# SURFACE MOUNT LED



## 1.ELEMENT APPEARANCE

| Model No. | Material | Lighting Color | Resin Color |
|---|---|---|---|
| RT-1411YL210T | AlGaInP | Yellow | Water Clear |

## 2.ABSOLUTE MAXIMUM RATINGS AT Ta=25℃

| Characteristic | Symbol | Rating | Unit |
|---|---|---|---|
| Forward direct current | IFM | 25 | mA |
| Reverse voltage | VRM | 4 | V |
| Operating temperature | Topr | -40 to +85 | ℃ |
| Storage temperature | Tstg | -40 to +100 | ℃ |
| Power dissipation | Pd | 62.5 | mW |

## 3.ELECTRO-OPTICAL CHARACTERISTICS AT Ta=25℃

| Characteristic | Symbol | Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Luminous intensity | Iv | IF= 20 mA | | 250 | | mcd |
| Forward voltage | VF | IF= 20 mA | | 2.0 | 2.5 | V |
| Reverse current | IR | VR=4V | | | 10 | μA |
| Peak emission wavelength | λp | IF=20mA | | 591 | | nm |
| Dominant wavelength | λd | IF=20mA | | 589 | | nm |
| Spectral line half width | Δλ | IF=20mA | | 15 | | nm |
| Viewing angle | 2θ 1/2 | IF=20mA | | 120 | | deg. |

＊Luminous Intensity Measurement allowance is ±15%

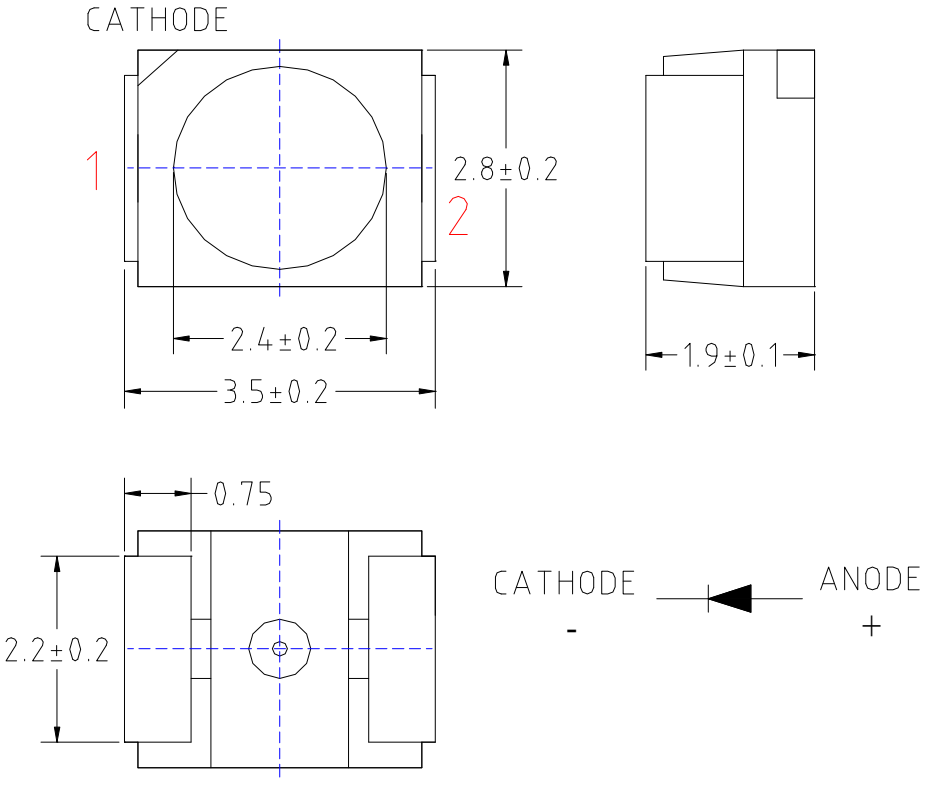
＊Forward voltage Measurement allowance is ±0.05V

＊Emission wavelength Measurement allowance is ±0.5nm

## 4.DIMENSIONS UNIT： m/m

Tolerance is ±0.25mm unless otherwise specified.

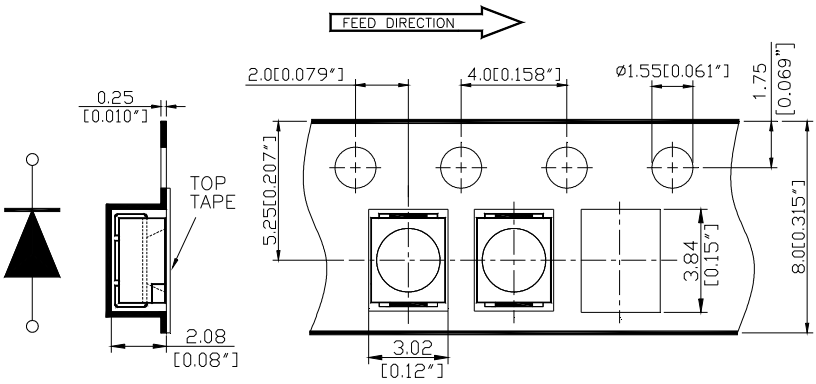
SIGN： 1. CATHODE
2. ANODE



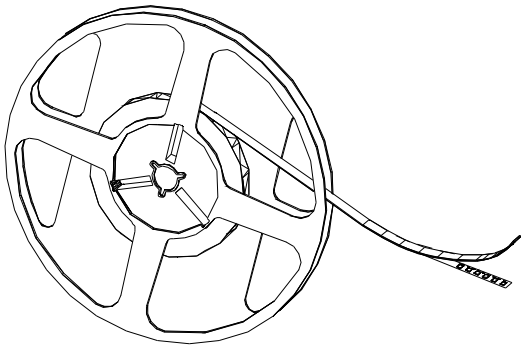
# Model：RT-1411YL210T



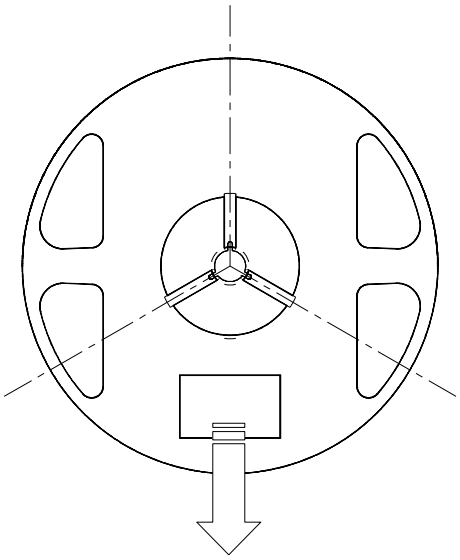
USER DIRECTION OF FEED

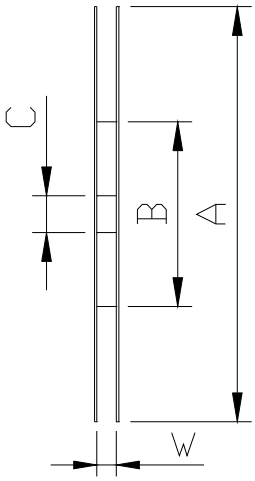



TOP COVER TAPE



| Dimensions per ANSI/EIA Standard RS-481 All dimensions are in Millimeters (inches). | |
|---|---|
| A | 180[7.09] |
| B | 60[2.36] |
| C | 13.5[0.53] |
| W | 8.4 [0.33] |
| Thickness of top cover tape 0.1[0.004"] MAX | |






**RODAN (TAIWAN) LTD.**

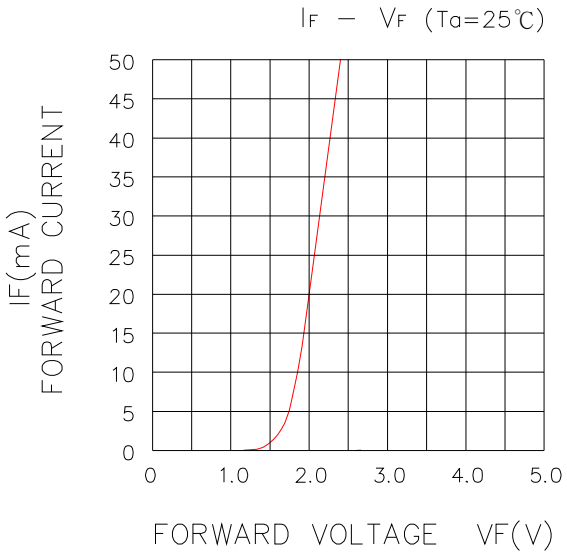
| | |
|---|---|
| **TYPE** | |
| **LOT. NO.** | |
| **QUANTITY** | **pcs** |
| **DATE** | |
| **NOTE** | |

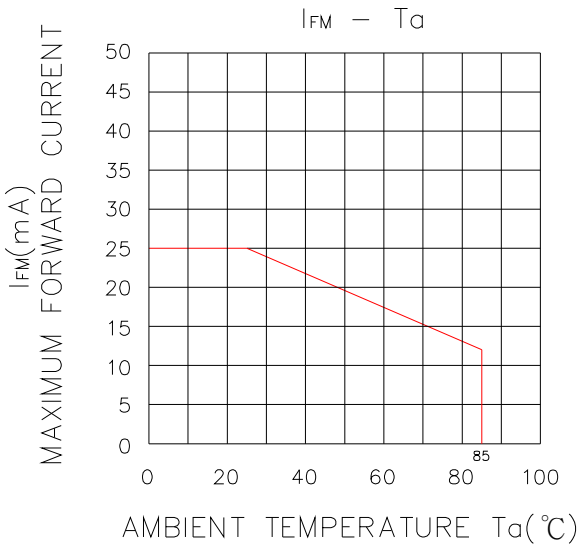
**NOTES:**

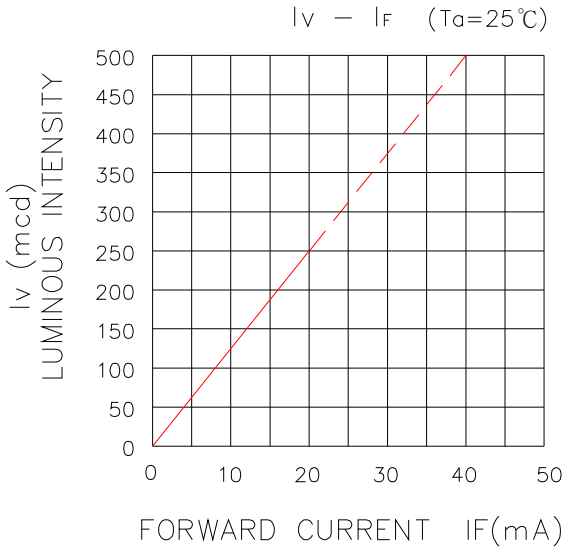
1. Empty component pockets are sealed with top cover tape;
2. Minimum leader length at both ends of the tape is 450 mm;
3. The maximum number of missing lamps is two;
4. The cathode is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specifications.
5. 2000pcs/Reel

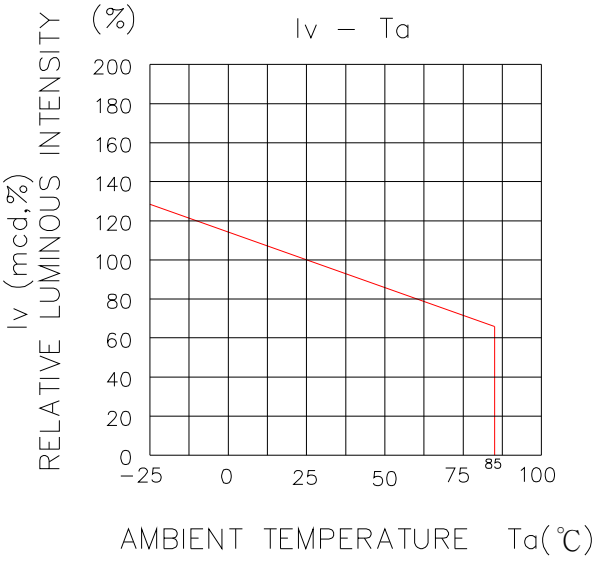
**Model：RT-1411YL210T**

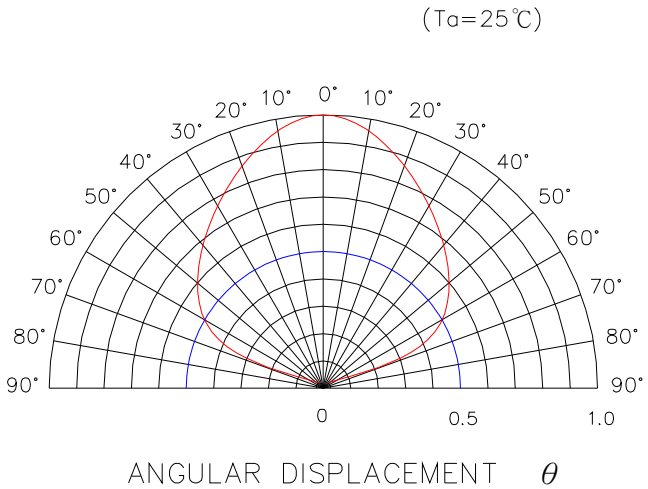


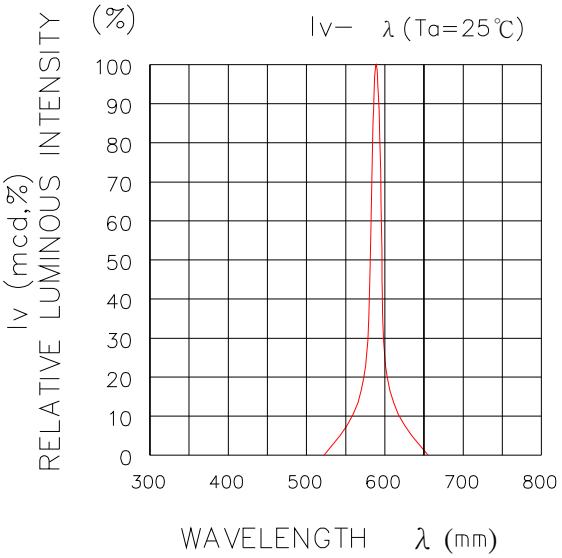


# Soldering Profile



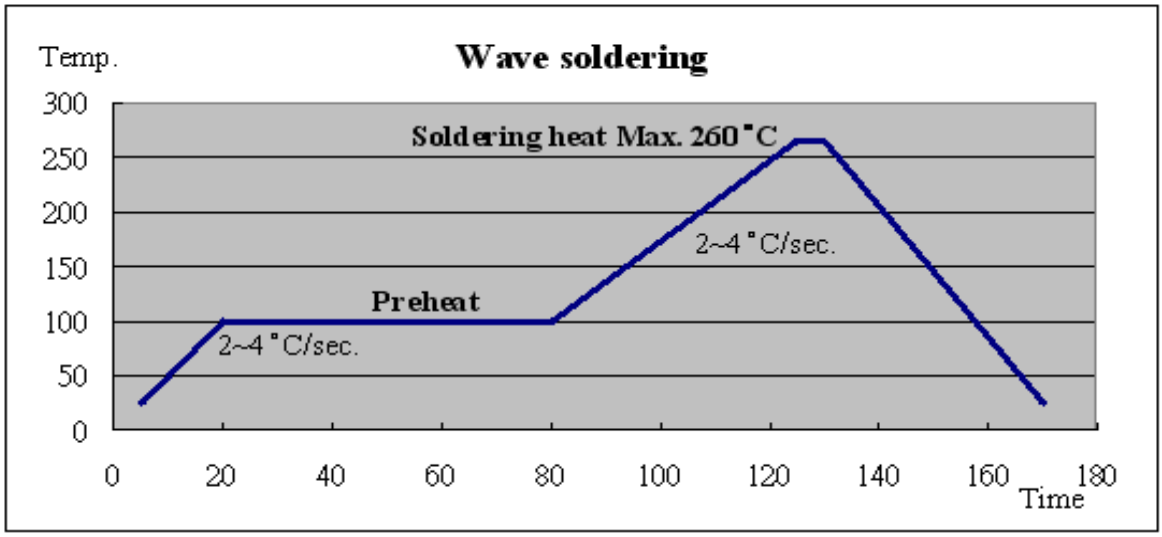
## Compliant with the following condition :

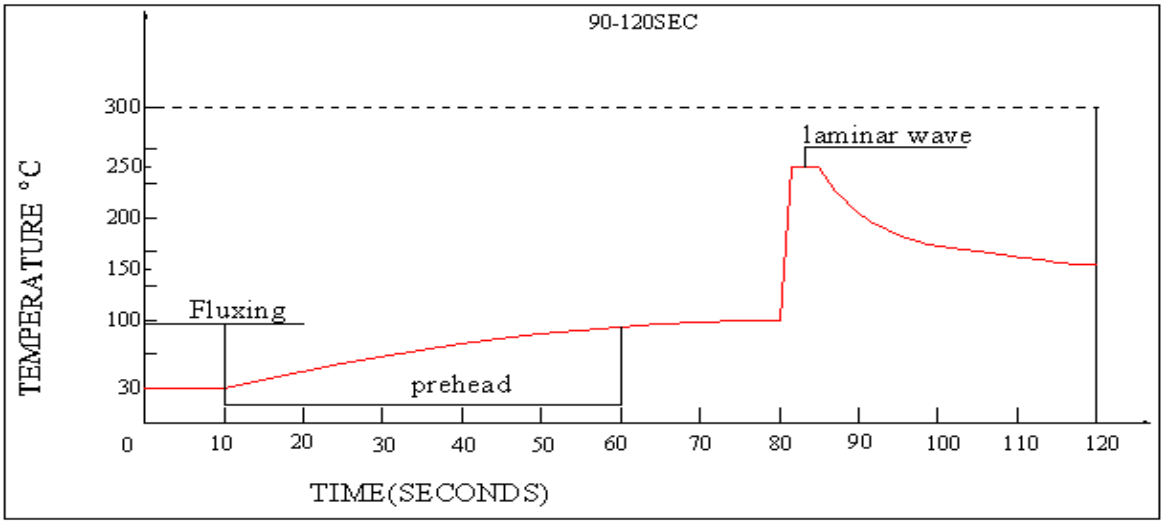
**(1) Leaded quantity of product below 100 ppm**

**(2) Lead-free process**

| Shape | Lead Frame Type / Holder Type |
|---|---|
| Hand soldering | 1.Temp.at tip of iron : 300 °C MAX(30W MAX).<br>2.Soldering time : 3 sec MAX.<br>3.Distance : 3 mm MIN (from solder joint to case) |
| DIP soldering | 1.Preheat temp : 100 °C MAX , 60 sec MAX.<br>2.Bath temp : 260 °C MAX.<br>3.Bath time : 5 sec MAX.<br>4.Distance : 3 mm MIN (From solder joint to case). |
| Reflow soldering | NO |
| **Shape** | **SMD Type** |
| Hand soldering | 1.Temp.at tip of iron : 300 °C MAX.<br>2.Soldering time : 3 sec MAX. |
| DIP soldering | 1.Preheat temp. : 120-150 °C , 60-120 sec.<br>2.Bath temp. : 260 °C MAX.<br>3.Bath time : 5 sec |
| Reflow soldering | 1.Preheat temp. : 150-180 °C , 120 sec MAX.<br>2.Peak temp. : 260 °C MAX.<br>3.Peak time : 10 sec MAX. |

**wave soldering profile :**



# Reliability Test Items



**CONDITIONS：**

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

| NO. | Item | Condition | Time / Cycle | Criteria | Ac / Re | Sample Quantity |
|---|---|---|---|---|---|---|
| 1 | Soldering Heat Test | 260°C | 5 sec | Open / Shot | 0 / 1 | 60 pcs |
| 2 | Thermal Shock | 0℃(5min) ~100℃(5min) | 20 Cycles | Open / Shot | 0 / 1 | 60 pcs |
| 3 | High Temp. Storage | 100℃ | 1000 Hrs | Open / Shot | 0 / 1 | 60 pcs |
| 4 | Low Temp. Storage | -40℃ | 1000 Hrs | Open / Shot | 0 / 1 | 60 pcs |
| 5 | Temperature Cycle Test | -40℃~85℃ | 100 Cycles , 200Hrs | Open / Shot | 0 / 1 | 60 pcs |
| 6 | High Temp. High Humidity Test | 60℃, 90% RH | 1000Hrs | Open / Shot | 0 / 1 | 60 pcs |
| 7 | DC Operation Life Test | IF=20mA | 1000Hrs | Power decay | ≦30% | 60 pcs |

# Instruction for SMD



The packaging material for SMD is PPA, it's a kind material which is moisture regain. If it's working under the high temperature the SMD glue could be divided from PPA due to the steam issue.

It will cause the dark light, flicker problem even the died light,

**Storage condition:**

| CONDITION | TEMPERATURE | RELATIVE HUMIDITY | LIFE LIMITS |
|---|---|---|---|
| **SMD with taping** | **≦40℃** | **≦85%** | **1 year** |
| **Package opened** | **≦30℃** | **≦60%** | **24 hours** |

- It need processing under dehumidifier procedure if it was opened over 24 hours, in case of the SMD body divide from PPA materials of the lead frame.

  Baking condition: 60℃±5℃/24hr.

- Please be aware of the temperature for storage, especially under the high wet environment because it is easy to action in freeze and solidify condition.

  Due to the plating materials under the lead frame so please storage the LED in to the nitrogen space, in case of any rusty problem occur.

# Instruction for SMD



Handling of Silicone LEDs
silicone leds 的操作導引

Notes for handling of silicone LEDs
silicone leds 的操作導引注意事項

●Avoid touching the silicone LEDs especially by sharp tools such as Tweezers.
避免接觸 silicone LEDs 特別是鋒利的器具例如:鑷子

●Please do not use a force of over 3kgf impact or pressure on the surface of silicone LEDs.
請不要使用超過 3 公斤的力量衝擊或擠壓 silicone lens.

●Please do not mold over the silicone LEDs with another resin. (epoxy, urethane, etc)
請不要在 silicone LEDs 上形成另一個樹脂(環氧基樹脂、胺基甲酸乙酯 等)

●Please store the LEDs away from dusty areas or seal the product against dust.
請把 LED 儲存在遠離灰塵多的區域或密封產品來對抗灰塵

●Avoid leaving fingerprints on the surface of silicone LEDs.
避免留下指紋在 LED 表面上