



Y. LIN ELECTRONICS CO., LTD.

## Data Sheet

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Customer: \_\_\_\_\_  
Part No: YLS0402/V/21/05-C  
Sample No: YL20180302-932Y  
Description: 0402 Yellow-Green SMD  
Item No: \_\_\_\_\_

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

| Y.LIN |       |          |           |
|-------|-------|----------|-----------|
| Drawn | Check | Approval | Date      |
|       |       |          | 2017/6/15 |

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### Features:

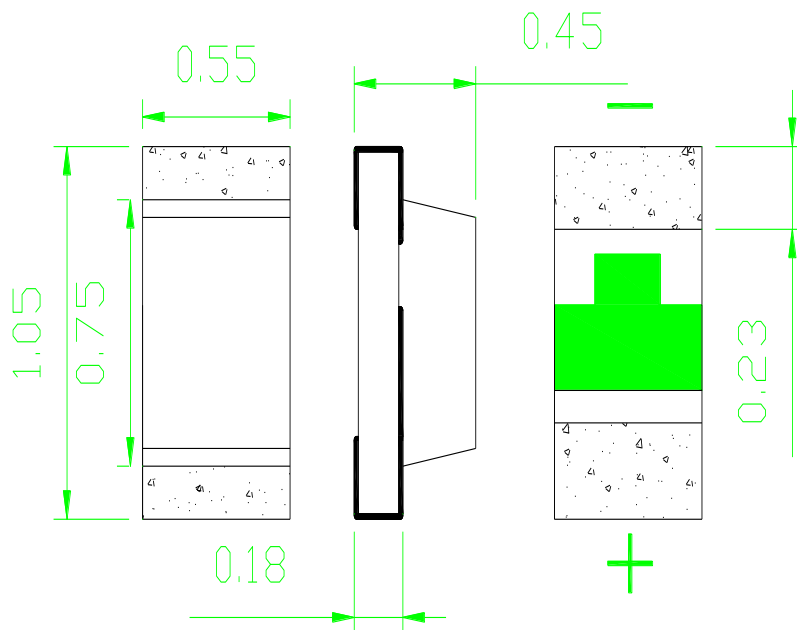
- . Wide Viewing Angle 120°
- . Reflow Solderable
- . High Luminous Intensity and Low Power Dissipation
- . Good Reliability and Long Life
- . Complied With RoHS Directive

### Technical Data Sheet

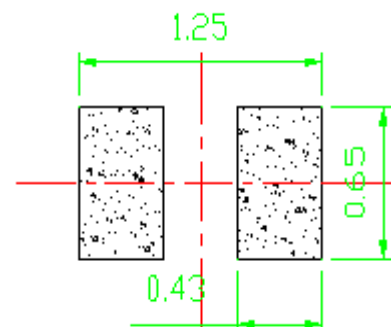
This product is generally used as indicator and luminary for electronic equipment such as household appliance, communication equipment, and dashboard.

### Applications

- Optical indicator
- Indoor display
- Backlighting in dashboard and switch
- Flat backlighting for LCD, symbol and display
- General use



Recommended Soldering Pattern:  
(Units : mm)



### Notes:

1. All dimension units are millimeters.
2. All dimension tolerance is  $\pm 0.2\text{mm}$  unless otherwise noted.



### Selection Guide

| Part No.          | Dice                      | Lens Type   | Luminous intensity(mcd)<br>@20mA |     |     | Viewing Angle |
|-------------------|---------------------------|-------------|----------------------------------|-----|-----|---------------|
|                   |                           |             | Min                              | Typ | Max | 201/2         |
| YLS0402/V/21/05-C | Yellow-Green<br>(AlGaInP) | Water Clear | 20                               | --  | 50  | 120           |

Note:

- 1.201/2 is the angle from optical centerline where the luminous intensity is 201/2 the optical centerline value.
- 2.The above luminous intensity measurement allowance tolerance  $\pm 10\%$

### Electrical / Optical Characteristics at Ta=25 °C

| Parameter           | Symbol      | Min. | Typ. | Max. | Units | test conditions |
|---------------------|-------------|------|------|------|-------|-----------------|
| Forward Voltage     | VF          | 1.8  | --   | 2.4  | V     | IF=20mA         |
| Reverse Current     | IR          | --   | --   | 10   | uA    | VR = 5V         |
| Dominate Wavelength | $\lambda_d$ | 564  | --   | 574  | nm    | IF=20mA         |

### Absolute Maximum Ratings at Ta=25 °C

| Parameter                     | Symbol | Rating   | Units |
|-------------------------------|--------|----------|-------|
| Power Dissipation             | Pd     | 60       | mW    |
| DC Forward Current            | IF     | 20       | mA    |
| Peak Forward Current [1]      | IFP    | 40       | mA    |
| Reverse Voltage               | VR     | 5        | V     |
| Electrostatic Discharge (HBM) | ESD    | 2000     | V     |
| Operating Temperature         | Topr   | -40~+85  | °C    |
| Storage Temperature           | Tstg   | -40~+100 | °C    |

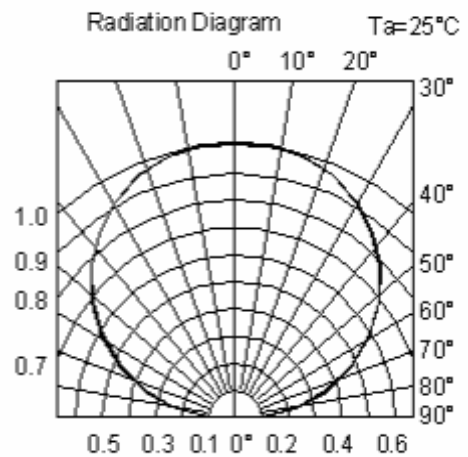
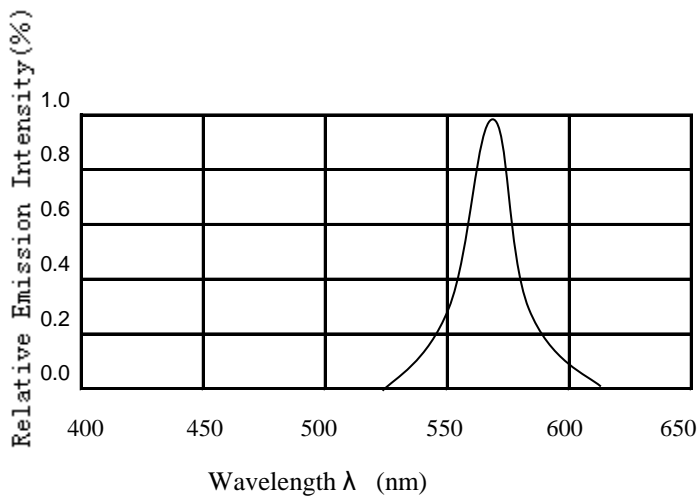
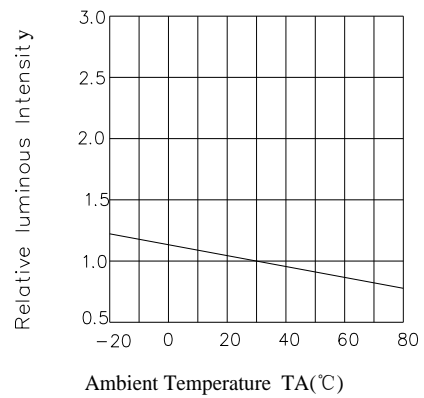
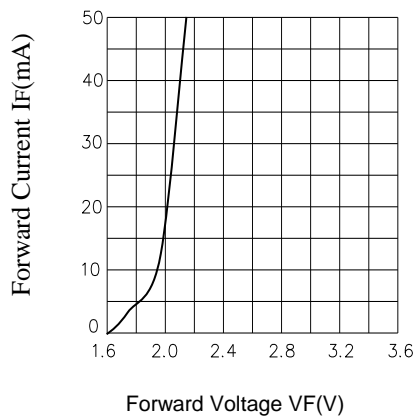
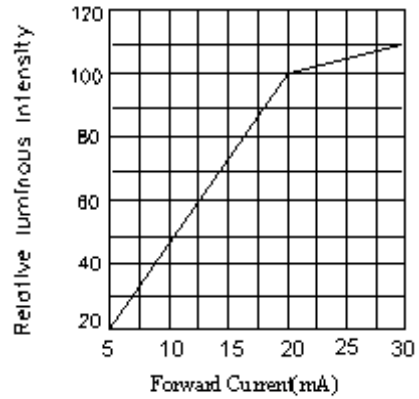
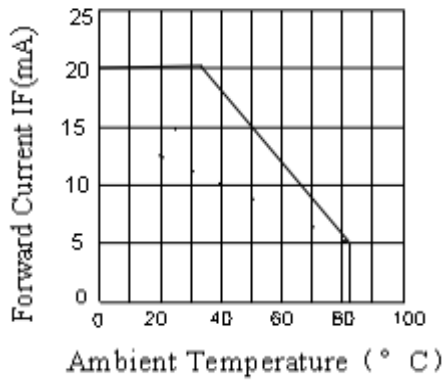
Note:

1. 1/10 Dut cycle,0.1ms pulse width.
2. The above forward voltage measurement allowance tolerance  $\pm 0.1V$ .
3. The tolerance of wave length:  $\pm 1nm$ .



YLS0402/V/21/05-C

## Typical optical characteristics curves





### Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.

Confidence level :90%

LTPD :10%

| Test Items  | Test conditions  | Quantity | Judging Criteria         |
|---|--|----------|--------------------------|
| Solderability   | Solder Temperature: 240°C<br>Solder Duration: (3.5±0.5) sec.   | 22       | Solderable Area Over 95% |
| Thermal Shock Followed by High Temperature And High Humidity Cyclic | -40°→10min<br>5 Cycles ↑ ↓ shift(2~3)min<br>100°C →10 min.<br>25°C~55°C<br>(90%~95%) RH<br>2 Cycles for 48 hrs., Recover for 2 hrs | 22       | C=0 & I**                |
| Resistance For Soldering Heat                                       | Reflow Soldering   | 22       | C=0 & I**                |
| DC Operating Life   | 1000 hrs.<br>Forward Current: 20mA   | 22       | C=0 & I**                |
| High Temperature Storage  | 100°C → 1000 hrs   | 22       | C=0 & I**                |
| High Temperature And High Humidity Cyclic                           | 25°C~55°C<br>(90%~95%) RH<br>6 Cycles for 144 hrs., Recover for 2 hrs.   | 22       | C=0 & I**                |

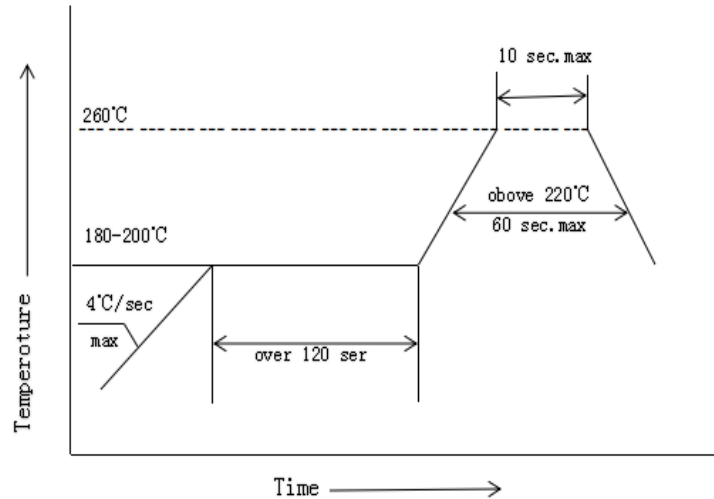
The technical information shown in the data sheets are limited to the typical characteristics and circuit examples of the referenced products. It does not constitute the warranting of industrial property nor the granting of any license.



YLS0402/V/21/05-C

## SMT Reflow Soldering Instructions

- 1.Reflow soldering should not exceed once.
- 2.In soldering process , do not stress on the LEDs during heating .

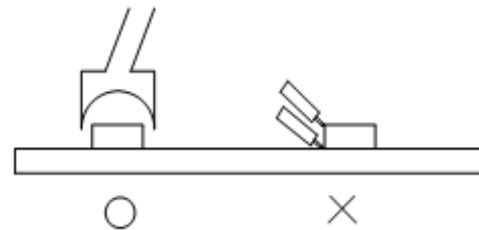


## Soldering iron

- 1.When hand soldering, the temperature of the iron must lower than 300°C for 3 seconds
- 2.The hand solder should be done only one time

## 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 LEDs will or will not be damaged by repairing.



## Storage

The package is sealed:

- 1.Recommended storage condition :At 5°C~30°C and relative humidity 90% RH max.
- 2.It is recommended that SMD out of their original packaging are used within one year.

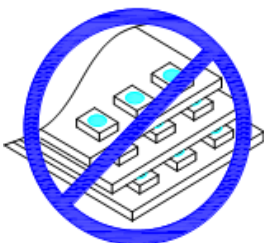
The package is opened:

- 1.After this bag is opened ,devises that will be applied to infrared to infrared reflow,vapor-phase reflow.
  - a.Completed within 672 hour.
  - b.Stored at 5°C~30°Cand 60% RH or less.
- 2.If baking is required,devices must be baked under below conditions 24 hours at 60°C±3°C

## Handling Precautions

1.Do not stack together assembled PCBs containing LEDs. Impact may scratch the silicone lens or damage.

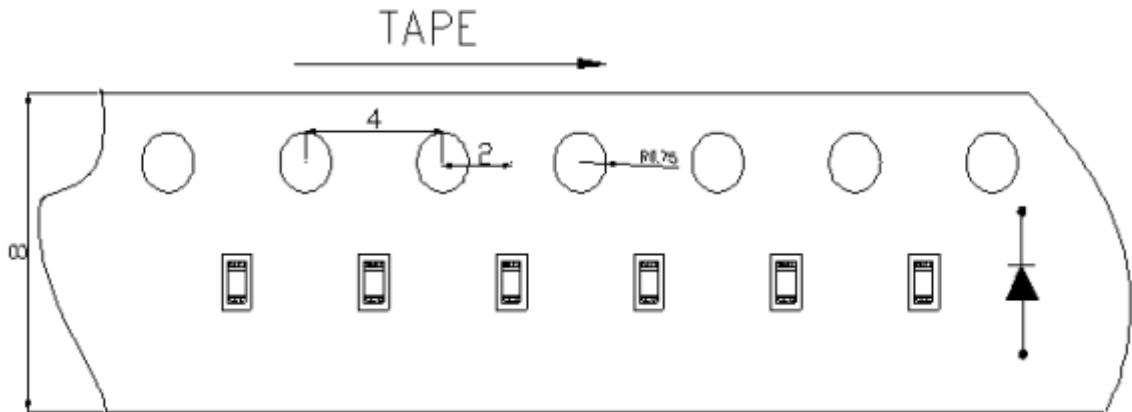
2.Not available in the situation of acidity for PH.





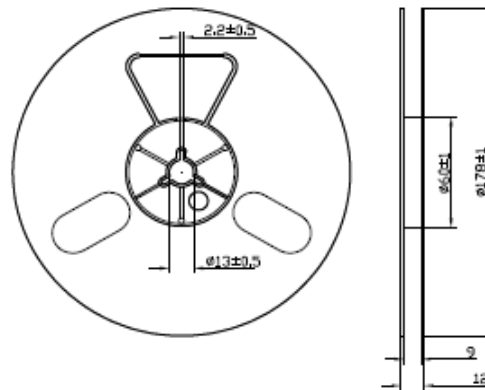
YLS0402/V/21/05-C

## Packaging



Package: 3000 PCS/reel

## Reel Dimensions



Note: The tolerances unless mentioned is  $\pm 0.1$ mm, Unit: mm

## Moisture Resistant Packaging

