



RODAN(TAIWAN)LTD.

VISIBLE LED

審查	審查	作成
沈夢榮	蔡尙麟	沈子檸

1.ELEMENT APPEARANCE

PAGE: 1/5

DATE:2016.06.23

Model No.	Material	Lighting Color	Resin Color
RT-9218Y2S3P-E14	AlGaInP-OMA	Yellow	Water Clear

2.ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Forward direct current	IFM	60	mA
Reverse voltage	VRM	4	V
Operating temperature	Topr	-40 to +85	°C
Storage temperature	Tstg	-40 to +100	°C
Power dissipation	Pd	300	mW

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

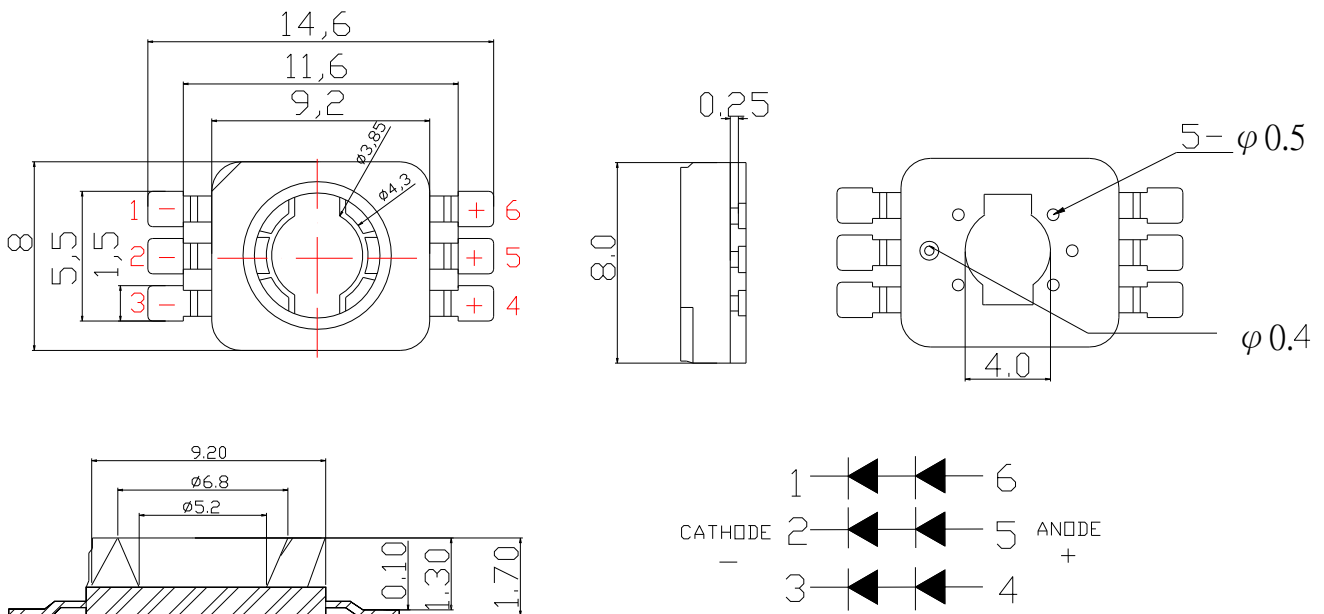
Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous intensity	Iv	IF=20 mA	1500	2500		mcd
Luminous Flux	ϕ_v	IF=20mA		9		Lm
Forward voltage	VF	IF=20mA		4.2	5.0	V
Reverse current	IR	VR=4V			10	μA
Dominant wavelength	λ_d	IF=20 mA		589		nm
Spectra half-width	$\Delta \lambda$	IF=20 mA		15		nm
Viewing angle	2θ 1/2	IF=20 mA		130		deg.

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

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

* Dominant wavelength Measurement allowance is $\pm 1nm$

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





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Model : RT-9218Y2S3P-E14

PAGE : 2 / 5

VF (V) IF=60mA				
Rank	PD		QA	
V6	3.2	3.5	3.1	3.6
V7	3.5	3.8	3.4	3.9
V8	3.80	4.10	3.70	4.20
V9	4.10	4.40	4.00	4.50
V10	4.40	4.70	4.30	4.80
V11	4.70	5.00	4.60	5.10

※VF 誤差值±0.1V

λ d(nm) IF=60mA				
Rank	PD		QA	
Y1	583.0	586.0	582.0	587.0
Y2	586.0	589.0	585.0	590.0
Y3	589.0	592.0	588.0	593.0
Y4	592.0	595.0	591.0	596.0
Y5	595.0	598.0	594.0	599.0

※WLD 誤差值±1.0nm

※Power 誤差值±15% lm

ϕ v (lm) IF=60mA				
Rank	PD		QA	
PB	5	6	4.2	6.7
PA	6	8	5.5	8.8
P0	8	10	7.2	11.4
P1	10	13	9.3	14.8
P2	13	18	12.1	19.3

BIN.別標示如下：

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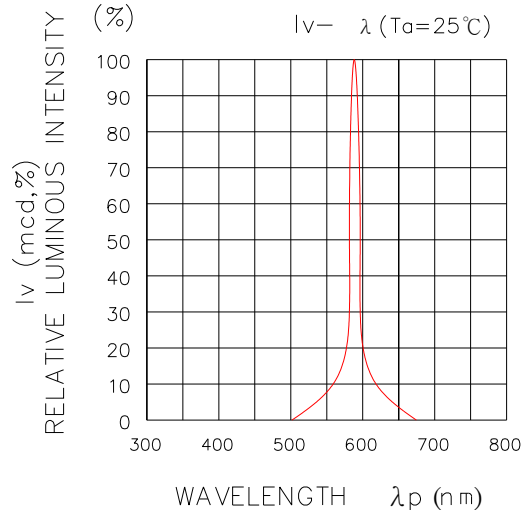
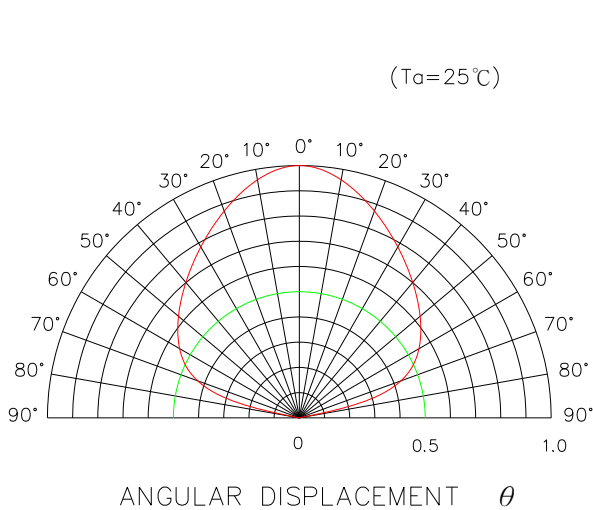
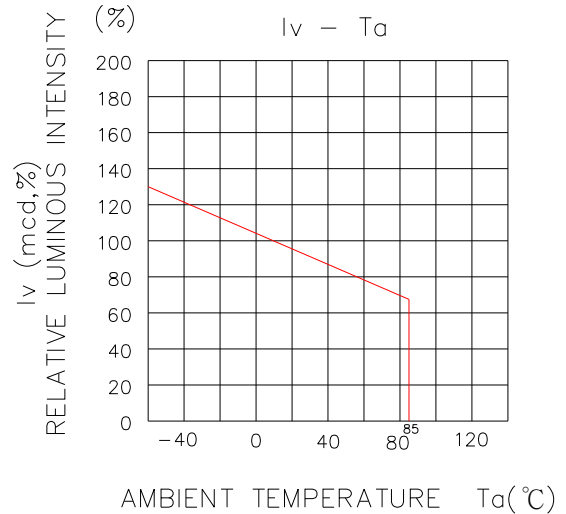
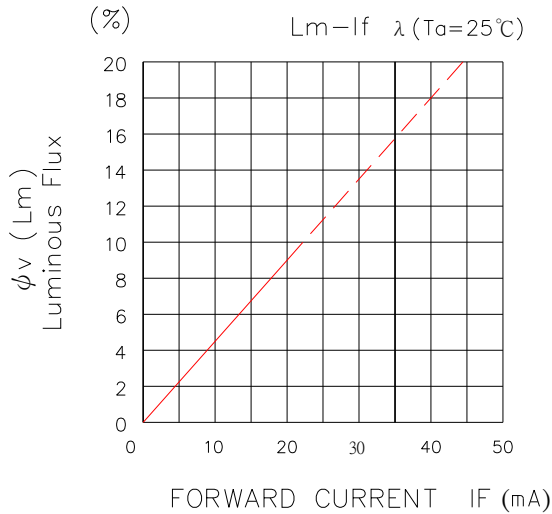
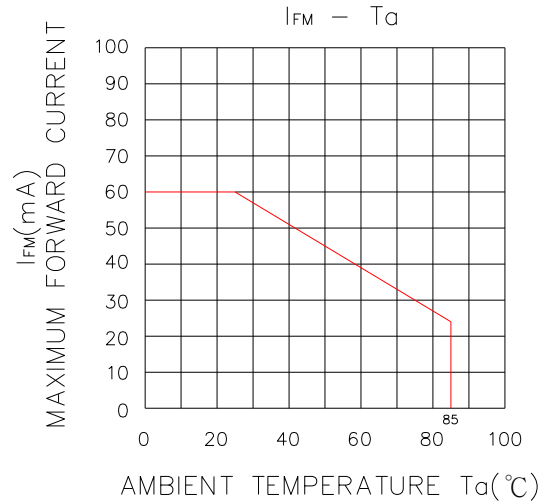
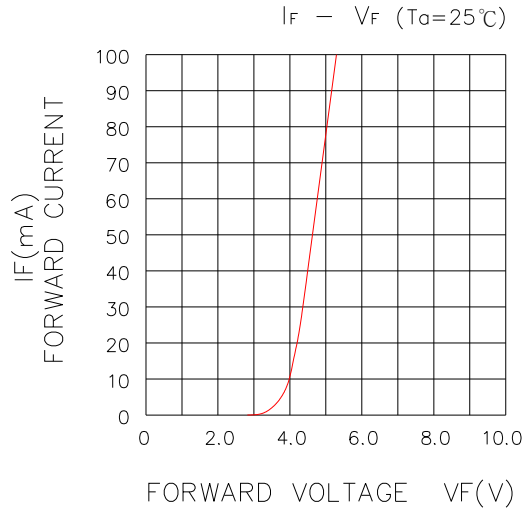
TYPE	
LOT. NO.	
QUANTITY	
DATE	
NOTE	V__P__Y__



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Model : RT-9218Y2S3P-E14

PAGE : 3 / 5





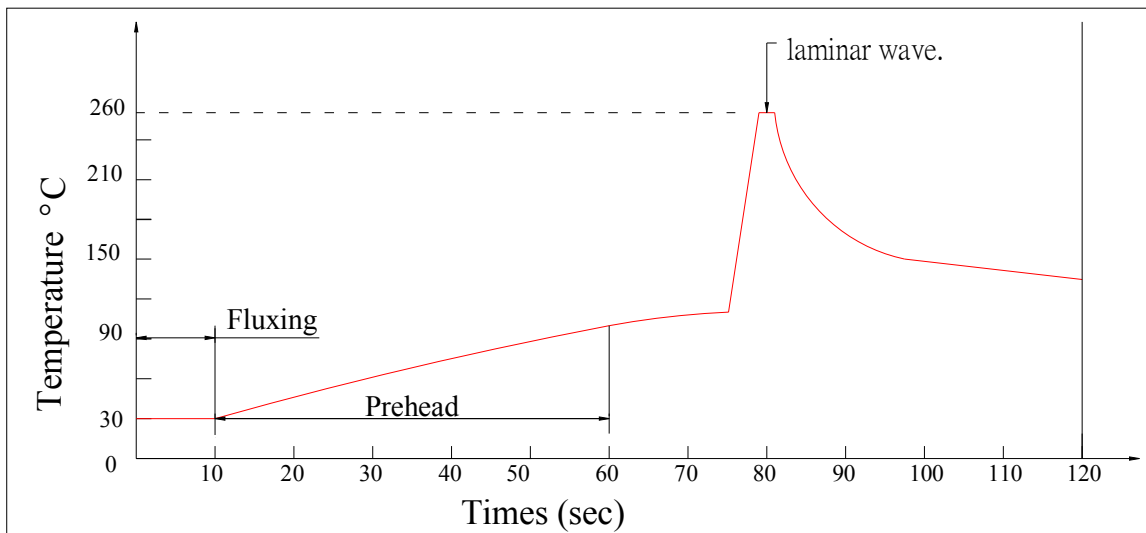
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Soldering Profile

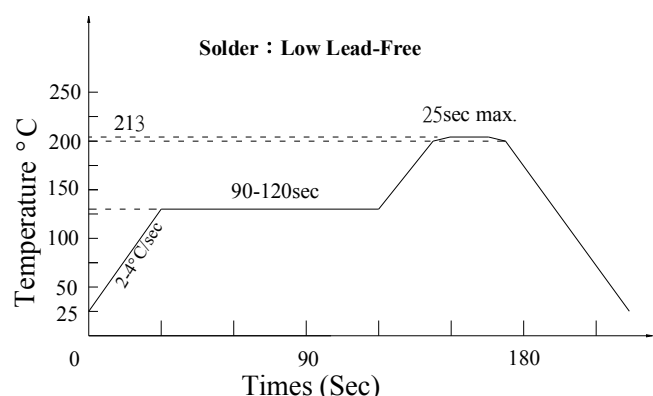
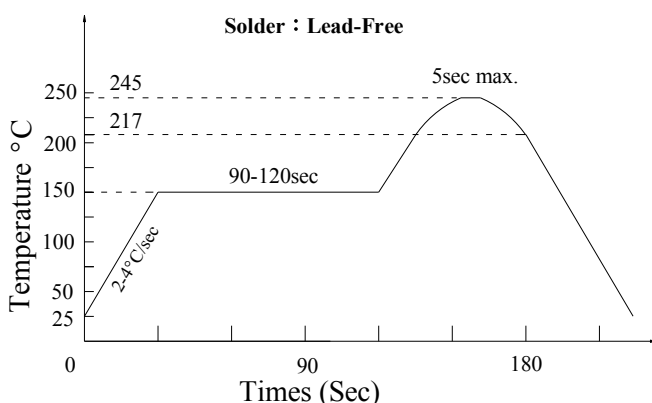
Compliant with the following condition :

- (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.



Profile Feature	SMD Type	
	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) ~85°C (5min)	20 Cycles	Open / Shot	0 / 1	60 pcs
3	High Temp. Storage	85°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~80°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