



SURFACE MOUNT LED

1.ELEMENT APPEARANCE

Model No.	Material	Lighting Color	Resin Color
RT-3528YA01-ES20	AlGaInP	Yellow	Water Clear

2.ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Forward direct current	IFM	50	mA
Reverse voltage	VRM	5	V
Operating temperature	Topr	-40 to +85	°C
Storage temperature	Tstg	-40 to +100	°C
Power dissipation	Pd	135	mW

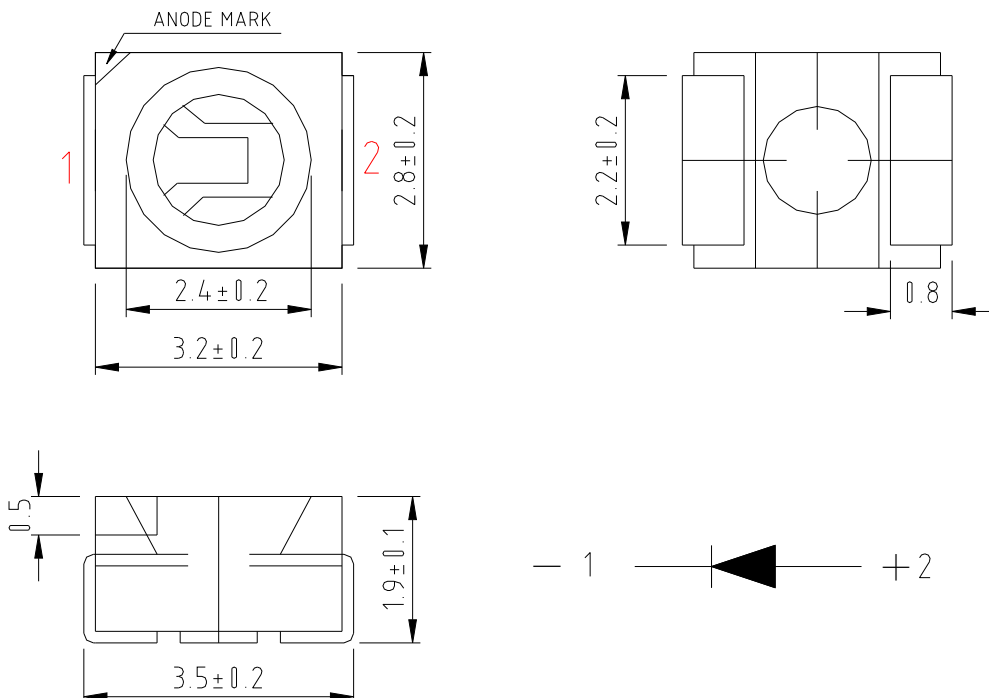
3.ELECTRO-OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit	
Luminous intensity	Iv	IF=20mA	L1	900	~	1050	mcd
			L2	1050	~	1200	
Forward voltage	VF	IF=20mA		2.2	2.6	V	
Reverse current	IR	VR=5V			10	μA	
Dominant wavelength	λd	IF=20mA	u1	589.5	~	592	nm
			u2	592	~	594.5	
Spectral line half width	Δλ	IF=20mA		18		nm	
Viewing angle	2θ 1/2	IF=20mA	100	120	140	deg.	

- ※ Forward voltage Measurement allowance is ±0.05V
- ※ Luminous Intensity Measurement allowance is ±15%
- ※ Dominant wavelength Measurement allowance is ±0.5nm



4.DIMENSIONS UNIT : m/m TOLERANCE : ± 0.25





5.BIN

VF (IF=20mA)		
BIN	MIN	MAX
V1	1.8	2.0
V2	2.0	2.2
V3	2.2	2.4
V4	2.4	2.6

※ VF 誤差值±0.05V

Iv (IF=20mA)		
BIN	MIN	MAX
L1	900	1050
L2	1050	1200

※IV 誤差值±15%

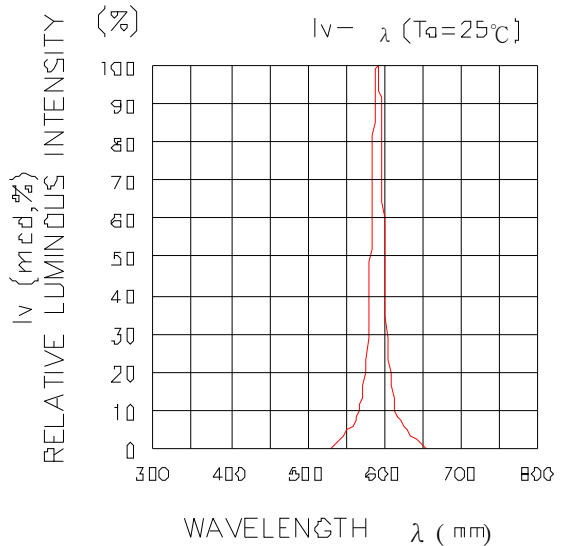
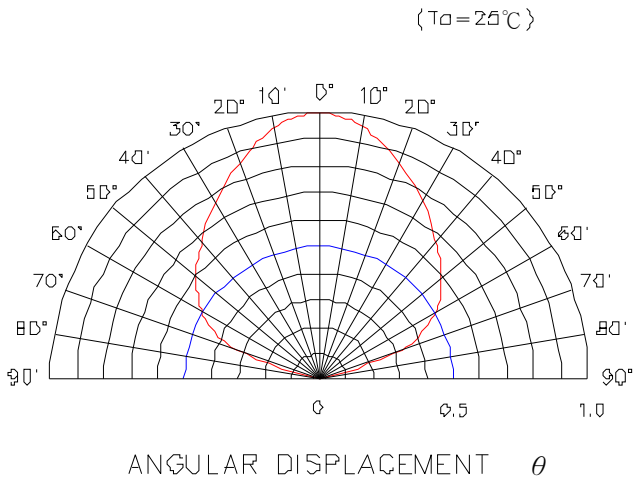
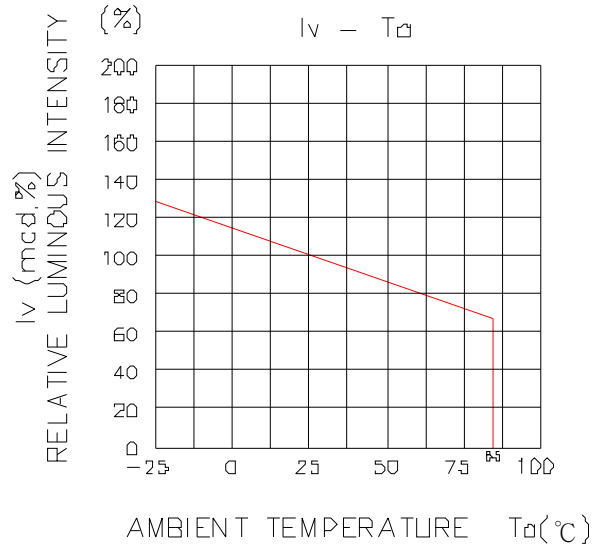
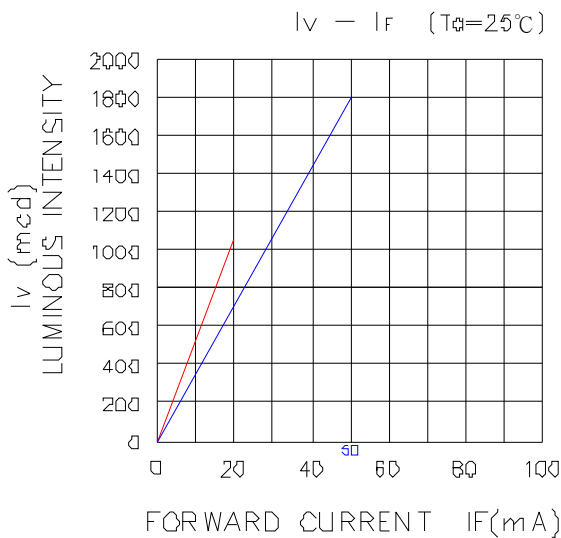
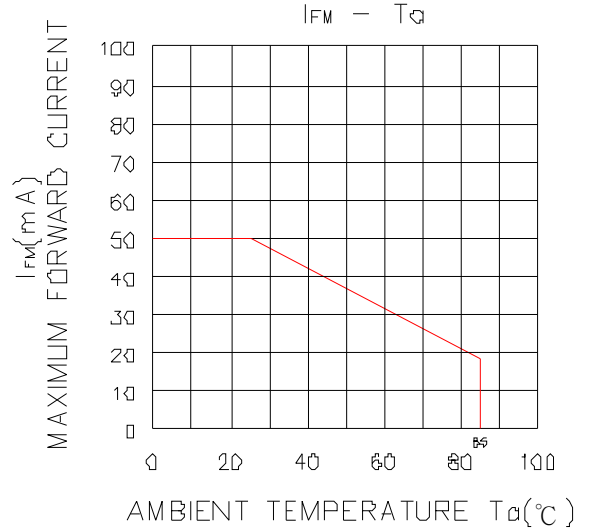
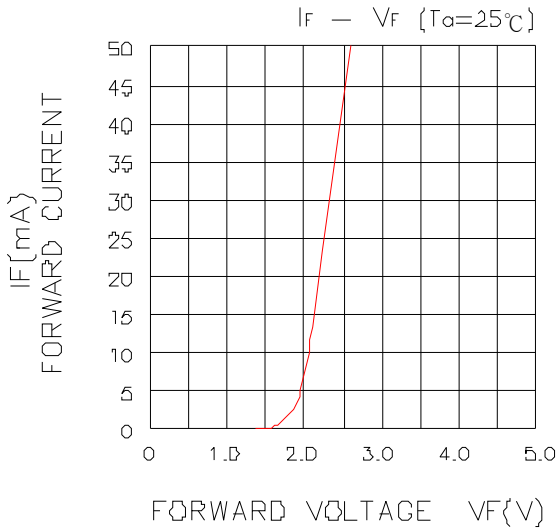
λd (IF=20mA)		
BIN	MIN	MAX
u1	589.5	592
u2	592	594.5

※ 波長誤差值±0.5nm

BIN.別標示如下：

RODAN (TAIWAN) LED.

TYPE	
LOT. NO.	
QUANTITY	
DATE	
NOTE	VF ___ IV ___ λd ___



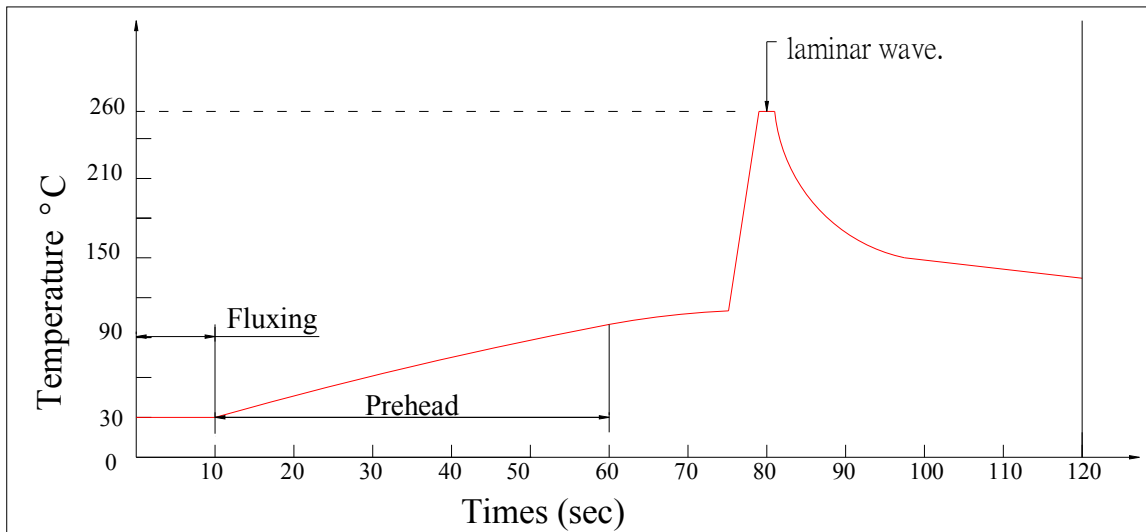


Soldering Profile

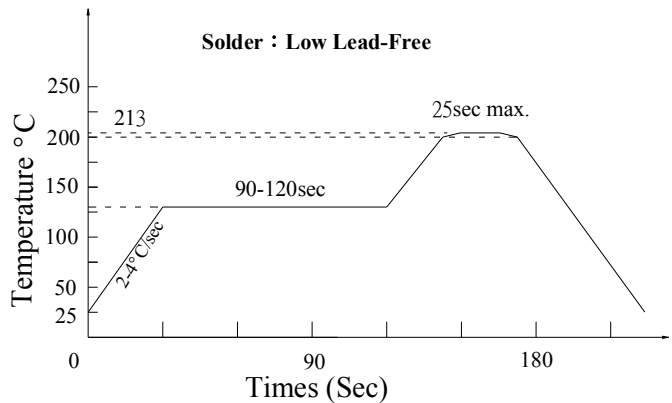
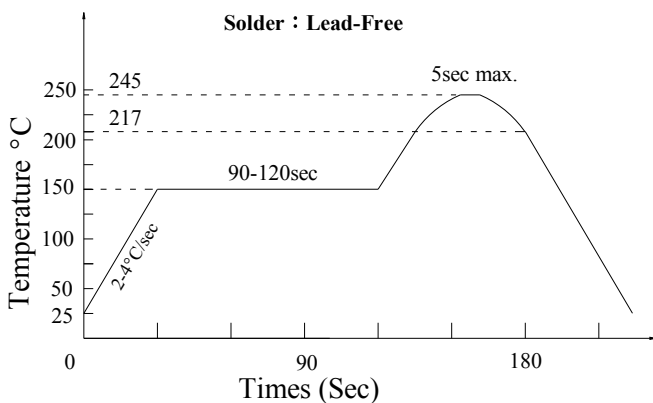
Compliant with the following condition :

- (1) Leaded quantity of product below 100 ppm
- (2) Lead-free process

Shape	Lead Frame 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 : 3 sec max. 4.Distance : 3 mm MIN (From solder joint to case)
Recommended soldering profile	1.Preheat temp. : 100 °C , 50 sec max. 2.Peak temp. : 260 °C max. 3.Peak time : 3 sec max. 4.Duration above: 200°C , 3 sec max.



SMD Type		
Profile Feature	Solder : Lead-Free	Solder : Low Lead-Free
Preheat temp	150-180 °C , 4°C/sec max. 120 sec max.	130-170 °C , 4°C/sec max. 120 sec max.
Peak temp	245 °C max. , 5 sec max.	213 °C max. , 25 sec max.
Duration above	217 °C , 60 sec max.	200 °C , 40 sec max.





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=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°C	≤85%	1 year
Package opened	≤30°C	≤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°C±5°C/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.



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

