S.Chen 尚宸

尚宸电子(惠州)有限公司

APPROVAL STAMP

MESSRS:	
ARTICLE:	RT3-A234KTSN
DATE:	2016-12-26

APPROVED	DESIGN	DRAWING
	Ailun	Dani

尚宸电子（惠州）有限公司
廣東省博羅縣罗阳江尾 22 号
Mob 15338203608

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INFRARED EMITTING DIODE

1.ELEMENT APPEARANCE

Model No.	Material	Lighting Color	Resin Color
RT3-A234KTSN	AlGaAs/ GaAs	Non-Visible	Water clere

2.ABSOLUTE MAXIMUM RATINGS AT Ta=25℃

Characteristic	Symbol	Rating	Unit
Pulse forward current (t ≤ 10us)	Imp	1	A
Forward direct current	Ifm	100	Ma
Reverse voltage	Vrm	5	V
Operating temperature	Topr	'-40 to +85	℃
Storage temperature	Tstg	-40 to +100	℃
Power dissipation	Mw	170	
Lead soldering temperature (3mm from body) 260℃ for 5sec.			

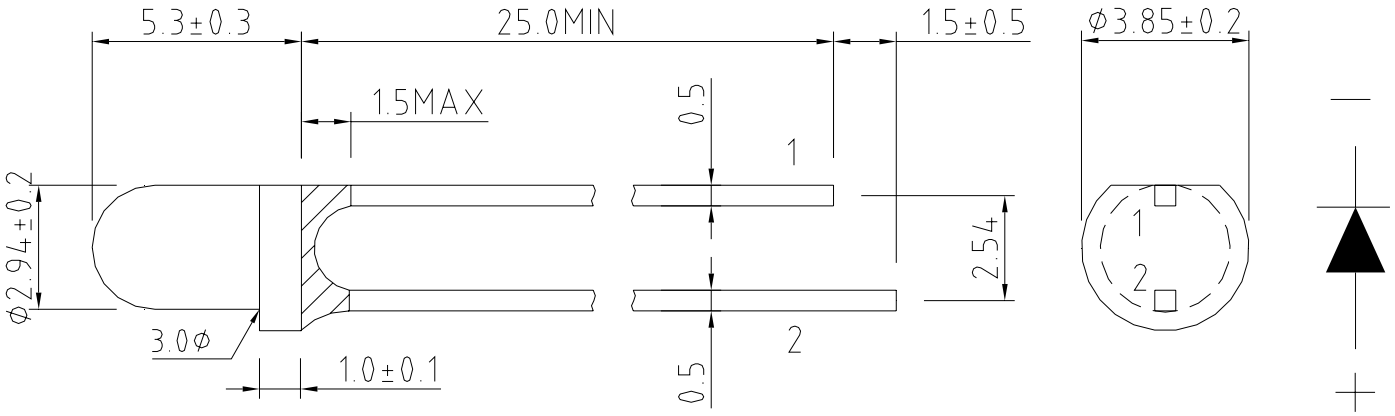
3.ELECTRO-OPTICAL CHARACTERISTICS AT Ta=25℃

Characteristic	Symbol	Condition		Min.	Typ.	Max.	Unit
Radiant intensity	Ie	IF=50mA	BIN.4	41	~	48	Mw/sr
Forward voltage	Vf	IF=100mA		1.1	1.35	1.7	V
Reverse current	Ir	Vr=5V				10	uA
Wavelength of the max. sensitivity	λ p	IF=50mA			940		nm
Spectral band width @ 50%	△ λ	IF=50mA			50		nm
Viewing angle	2θ 1/2	IF=50mA			30		deg.

※ IL 誤差值±15% μA

4.DIMENSIONS **UNIT**： m/m

SIGN： 1.CATHODE
2.ANODE



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Model：RT3-A234KTSN

Fig 1.Forward Current vs.Forward Voltage

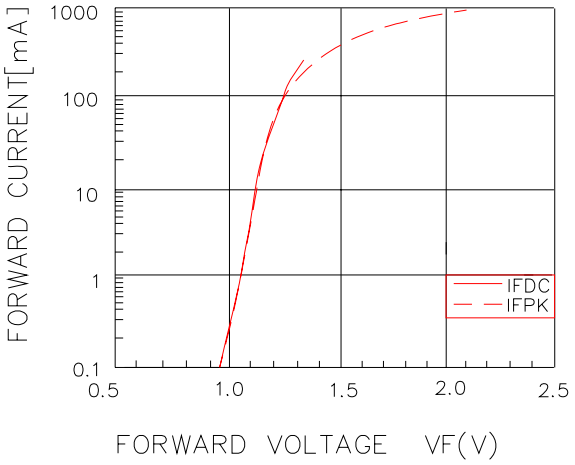


Fig 2. Relative Intensity vs.Forward Current

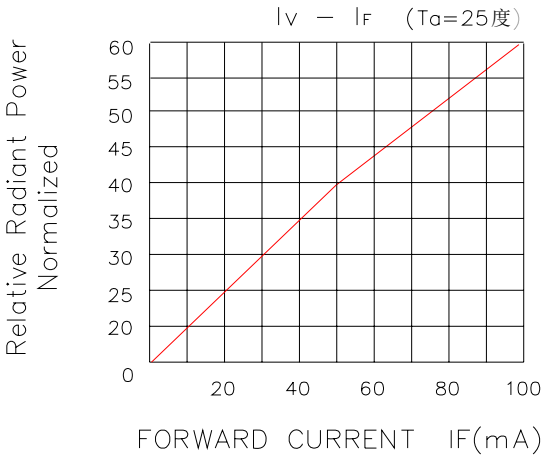


Fig 3. Forward DC Voltage vs. Temperature

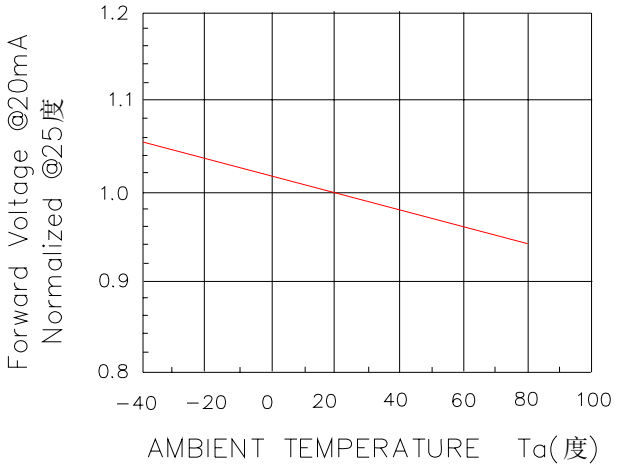


Fig 4. Relative Intensity vs.Temperature

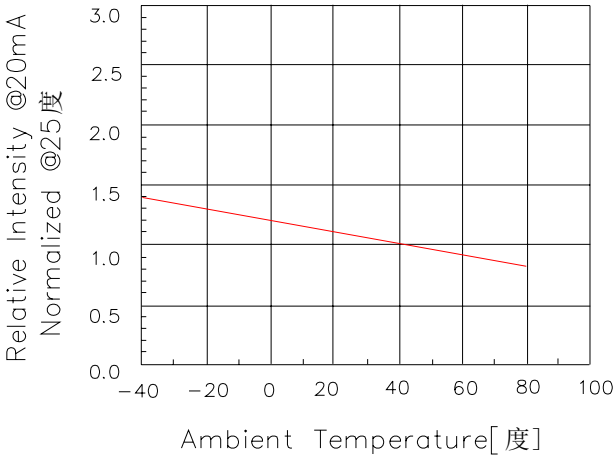
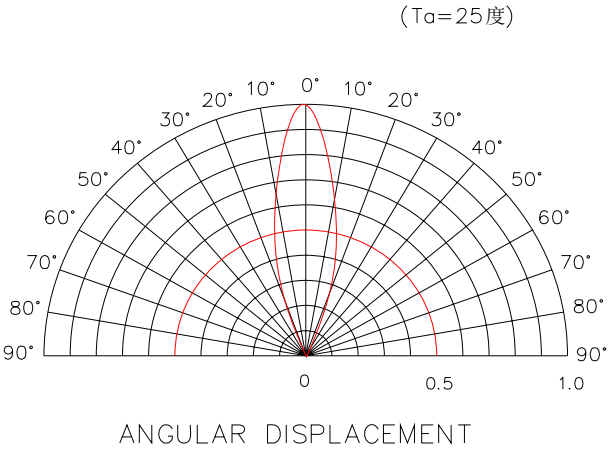
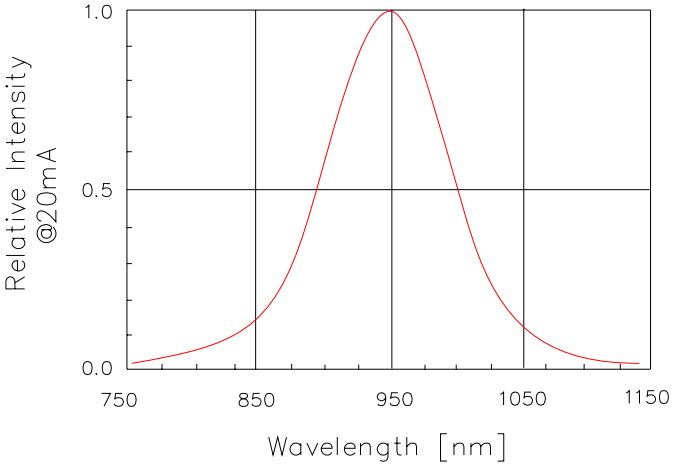


Fig 6. Relative Intensity vs.Wavelength





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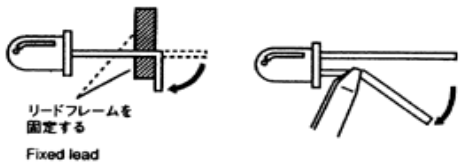
APPLICATION NOTES：

Static Electricity and Surge

Static electricity and surge damage LEDs. It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs. All devices, equipment and machinery must be electrically grounded.

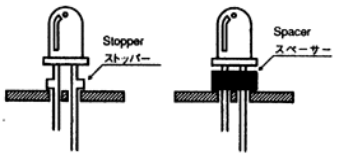
Lead Forming

The leads should be bent at a point at least 3mm from the epoxy resin of the LEDs. Bending should be performed with the base firmly fixed by means of a jig or radio pliers.

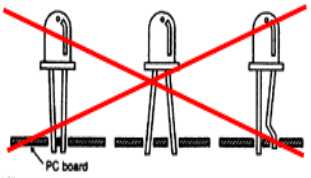


Mounting Method

The leads should be formed so they are aligned exactly with the holes on the PC board. This will eliminate any stress on the LEDs. Use LEDs with stoppers or resin spacer to accurately position the LEDs. The epoxy resin base should not be touching the PC board when mounting the LEDs.



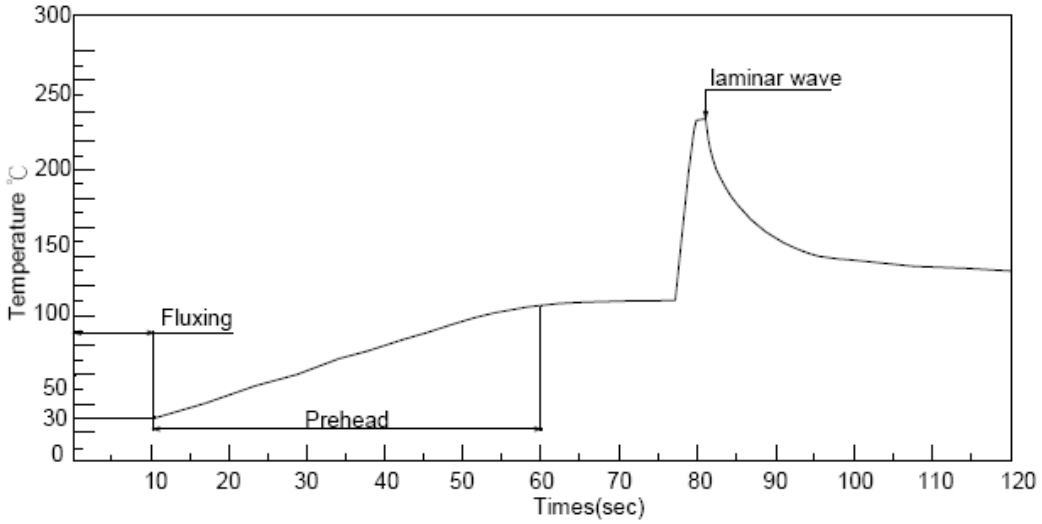
Mechanical stress to the resin may be caused by the warping of the PC board when soldering. The LEDs must not be designed into a product or system where the epoxy lens is pressed into a plastic or metal board. The lens part of the LED must not be glued onto plastic or metal. The mechanical stress to the leadframe must be minimized.



Soldering

Solder the LEDs no closer than 3mm from the base of the epoxy resin. For solder dipping, it may be necessary to fix the LEDs for correct positioning. When doing this, any mechanical stress to the LEDs must be avoided. When soldering, do not apply any mechanical force to the leadframe while heating. Repositioning after soldering must be avoided.

Soldering conditions:			
Lamp LED	Soldering Iron	Dip Soldering	Reflow Soldering
	300degC(max), 3sec(max)	260degC(max), 5sec(max)	Not allowed.



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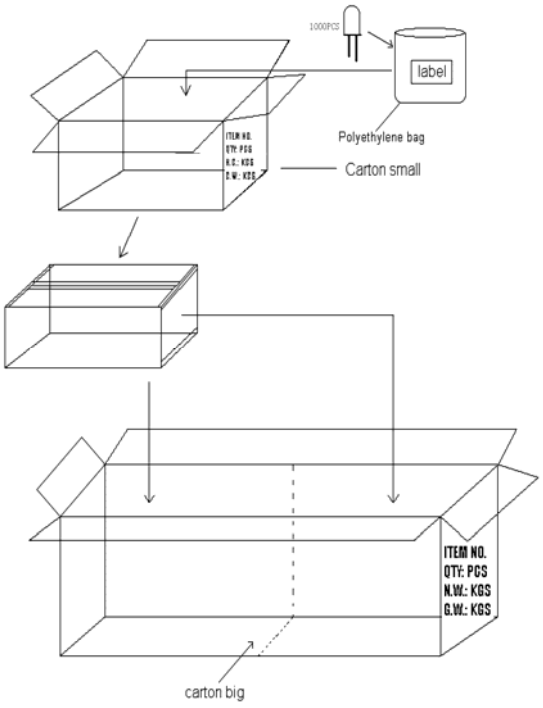
PACKAGING STANDARD

The boxes are not water resistant and they must be kept away from water and moisture**.**
The LEDs are packed in cardboard boxes after packaging
in normal or anti-electrostatic bags.
Cardboard boxes will be used to protect the LEDs from
mechanical shocks during transportation.
500pcs/bag



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℃	5 sec	0/60
2	Thermal Shock	0℃(15sec) ~100℃(15sec)	20 cycle	0/60
3	High Temp. Storage	100℃	1000 Hrs	0/60
4	Low Temp. Storage	-25℃	1000 Hrs	0/60
5	Temperature Cycle Test	-40℃~85℃	100 Cycles 200Hr	0/60
6	High Temp. High Humidity Test	85℃, 85% RH	1000Hrs	0/60