



VISIBLE LED

1.ELEMENT APPEARANCE

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Model No.	Material	Lighting Color	Resin Color
RT-9218W2S3P-ET	InGaN/GaN	White	Yellow

2.ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Forward direct current	I _{FM}	60	mA
Reverse voltage	V _{RM}	4	V
Operating temperature	T _{opr}	-25 to +85	°C
Storage temperature	T _{stg}	-25 to +100	°C
Power dissipation	P _d	480	mW

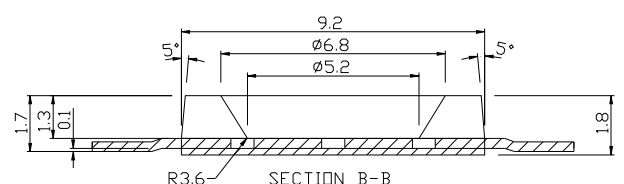
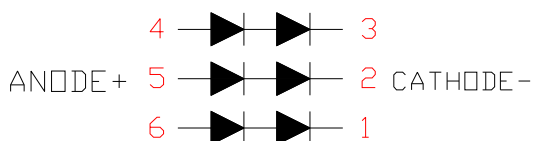
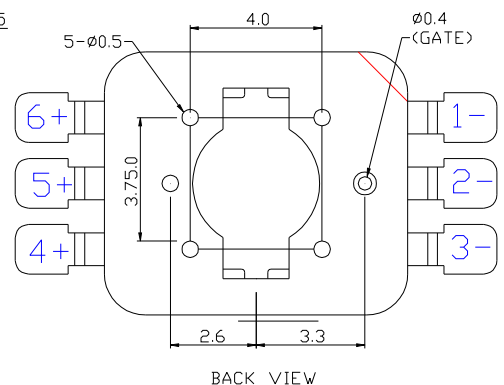
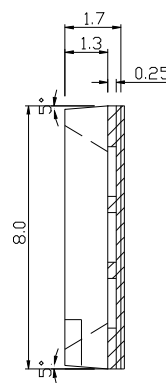
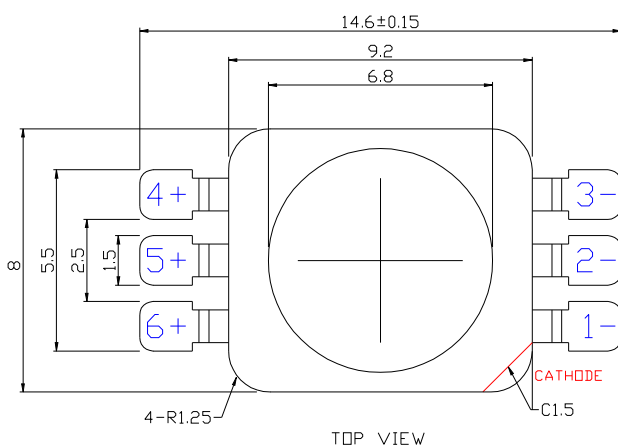
3.ELECTRO-OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous intensity*1	I _v	I _F =60 mA		9500		mcd
Luminous Flux*1	φ _v	I _F =60 mA		30		Lm
Forward voltage*1	V _F	I _F =60 mA		6.6	8.0	V
Reverse current	I _R	V _R =4V			10	μA
Viewing angle*1	2θ 1/2	I _F =60 mA		130		deg.

* Forward voltage Measurement allowance is ±0.1V

* Luminous Intensity Measurement allowance is ±15%

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





VF (V) IF=60mA		
Rank	MIN	MAX
V13	5.30	5.60
V14	5.60	5.90
V15	5.90	6.20
V16	6.20	6.50
V17	6.50	6.80
V18	6.80	7.10
V19	7.10	7.40
V20	7.40	7.70
V21	7.70	8.00

※VF 誤差值±0.1V

φ v (lm) IF=60mA		
Rank	MIN	MAX
P2	13	18
P3	18	23
P4	23	30
P5	30	38
P6	38	50
P7	50	65
P8	65	85

※Power 誤差值±15% lm

BIN.別標示如下：

RODAN (TAIWAN) LED.

TYPE	
LOT. NO.	
QUANTITY	
DATE	
NOTE	V__P__ 色座標__

5.CHROMATICITY COORDINATE RANKS (IF=60mA) AT Ta=25°C

2700~4000K

S1		S2		S3		S4		S5		S6	
x	y	x	y	x	y	x	y	x	y	x	y
0.4240	0.4114	0.4380	0.4177	0.4520	0.4238	0.4181	0.3910	0.4308	0.3970	0.4432	0.4029
0.4181	0.3910	0.4308	0.3970	0.4432	0.4030	0.4122	0.3700	0.4233	0.3759	0.4343	0.3818
0.4308	0.3970	0.4432	0.4030	0.4555	0.4088	0.4233	0.3759	0.4343	0.3818	0.4449	0.3874
0.4380	0.4177	0.4520	0.4238	0.4666	0.4300	0.4308	0.3970	0.4432	0.4030	0.4555	0.4088
Q1		Q2		Q3		Q4		Q5		Q6	
x	y	x	y	x	y	x	y	x	y	x	y
0.3863	0.3977	0.3983	0.4023	0.4103	0.4069	0.3821	0.3781	0.3941	0.3824	0.4061	0.3867
0.3821	0.3781	0.3941	0.3824	0.4061	0.3867	0.3780	0.3586	0.3900	0.3624	0.4020	0.3662
0.3941	0.3824	0.4061	0.3867	0.4181	0.3910	0.3900	0.3624	0.4020	0.3662	0.4122	0.3700
0.3983	0.4023	0.4103	0.4069	0.4240	0.4114	0.3941	0.3824	0.4061	0.3867	0.4181	0.3910

4000~5600K

N1		N2		N3		N4	
x	y	x	y	x	y	x	y
0.3610	0.3780	0.3733	0.3888	0.3570	0.3611	0.3700	0.3700
0.3570	0.3611	0.3700	0.3700	0.3539	0.3427	0.3668	0.3512
0.3700	0.3700	0.3821	0.3781	0.3668	0.3512	0.3780	0.3586
0.3733	0.3888	0.3863	0.3977	0.3700	0.3700	0.3821	0.3781
C1		C2		C3		C4	
x	y	x	y	x	y	x	y
0.3290	0.3550	0.3445	0.3670	0.3290	0.3385	0.3430	0.3480
0.3290	0.3385	0.3430	0.3480	0.3290	0.3180	0.3411	0.3325
0.3430	0.3480	0.3570	0.3611	0.3411	0.3325	0.3539	0.3427
0.3445	0.3670	0.3610	0.3780	0.3430	0.3480	0.3570	0.3611

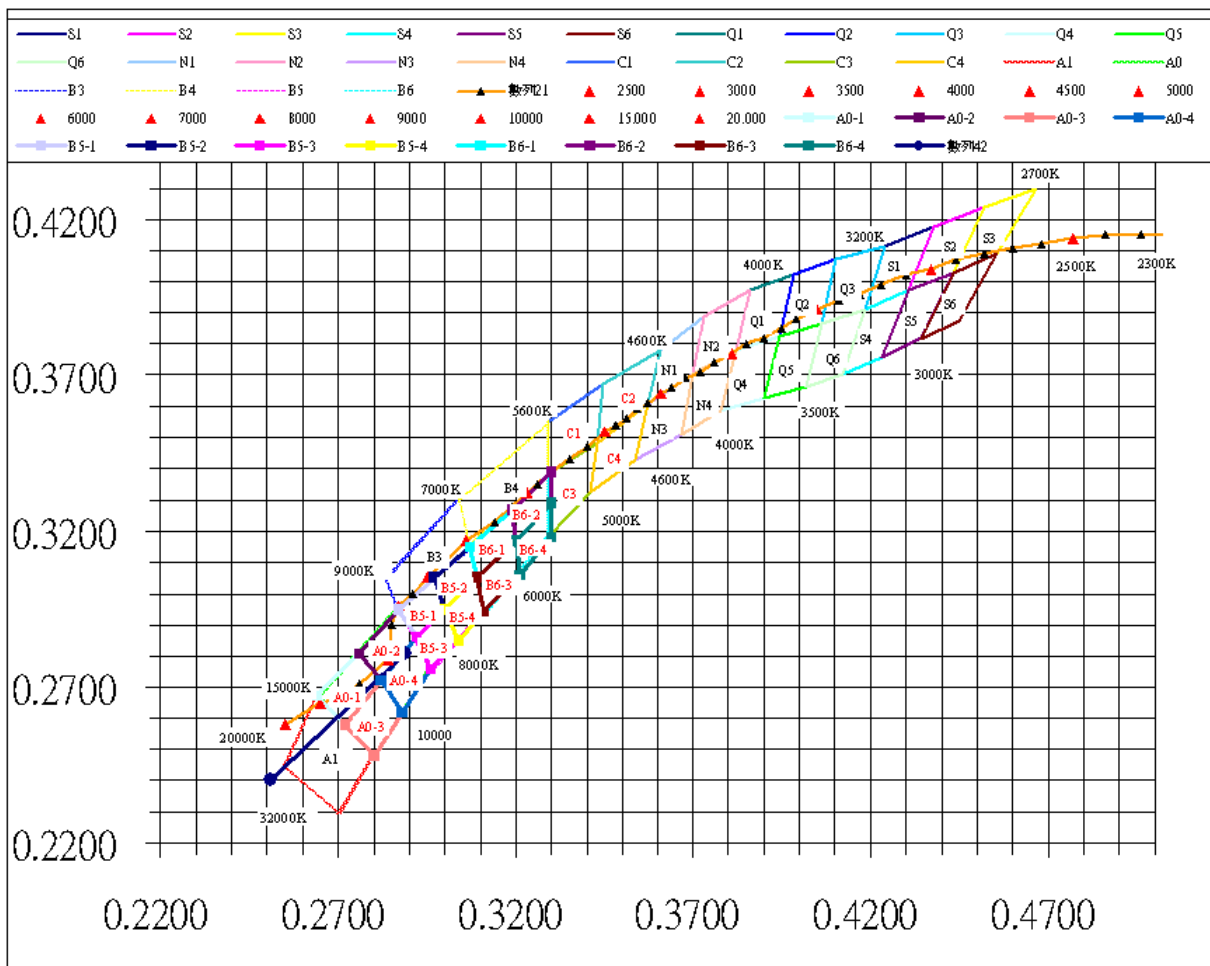


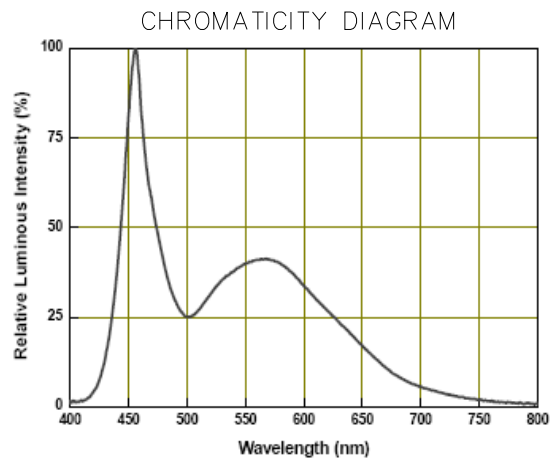
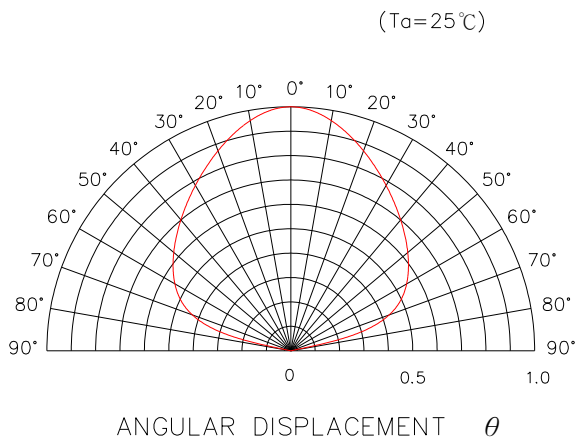
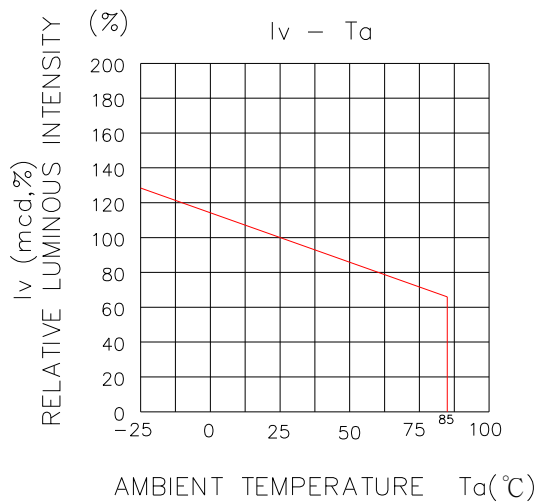
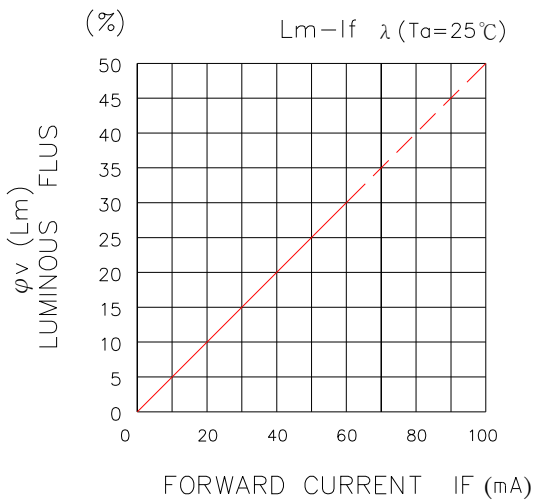
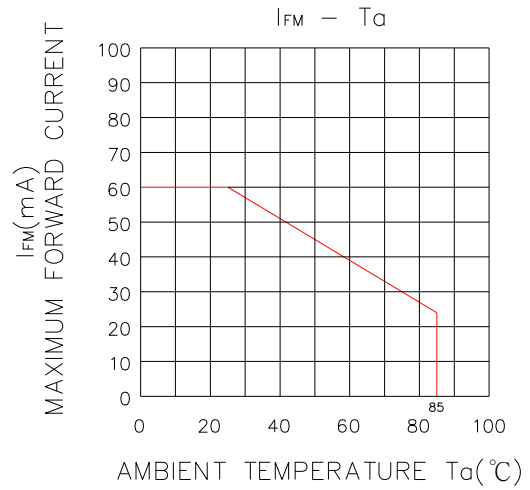
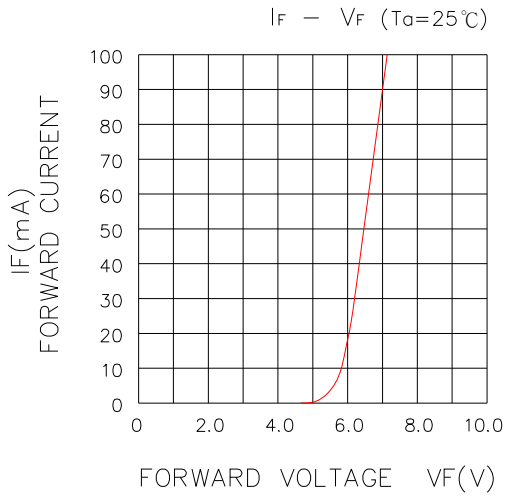
5600-32000K

A1		A0-1		A0-2		A0-3		A0-4	
x	y	x	y	x	y	x	y	x	y
0.2550	0.2450	0.272	0.258	0.282	0.272	0.280	0.248	0.288	0.262
0.2640	0.2670	0.264	0.267	0.276	0.281	0.272	0.258	0.282	0.272
0.2800	0.2480	0.276	0.281	0.287	0.295	0.282	0.272	0.292	0.286
0.2700	0.2300	0.282	0.272	0.292	0.286	0.288	0.262	0.296	0.276
B3		B4		B5-1		B5-2		B5-3	
x	y	x	y	x	y	x	y	x	y
0.2830	0.3050	0.3040	0.3300	0.292	0.286	0.300	0.295	0.296	0.276
0.2870	0.2950	0.3070	0.3150	0.287	0.295	0.297	0.305	0.292	0.286
0.3070	0.3150	0.3290	0.3385	0.297	0.305	0.307	0.315	0.300	0.295
0.3040	0.3300	0.3290	0.3550	0.300	0.295	0.309	0.305	0.304	0.285
B5-4		B6-1		B6-2		B6-3		B6-4	
x	y	x	y	x	y	x	y	x	y
0.304	0.285	0.309	0.305	0.320	0.317	0.311	0.294	0.321	0.306
0.300	0.295	0.307	0.315	0.319	0.327	0.309	0.305	0.320	0.317
0.309	0.305	0.319	0.327	0.330	0.339	0.320	0.317	0.330	0.329
0.311	0.294	0.320	0.317	0.330	0.329	0.321	0.306	0.330	0.318

* Measurement Uncertainty of the color coordinates : ± 0.01

色塊圖：





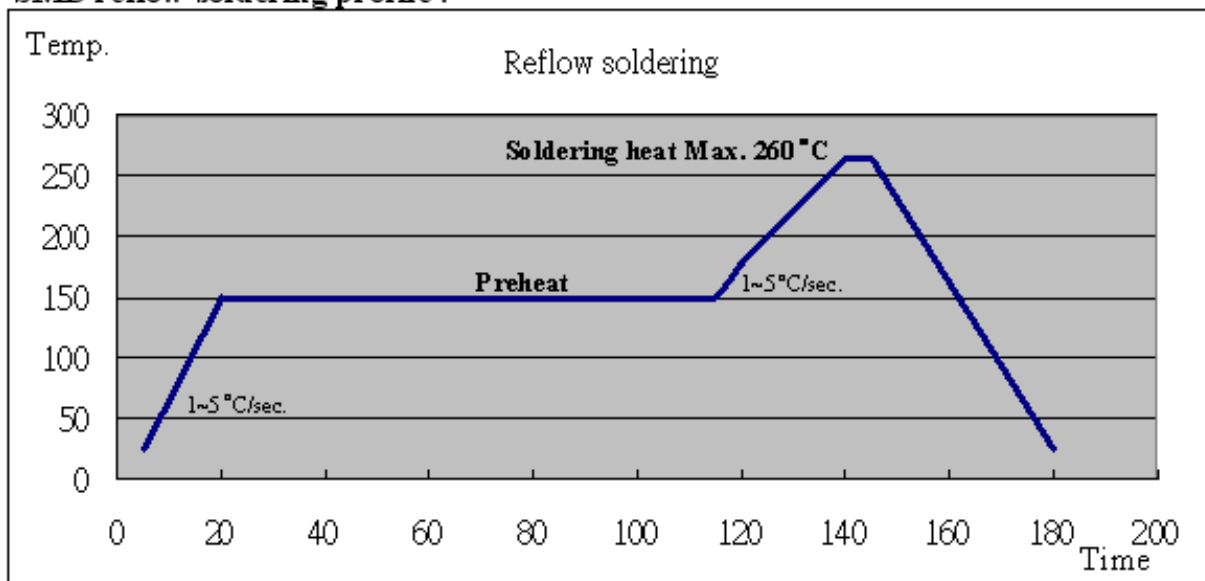
Soldering Profile

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. 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.

SMD reflow soldering profile :





Reliability Test Items

CONDITIONS :

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

NO.	Item	Condition	Time/Cycle	Number of Damaged
1	Soldering Heat Test	260°C	5 sec	0/60
2	Thermal Shock	0°C (5min) ~100°C (5min)	20 cycle	0/60
3	High Temp. Storage	100°C	1000 Hrs	0/60
4	Low Temp. Storage	-25°C	1000 Hrs	0/60
5	Temperature Cycle Test	-25°C ~85°C	100 Cycles, 200Hrs	0/60
6	High Temp. High Humidity Test	85°C, 85% RH	1000Hrs	0/60
7	DC Operation Life Test (For each dice)	IF=40mA	1000Hrs	0/60



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.



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

