

## Product Data Sheet

- ✧ KL05011WDBA/BSG
- ✧ Digit height: 0.5 inch (12.70mm)
- ✧ Digit number: 1 digit
- ✧ Emitting color: Super green

### **Dongguan Kinley Industrial Co., Ltd**

**Add:** Humen 3<sup>rd</sup> Industrial District, Humen Town Dongguan City GD,CN

**Tel:** 0086 135 3866 1622

**Email:** sales@dgkinley.com

**Web:** [www.dgkinley.com](http://www.dgkinley.com)

# Dongguan Kinley Industrial Co., Ltd

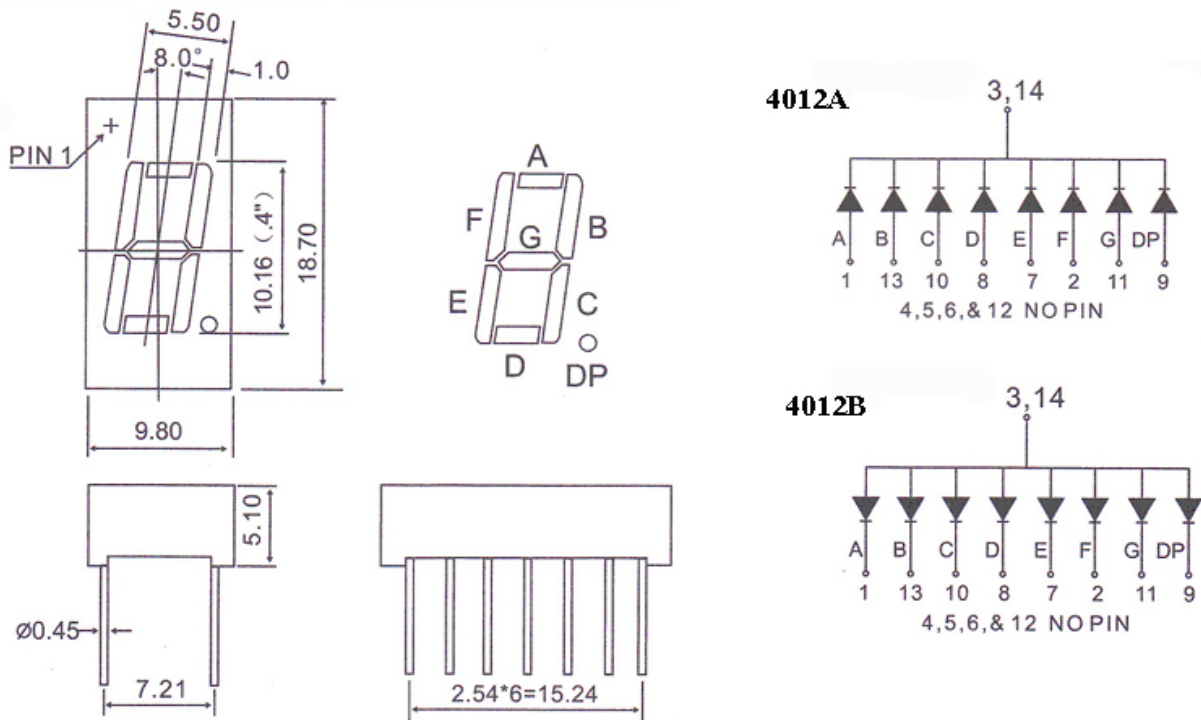
## Selection Guide

| Part No.      | Emitting color | Wavelength | Lens color     | Intensity | Polarity       | Surface color |
|---------------|----------------|------------|----------------|-----------|----------------|---------------|
| KL05011WDBASG | Super green    | 568-573nm  | White diffused | 50-60mcd  | Common cathode | Black         |
| KL05011WDBBSG | Super green    | 568-573nm  | White diffused | 50-60mcd  | Common anode   | Black         |
| KL05011WDGASG | Super green    | 568-573nm  | White diffused | 50-60mcd  | Common cathode | Gray          |
| KL05011WDGBSG | Super green    | 568-573nm  | White diffused | 50-60mcd  | Common anode   | Gray          |



# Dongguan Kinley Industrial Co., Ltd

## Dimension and Diagram



Notes:

1. Dimension in millimeter [inch], tolerance is  $\pm 0.25$  [.010] and angle is  $\pm 1^\circ$  unless otherwise noted.
2. Bending  $\leq$  Length\*1%.
3. The specifications characteristics and technical data described in the datasheet are subject to change without prior notice.

# Dongguan Kinley Industrial Co., Ltd

## Absolute Maximum Ratings at TA=25°C

| Parameter             | Symbol | Test Condition  | Value |     | Unit |
|-----------------------|--------|-----------------|-------|-----|------|
|                       |        |                 | Min   | Max |      |
| Reverse Voltage       | VR     | IR=30           | 5     | —   | V    |
| Forward Current       | IF     | —               | —     | 15  | mA   |
| Power Dissipation     | Pd     | —               | —     | 100 | mW   |
| Pulse Current         | Ipeak  | Duty=0.1mS,1KHz | —     | 150 | mA   |
| Operating Temperature | T opr  | —               | -40   | +85 | °C   |
| Storage Temperature   | T str  | —               | -40   | +85 | °C   |

## Electro-Optical Characteristics (Ta=25°C)

| Parameter                    |                   | Symbol         | Min. | Typ. | Max. | Units | Condition            |
|------------------------------|-------------------|----------------|------|------|------|-------|----------------------|
| Forward Voltage              |                   | V <sub>F</sub> | --   | 1.9  | 2.1  | V     | I <sub>F</sub> =15mA |
| Reverse Current              |                   | I <sub>R</sub> | --   | --   | 10   | μA    | V <sub>R</sub> =5V   |
| Luminous Intensity           | Per segment       | I <sub>V</sub> | 50   | 60   | 70   | mcd   | I <sub>F</sub> =10mA |
|                              | Per decimal point |                | 50   | 60   | 70   |       |                      |
| Peak Wavelength              |                   | λ <sub>p</sub> | --   | 573  | --   | nm    | I <sub>F</sub> =15mA |
| Dominant Wavelength          |                   | λ <sub>d</sub> | --   | 570  | --   | nm    | I <sub>F</sub> =15mA |
| Spectrum Radiation Bandwidth |                   | Δλ             | --   | 20   | --   | nm    | I <sub>F</sub> =15mA |

Note:

1.Luminous Intensity is based on the Kinley standards.

2.Pay attention about Intensity is only for one chip

# Dongguan Kinley Industrial Co., Ltd

## Reliability test items and conditions:

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

| NO | Item                             | Test Conditions                        | Test Hours/Cycle | Sample Size | Failure Judgment Criteria                                  | Ac/Re |
|----|----------------------------------|--|------------------|-------------|--|-------|
| 1  | Reflow Soldering                 | TEMP:230°C±5°C Min. 5<br>SEC           | 6 Min            | 22 PCS      | $I_v \leq I_{vt} * 0.5$ or<br>$V_F \geq U$ or $V_F \leq L$ | 0/1   |
| 2  | Temperature Cycle                | H:+100°C 15min ∫ 5min<br>L:-40°C 15min | 300 Cycles       | 22 PCS      |  | 0/1   |
| 3  | Thermal Shock                    | H:+100°C 5min ∫ 10 sec<br>L:-10°C 5min | 300 Cycles       | 22 PCS      |  | 0/1   |
| 4  | High Temperature Storage         | TEMP:100°C                             | 1000 HRS         | 22PCS       |  | 0/1   |
| 5  | Low Temperature Storage          | TEMP:-40°C                             | 1000 HRS         | 22 PCS      |  | 0/1   |
| 6  | DC Operating Life                | TEMP:25°C If=10mA                      | 1000 HRS         | 22 PCS      |  | 0/1   |
| 7  | High Temperature / High Humidity | 85°C / 85% RH                          | 1000 HRS         | 22 PCS      |  | 0/1   |

Note:

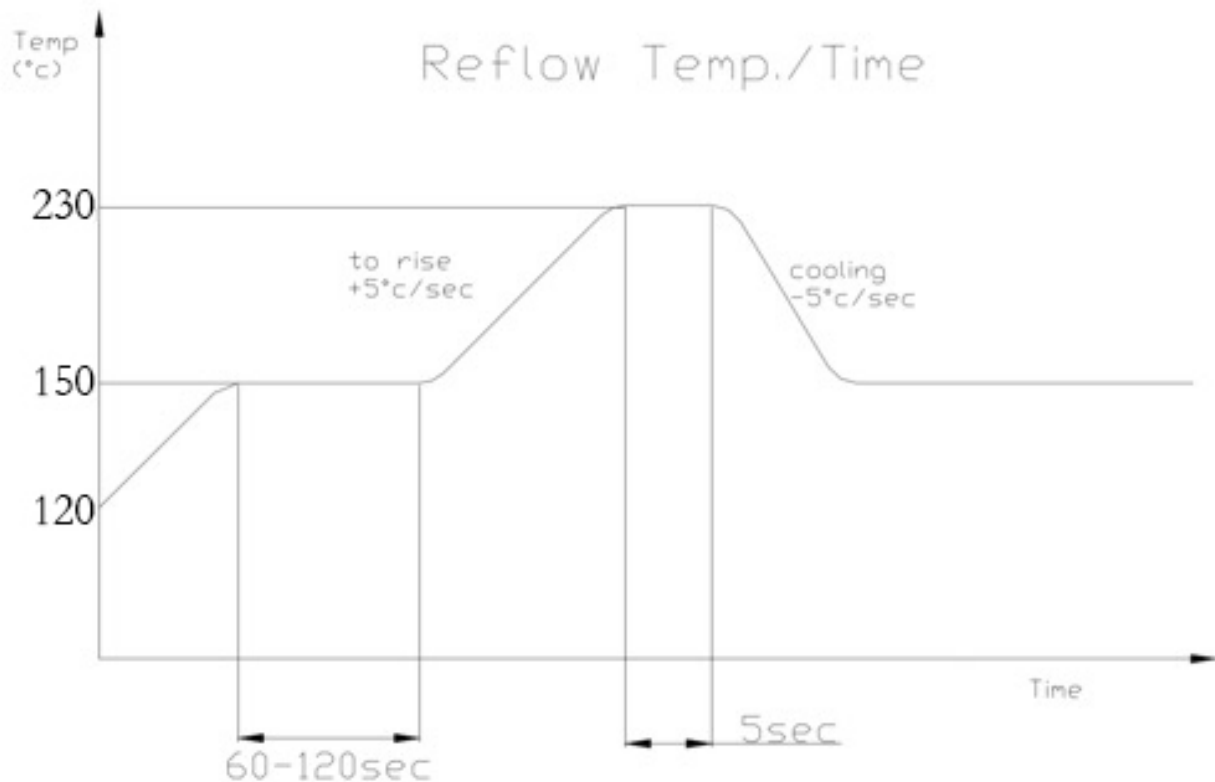
Ivt: The test I<sub>v</sub> value of the chip before the reliability test

I<sub>v</sub>: The test value of the chip that has completed the reliability test

U: Upper Specification Limit L: Lower Specification Limit

# Dongguan Kinley Industrial Co., Ltd

Reflow Temp. / Time :



## ■ Soldering Iron :

Basic spec is  $\leq 5$  sec when 230°C. If temperature is higher, time should be shorter (+10°C → -1sec).

Power dissipation of iron should be smaller than 15 W, and temperature should be controllable. Surface temperature of the device should be under 230 °C.

## ■ Rework :

1. Customer must finish rework within 5 sec under 230°C.
2. The head of iron can not touch copper foil.