

# 规格书

## Specification

Customer Name: PLAY-ZONE GmbH

Type: LN3461AS2B

| Customer confirmation |         | Guangzhou Linong Lighting technology Co., LTD |         |           |
|-----------------------|---------|---|---------|-----------|
| Approval              | Confirm | Confirm                                       | Made    | Date      |
|                       |         |   | Lingshu | 17-Dec-12 |

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● **Description of the type:**

LN    XXXX    XX    XX

①            ②            ③            ④

- ① Stand for the digital display series of Guangzhou Linong Lighting Technology Co., LTD
- ② Stand for the height of the digit and the quantity of digit
- ③ Stand for the polarity and emitting color
- ④ Stand for the length of the PIN and the color of encapsulation adhesive

● **Description:**

- ① **Description:** 0.36 Inch 4 digits Common Cathode Red Color Digital Display
- ② **Type:** LN3461AS2B
- ③ **Overall dimension:** 30.0\*14.0\*7.2 (mm)
- ④ **Emitting color:** Red
- ⑤ **Encapsulation adhesive color:** milky white adhesive
- ⑥ **Surface color of the shell:** Black
- ⑦ **Diameter of the Pin:**  $\Phi 0.45 \pm 0.05$  mm

● **Certification :**

- ① ISO9001: 2008;
- ② SGS

● **Technical terms:**

- ① **Wavelength:** The data which use to describe the changes of the color of the light can be called wavelength. The range of the wavelength between 380 to 780 nm can be caught by human eye. Unit: Nm.
- ② **Luminance:** Luminance is a photometric measure of the luminous intensity per unit area of light traveling in a given direction. It describes the amount of light that passes through or is emitted from a particular area, and falls within a given solid angle. Unit: Nit.
- ③ **Luminous intensity:** Refers to the degree of the bright light. It is a physical quantity also indicates the visible radiation of the strength of the illuminant. Unit: Cd.
- ④ **Luminous flux:** Luminous flux is the measure of the perceived power of light. It differs from radiant flux, the measure of total power of light emitted, in that luminous flux is adjusted to reflect the varying sensitivity of the human eye to different wavelengths of light. Unit: Lm.

● **ELECTRICAL/OPTICAL PARAMETER:**

**Electrical / Optical (chip) parameter**

**Ta=25°C**

| Parameter          | Symbol    | Test Condition | MIN. | TYP. | MAX. | UNIT |
|--------------------|-----------|----------------|------|------|------|------|
| Forward Voltage    | Vf        | 20mA           | —    | 1.8  | —    | V    |
| Reverse Current    | Ir        | VF=5V          | —    | —    | 10   | uA   |
| Luminous Intensity | Iv        | 20mA           | —    | 12.8 | —    | mcd  |
| Wavelength         | $\lambda$ | 20mA           | —    | 648  | —    | nm   |

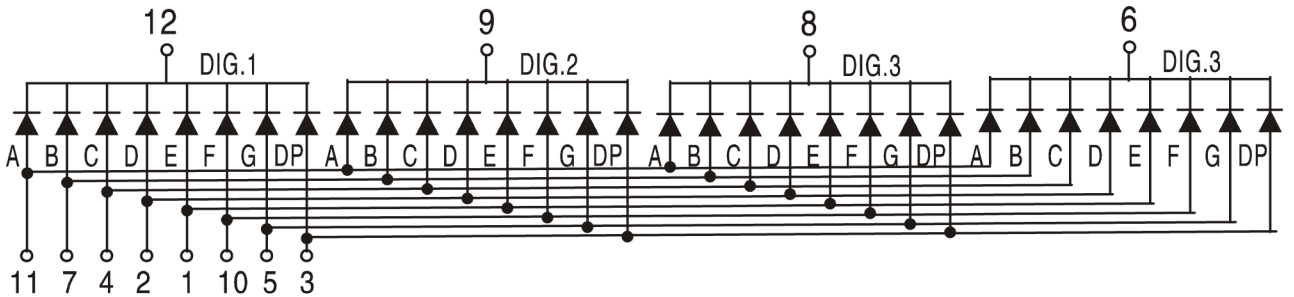
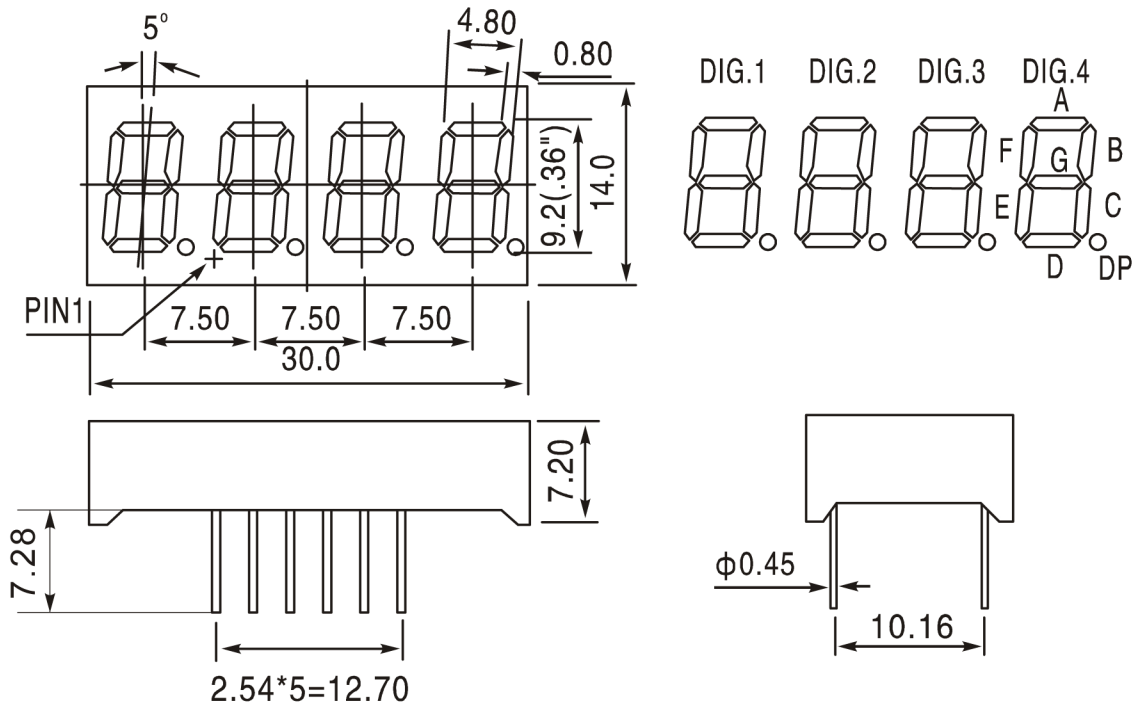
**Absolute rating**

**Ta=25°C**

| Parameter              | Symbol | MIN. | MAX. | UNIT |
|------------------------|--------|------|------|------|
| Forward Current        | If     | —    | 30   | mA   |
| Pulse forward current* | Ifp    | —    | 80   | mA   |
| Reverse Voltage        | Vr     | —    | 5    | V    |
| Operating Temperature  | Topr   | -30  | 80   | °C   |
| Storage Temperature    | Tstg   | -40  | 85   | °C   |
| Power Dissipation      | Pd     | —    | 65   | mW   |

**\*Remark: pulse width: 10ms    Duty Cycle: 1/10**

● Overall dimension and the function of certain PIN:



remark:

- ① All dimensions Unit are “mm”;
- ② Tolerance is  $\pm 0.25$  mm unless otherwise noted.

● **Storage and transportation:**

- ① Operating Temperature -30~80°C
- ② Storage Temperature -40~85°C
- ③ Need moisture proof
- ④ When transporting, try to reduce the chance of mechanical vibration and shock; when carrying, handle gently, Do not stacking too high, Do not put overweight goods on the surface of the LED.

● **Welding:**

**Welding condition:**

- ① Soldering iron welding: Soldering iron (MAX.30W) , tip temperature should not more than 260°C; welding time should not more than 3 Seconds
- ② Wave-soldering: Dip soldering maximum temperature is 260°C; dip soldering should not more than 3 Seconds.

|                        |  |
|------------------------|--|
| Soldering iron welding | 1.Maximum soldering iron power: 30 W         |
|                        | 2.Maximum temperature: 260 °C                |
|                        | 3.Maximum duration: 3 seconds                |
| Wave -soldering        | 1.Maximum temperature of preheating : 100 °C |
|                        | 2.Maximum preheating duration: 60 seconds    |
|                        | 3.Dip soldering maximum temperature: 260 °C  |
|                        | 4.Dip soldering duration: 3 seconds          |

● **Clean:**

Some chemicals will do harm to the surface of the LED such as: chlorylene, acetone. Can use ethanol to wipe (not more than 3 minutes) under the normal temperature.

● **Warning**

- ① Adopt the right current and voltage when operating.
- ② The product can not storage and use under the corrosion gas and can not exposure in the air for a long time otherwise, it will get oxidation.
- ③ All the equipments and instruments connected with the LED should be grounded.
- ④ All the people who touch the LED should wear ESD wrist strap or antistatic gloves.
- ⑤ Once the LED damaged by the static it will show some bad characteristics such as :Leakage current is add, static consequent voltage rise, does not give out normal light or not shine under the low current, the service life will be shorten.