



## VISIBLE LED

### 1.ELEMENT APPEARANCE

PAGE : 1 / 7

Model No.	Material	Lighting Color	Resin Color
RT-7020WRET	InGaN	White	Yellow

### 2.ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Forward direct current	IFM	150	mA
Reverse voltage	V <sub>RM</sub>	5	V
Operating temperature	T <sub>opr</sub>	-25 to +80	°C
Storage temperature	T <sub>stg</sub>	-30 to +85	°C
Power dissipation	P <sub>d</sub>	480	mW

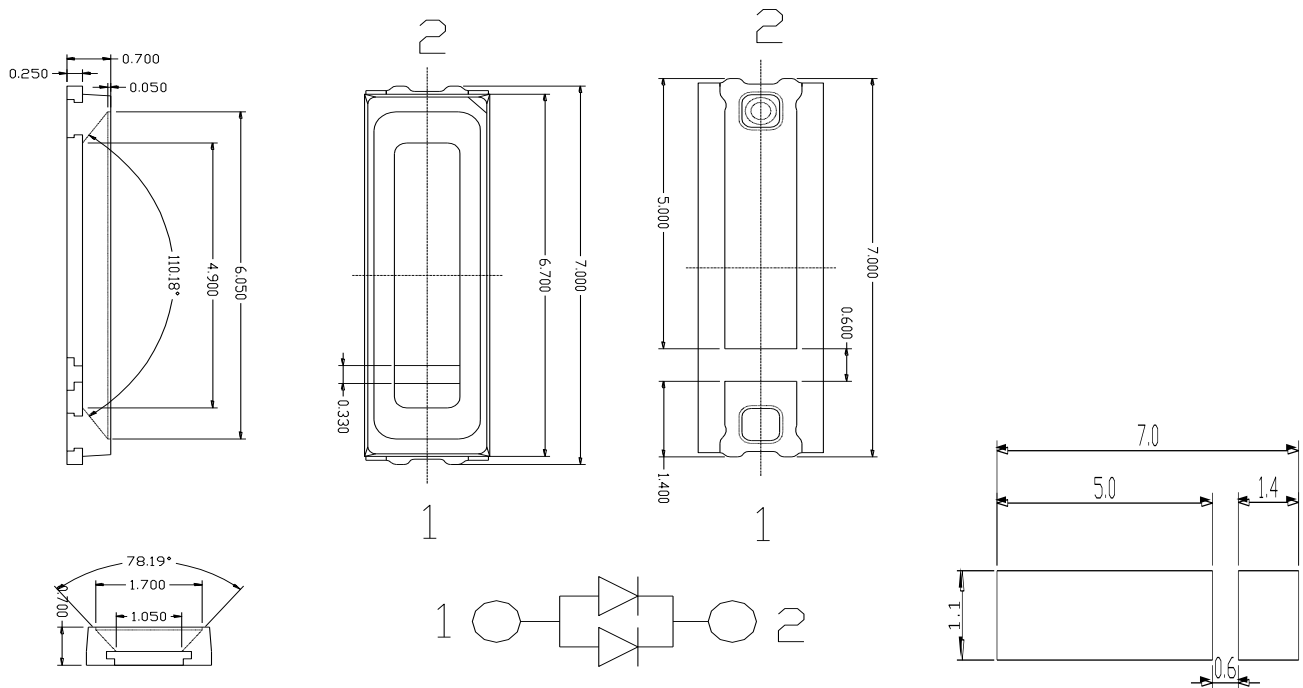
### 3.ELECTRO-OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Flux	$\psi_v$	IF=150mA	60		70	Lm
Forward voltage	V <sub>F</sub>	IF=150mA	3.0		3.4	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =4V			10	$\mu$ A
Viewing half angle	2 $\theta$ 1/2	IF=150mA		120		deg.
Color Temperature	CCT	IF=150mA	9000		10000	K

\* Forward voltage Measurement allowance is  $\pm 0.1V$

\* Luminous Intensity Measurement allowance is  $\pm 15\%$

### 4.DIMENSIONS UNIT : m/m TOLERANCE : $\pm 0.25mm$





5.BIN:

VF (IF=150mA)		
BIN	MIN	MAX
v1	3.0	3.2
V2	3.2	3.4

※VF 誤差值±0.1V

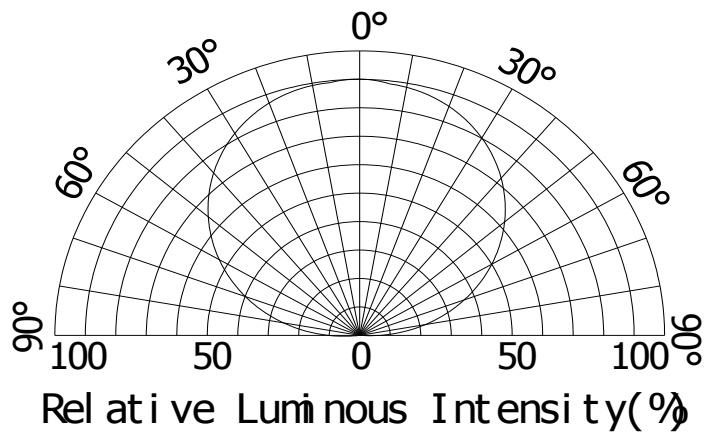
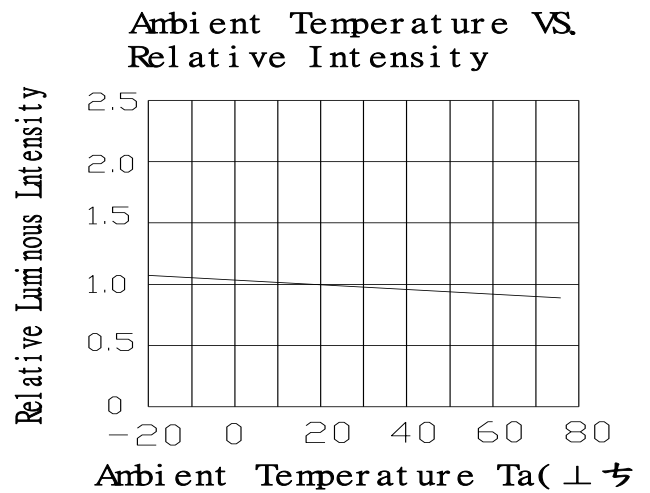
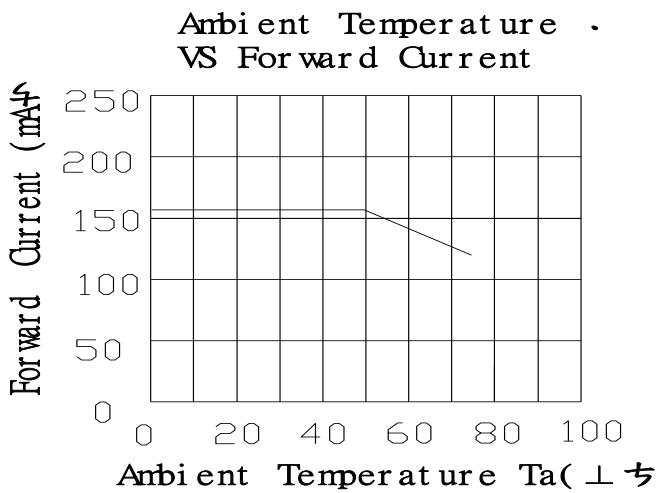
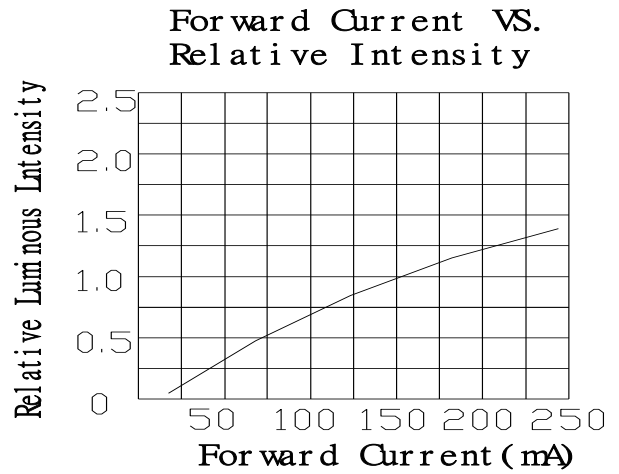
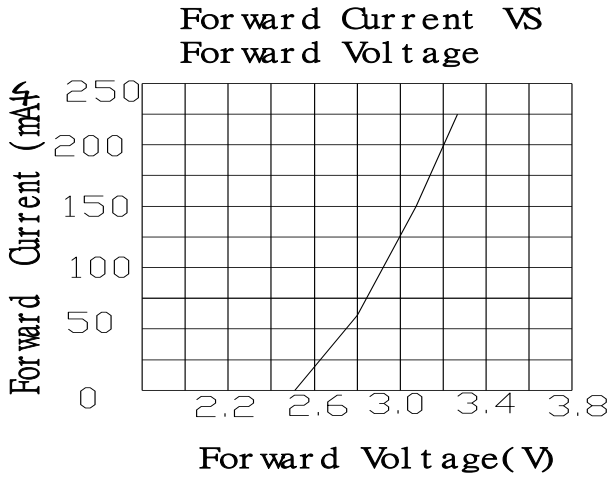
IV (IF=150mA)		
BIN	MIN	MAX
L1	60	70

※亮度誤差值±15%

BIN.別標示如下：

RODAN (TAIWAN) LED.

TYPE	
LOT. NO.	
QUANTITY	
DATE	
NOTE	IV ___ VF___ K_____





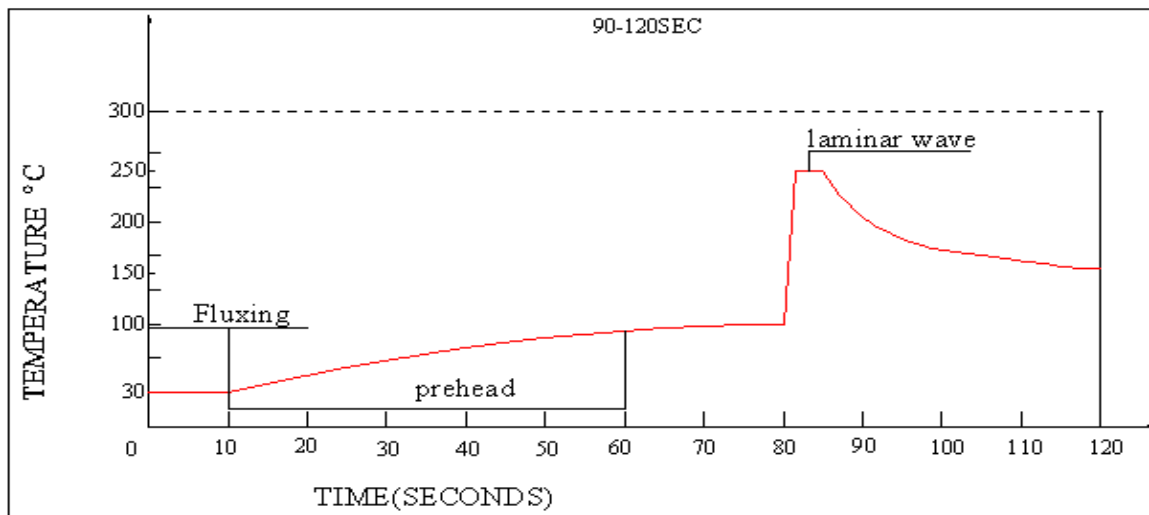
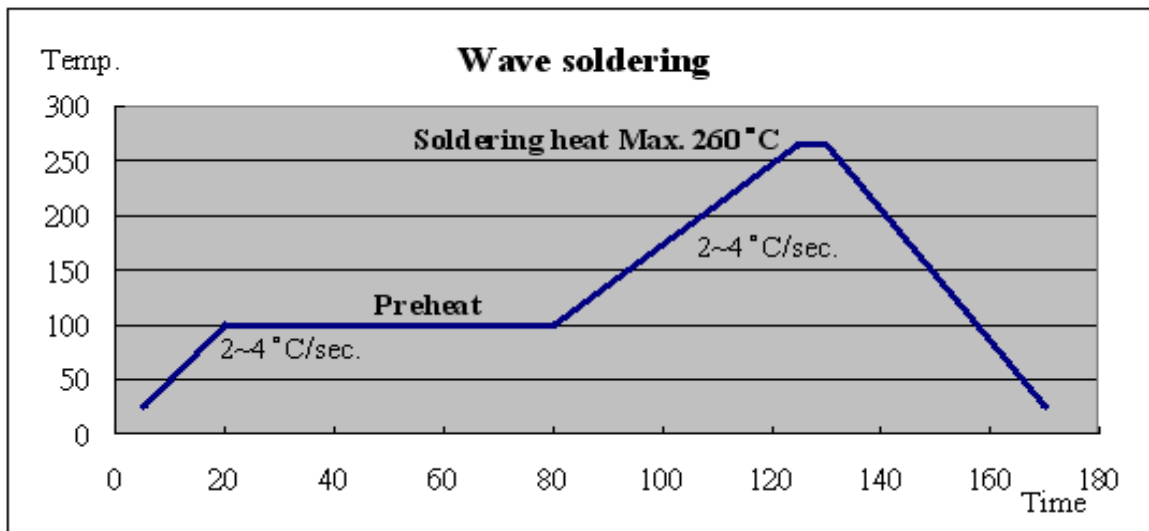
## Soldering Profile

**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). 2.Soldering time : 3 sec MAX. 3.Distance : 3 mm MIN (from solder joint to case)
DIP soldering	1.Preheat temp : 100 °C MAX , 60 sec MAX. 2.Bath temp : 260 °C MAX. 3.Bath time : 5 sec MAX. 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. 2.Soldering time : 3 sec MAX.
DIP soldering	1.Preheat temp. : 120-150 °C , 60-120 sec. 2.Bath temp. : 260 °C MAX. 3.Bath time : 5 sec
Reflow soldering	1.Preheat temp. : 150-180 °C , 120 sec MAX. 2.Peak temp. : 260 °C MAX. 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.	<u>Item</u>	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°C (5min) ~100°C (5min)	20 Cycles	Open / Shot	0 / 1	60 pcs
3	High Temp. Storage	100°C	1000 Hrs	Open / Shot	0 / 1	60 pcs
4	Low Temp. Storage	-40°C	1000 Hrs	Open / Shot	0 / 1	60 pcs
5	Temperature Cycle Test	-40°C~85°C	100 Cycles , 200Hrs	Open / Shot	0 / 1	60 pcs
6	High Temp. High Humidity Test	60°C, 90% RH	1000Hrs	Open / Shot	0 / 1	60 pcs
7	DC Operation Life Test	IF=40mA	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	$\leq 40^{\circ}\text{C}$	$\leq 85\%$	1 year
Package opened	$\leq 30^{\circ}\text{C}$	$\leq 60\%$	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:  $60^{\circ}\text{C} \pm 5^{\circ}\text{C} / 24\text{hr}$ .

- 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

