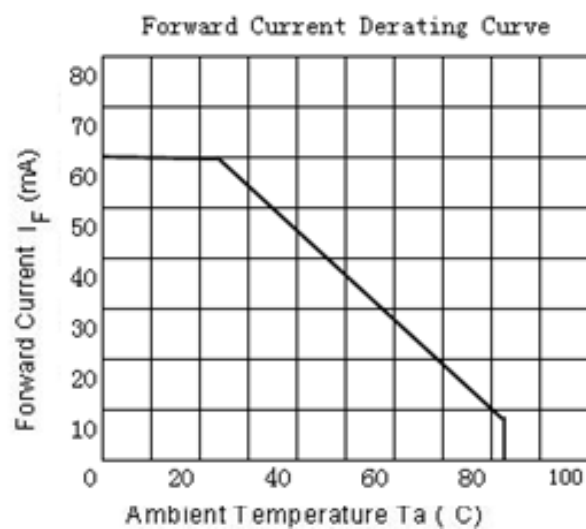
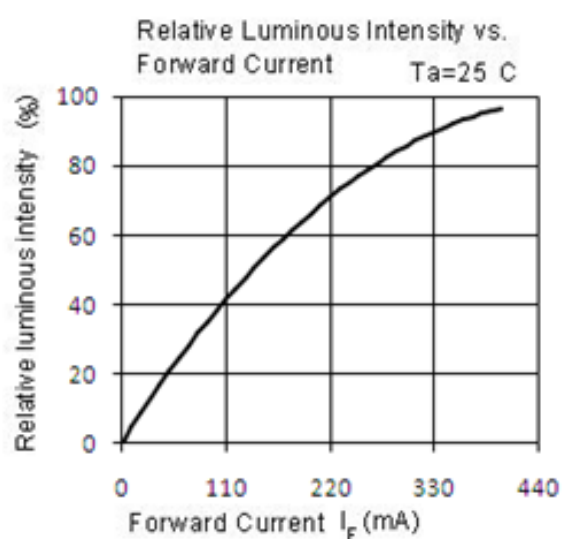
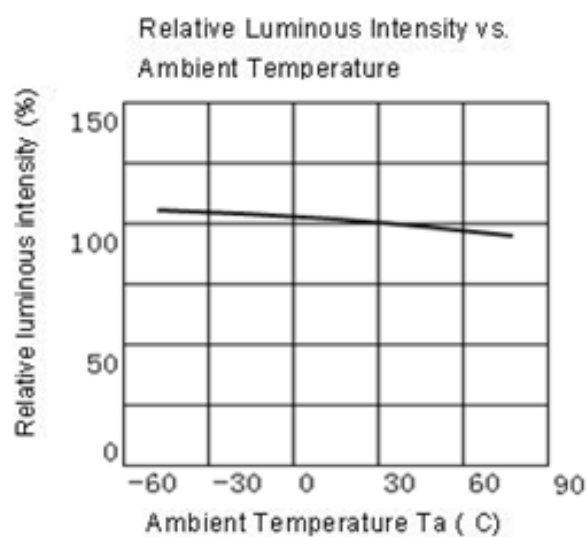
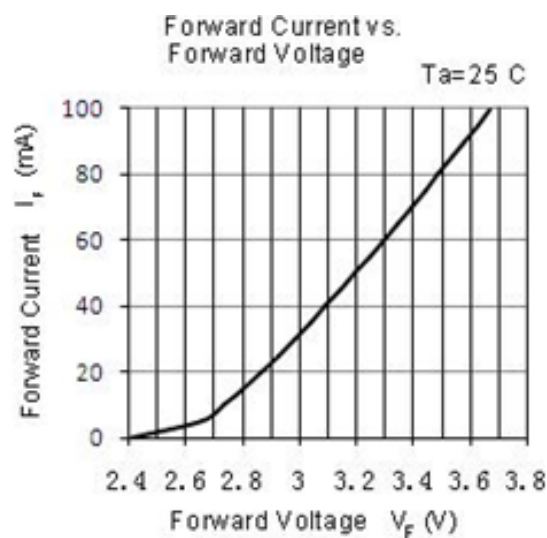
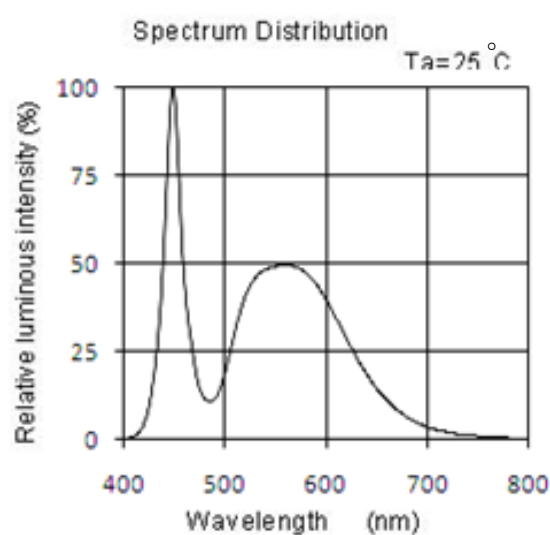
Tolerance of Luminous Intensity: $\pm 10\%$

The C.I.E.
Chromaticity
Diagram

Tolerance of CIE ± 0.004



Sort Feature






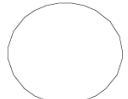




Label

Desiccant

Label

Label Explanation

CAT: Luminous Intensity Rank
HUE: Chromaticity Coordinates
REF: Forward Voltage Rank

| | | |
|--|--------------------|---|
|  | <div>HY-2835</div> |  |
| CPN: P/N:XXXXXXXXXX | | <div>RoHS</div> |
|  XXXXXXXXXXXX | | |
| QTY:XXX | | LM:XXX |
|  | | CIE:XXX |
| LOT NO:XXXXXXXXXX | | VF:XXX |
|  | | |
| Reference : xxxxxxxx | | |
|  | | |

Reliability Test Items and Conditions

The reliability of products shall be satisfied with items listed below,Confidence level:90%;LTPD:10%.

| No. | Items | Test Condition | Test Hours/Cycles | Sample Size | Ac/Re |
|-----|----------------------------------|--|-------------------|-------------|-------|
| 1 | Reflow Soldering | Temp. : 260°C±5°C | 6 Min. | 22 PCS | 0/1 |
| 2 | Temperature Cycle | H : +100°C 15min ↓5min L : -40°C 15min | 300 Cycles | 22 PCS. | 0/1 |
| 3 | Thermal Shock | H : +100°C 5min ↓10 sec L : -10°C 5min | 300 Cycles | 22 PCS | 0/1 |
| 4 | High Temperature Storage | Temp. : 100°C | 1000 Hrs. | 22 PCS. | 0/1 |
| 5 | Low Temperature Storage | Temp. : -40°C | 1000 Hrs. | 22 PCS | 0/1 |
| 6 | DC Operating Life | I _f = 20 mA / 25°C | 1000 Hrs. | 22 PCS. | 0/1 |
| 7 | High Temperature / High Humidity | 85°C/85%RH | 1000 Hrs. | 22 PCS. | 0/1 |

Precautions for Use

1. Over-current-proof

Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

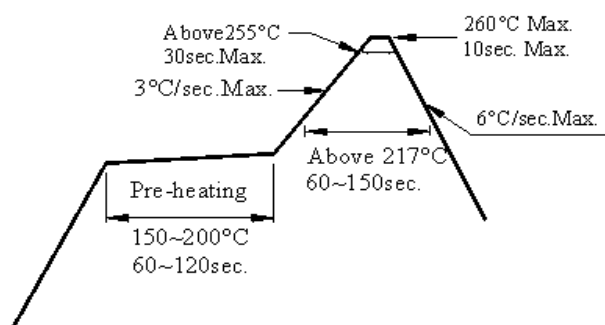
2.2 Before opening the package, The LEDs should be kept at 30°C or less and 90%RH or less.

2.3 After opening the package: The LED's floor life are 168 hours under 30°C or less and 60% RH or less. If unused LEDs remain, it should be stored in moisture proof packages.

2.4 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions. Baking treatment: $60 \pm 5^\circ\text{C}$ for 24 hours.

3. Soldering Condition

3.1 Pb-free solder temperature profile



3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs during heating.

3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

5. Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

