



Data Sheet

Customer: _____

Part No: _____

CLS-23011AUW-11

Sample No: _____

Description: _____

2.3 inch 1 Digit White Color

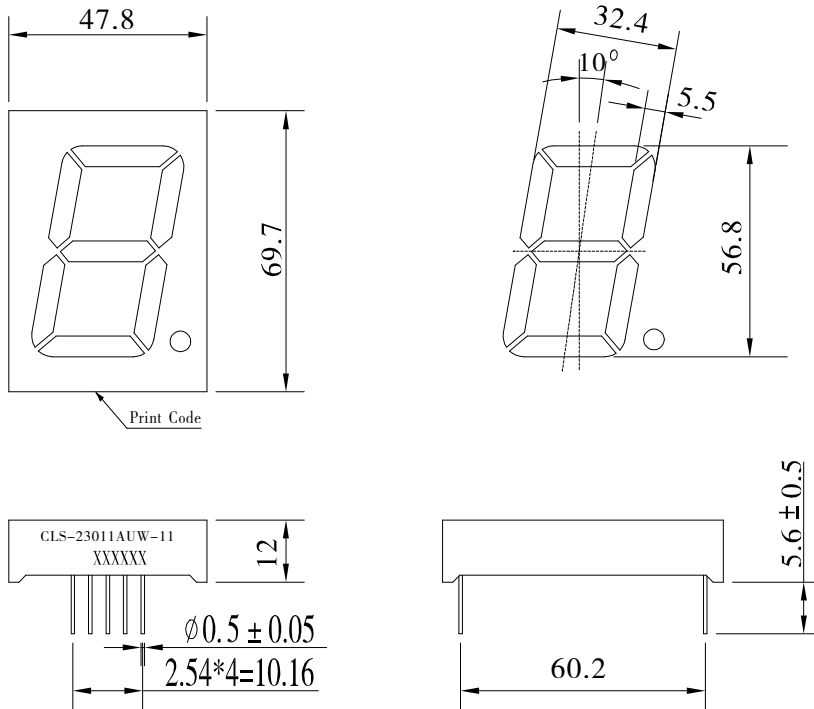
Item No: _____

| Customer | | | |
|----------|------------|----------|------|
| Check | Inspection | Approval | Date |
| | | | |

Descriptions

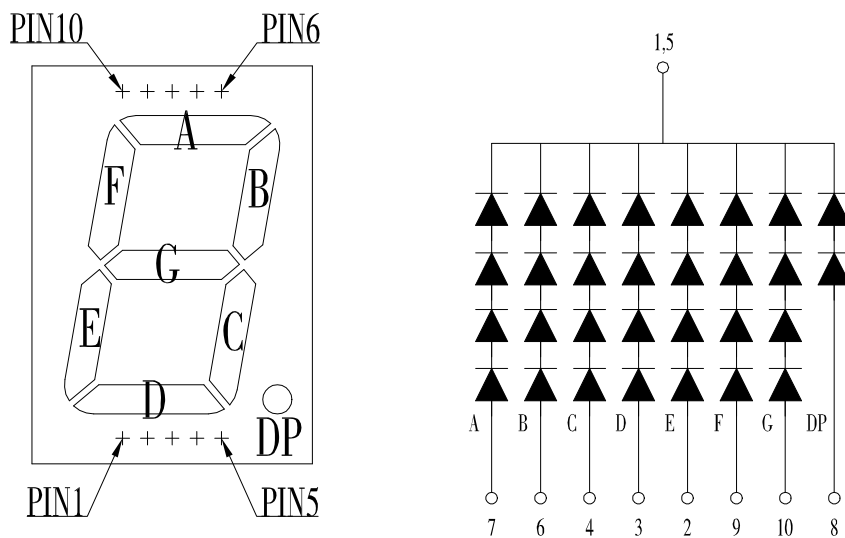
1. Emitting color: White
2. Lens color: White Diffuse
3. Surface black color : Black
4. Dice material: InGaN/GaN

Outline drawing



Tolerance is $\pm 0.25\text{mm}$ unless otherwise noted

Internal Circuit Diagram (C.C.)

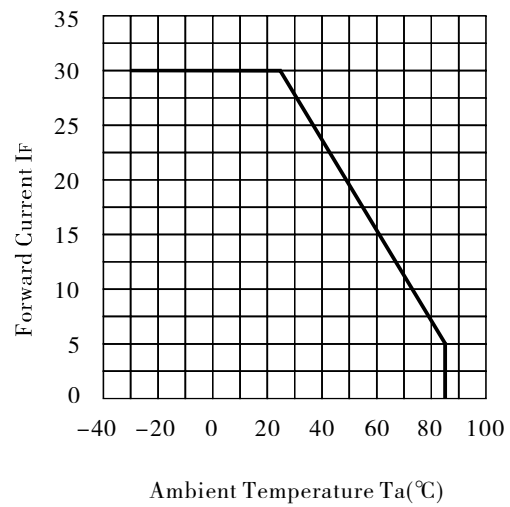
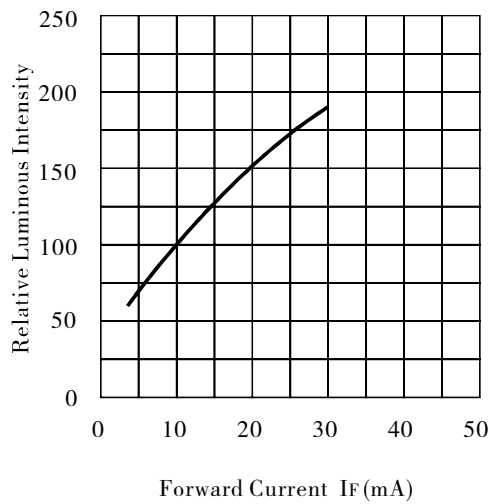
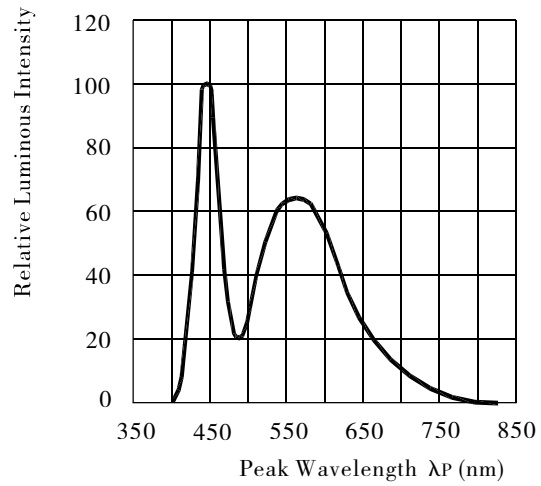
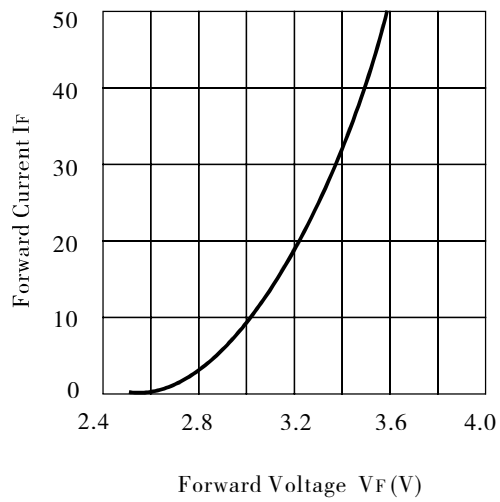


Electrical optical characteristics (Ta=25°C)

| Parameter | Symbol | White | | | Unit | Test Condition |
|--------------------------|--------|-------|------|-----|---------|----------------|
| | | Min | Typ | Max | | |
| Forward Voltage | V_F | --- | 3.2 | 3.6 | V | IF=20mA |
| Luminous Intensity | I_V | 52 | 75 | --- | mcd | IF=10mA |
| Chromaticity Coordinates | X | --- | 0.28 | --- | --- | IF=20mA |
| | Y | --- | 0.27 | --- | | |
| Reverse Leakage Current | I_R | --- | --- | 50 | μA | $V_R=5V$ |

Absolute maximum parameters (Ta=25°C)

| Parameter | Symbol | Condition | Rating | Unit |
|-----------------------------|--------|----------------|------------|-------|
| Power Dissipation | PD | --- | 100 | mW |
| Reverse Voltage | VR | --- | 5 | V |
| Forward Average Current | IF | --- | 30 | mA |
| Temperature coefficient | I/C | --- | 0.4 | mA/°C |
| Pulse Current | IFP | Duty=1/10,1kHz | 100 | mA |
| Operating Temperature Range | Topr | --- | -25 ~ +85 | °C |
| Storage Temperature Range | Tstg | --- | -30 ~ +100 | °C |
| Soldering Condition | Tsd | --- | 265°C/5sec | °C |

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


Reliability test conditions

| Test Item | Test Condition | Result | Judgment criteria |
|---|---|--------|---|
| Consecutive operating life test | IF=20mA, T=25°C, t=168h | 0/12 | Forward Voltage $V_F(V) = \text{Upper Limit} \times 1.2$ Reverse Leakage Current $I_R(\mu A) = \text{Upper Limit} \times 2.0$ Luminous Intensity Iv (mcd)=Lower Limit $\times 0.7$ |
| High temperature storage life test | T=100°C, t=168h | 0/12 | |
| Low temperature storage life test | T=-25°C, t=168h | 0/12 | |
| high Temperature humidity storage life test | T=85 ± 2°C, RH=85% ± 3, t=168h | 0/12 | |
| Temperature cycle test | -25°C~25°C~100°C, 30min 5min 30min 10cycles | 0/12 | |
| Thermal shock test | 100°C 0°C 5min 5min 20 cycles | 0/12 | |
| Soldering heat test | T=260 ± 5°C, t=10s ± 1s | 0/12 | |
| Solderability test | T=230 ± 5°C, t=5s ± 0.5s | 0/12 | Steeped Part ≥ 95% |
| Fall test | h=100cm, Free fall, 3times | 0/12 | Intact |
| Terminal strength test | W=9.8N, t=30 ± 5s | 0/12 | |
| Lead Bending test | W=4.9N, 2times | 0/12 | |