Release by
PARALIGHTDCC

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DATA SHEET

PART NO. : LRR8LPG6C254G

REV : A / 0

CUSTOMER'S APPROVAL : ________________ DCC : ______________

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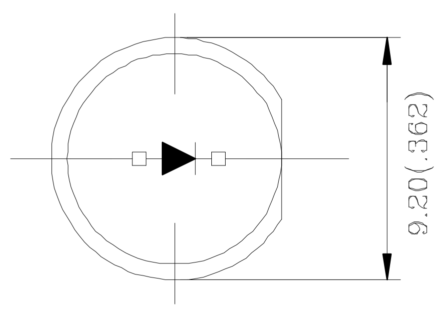
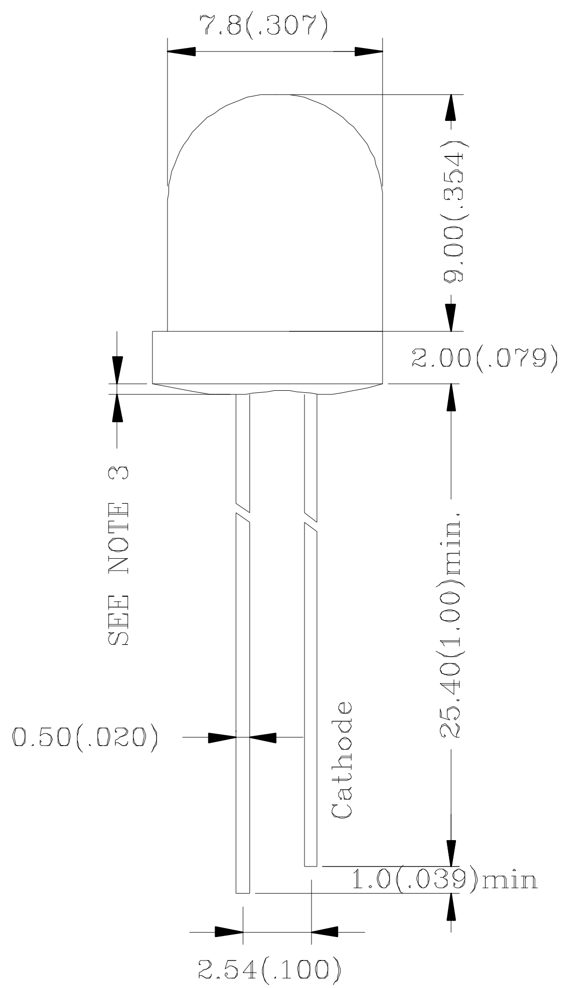
8.0 mm DIA LED LAMP	
LRR8LPG6C254G	REV:A / 0

PACKAGE DIMENSIONS





Note:

1.All Dimensions are in millimeters.

2.Tolerance is ±0.25mm(0.010 ")
Unless otherwise specified.

3.Protruded resin under flange
is 1.5mm(0.059 ") max.

4.Lead spacing is measured where
the leads emerge from the package.

5.Specification are subject to change
without notice

6.highlight <-400V the led can
withstand the max static level when
assembling or operation.

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FEATURES

* SUITABLE HIGH PULSE CURRENT OPERATION
* EXTRA HIGH RADIANT POWER AND RADIANT INTENSITY
* HIGH RELIABILITY
* LOW FORWARD VOLTAGE
* Pb FREE PRODUCTS

CHIP MATERIALS

* Dice Material : GaN
* Light Color : ULTRA PURE GREEN
* Lens Color : WATER CLEAR

ABSOLUTE MAXIMUM RATING:(Ta＝25°C)

SYMBOL	DESCRIPTION	ULTRA PURE GREEN	UNIT
PAD	Power Dissipation Per Chip	120	mW
VR	Reverse Voltage Per Chip	5	V
IF	Average Forward Current Per Chip	30	mA
-	Derating Linear From 25°C Per Chip	0.4	mA/°C
Topr	Operating Temperature Range	-25°C to 85°C	
Tstg	Storage Temperature Range	-40°C to 85°C	

ELECTRO-OPTICAL CHARACTERISTICS:(Ta=25°C)

SYMBOL	DESCRIPTION	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
VF	Forward Voltage	IF = 20mA		2.9	4.0	V
IR	Reverse Current	VR = 5V			100	μA
λD	Dominant Wavelength	IF = 20mA		528		nm
Δλ	Spectral Line Half-Width	IF = 20mA		22		nm
2θ1/2	Half Intensity Angle	IF = 20mA		30		deg
Iv	Luminous Intensity	IF = 20mA		25000		mcd

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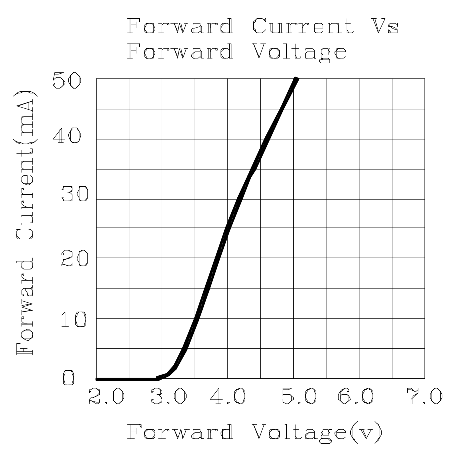

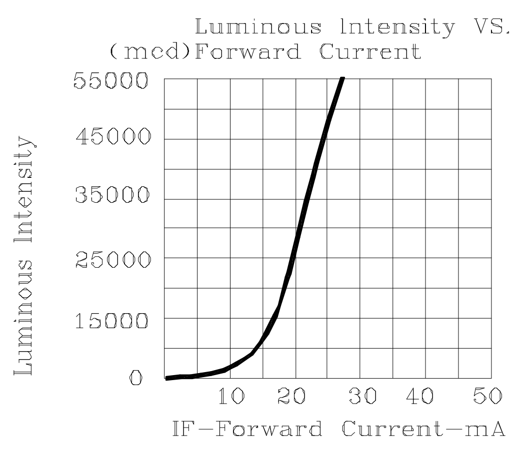

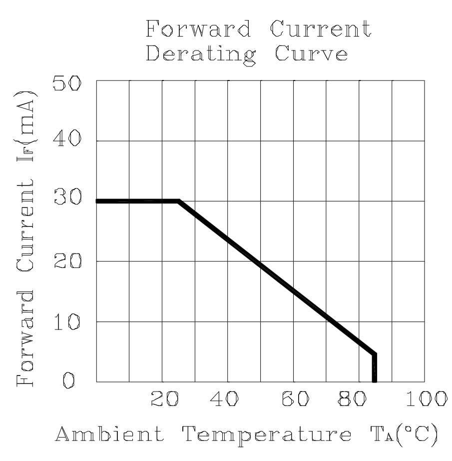

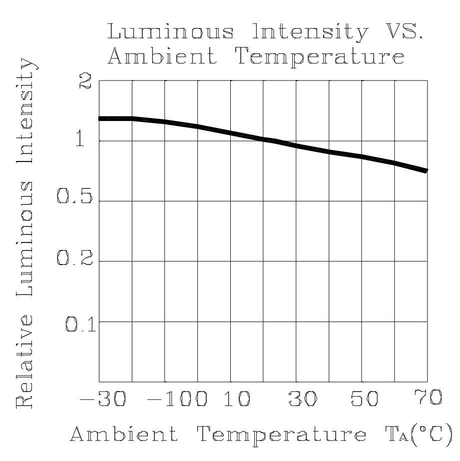

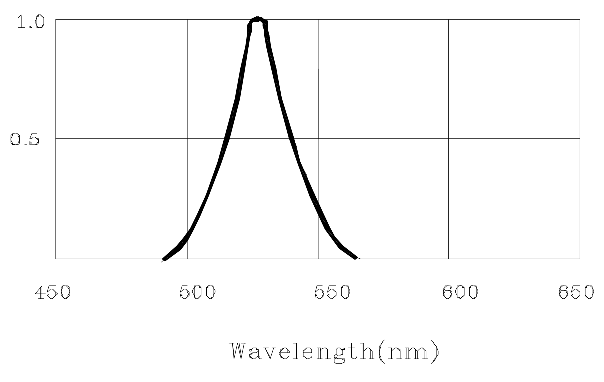

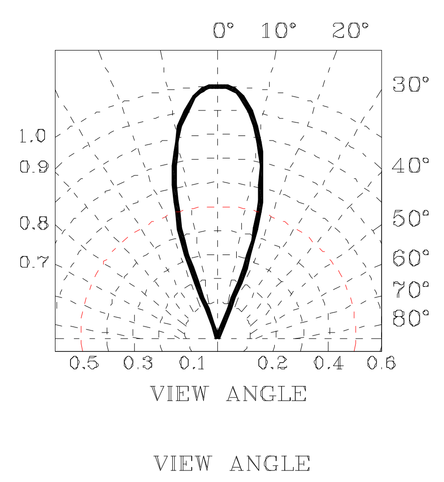

VIEW ANGLE

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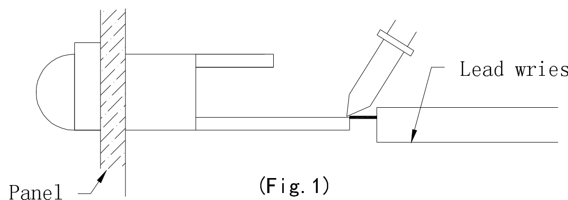
•SOLDERING

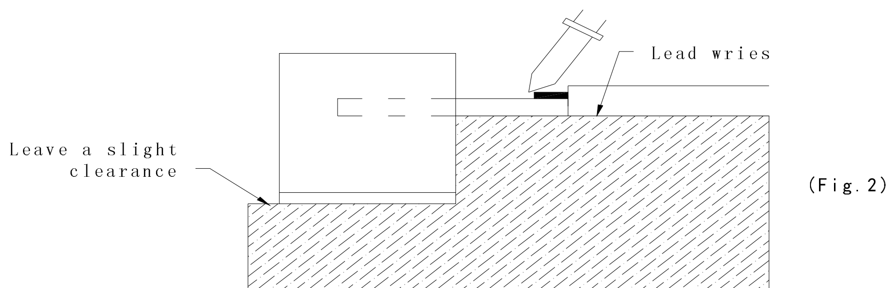
METHOD	SOLDERING CONDITIONS	REMARK
DIP SOLDERING	Bath temperature: 240℃ Immersion time: with 5 sec	• Solder no closer than 3mm from the base of the package • Using soldering flux," RESIN FLUX" is recommended.
SOLDERING IRON	Soldering iron: 30W or smaller Temperature at tip of iron: 260℃ or lower Soldering time: within 5 sec.	• During soldering, take care not to press the tip of iron against the lead. (To prevent heat from being transferred directly to the lead, hold the lead with a pair of tweezers while soldering

1) When soldering the lead of LED in a condition that the package is fixed with a panel (See Fig.1), be careful not to stress the leads with iron tip.



(Fig. 1)

2) When soldering wire to the lead, work with a Fig (See Fig.2) to avoid stressing the package.



(Fig. 2)

Regarding solution in the tinning oven for product-tinning, compound sub-solution made of tin & copper and sliver is proposed with the temperature of Celsius 260. The proportion of the alloyed solution is tin 95.5: copper 3.5: silver 0.5 by percentage. The time of tinning is constantly 3 seconds.

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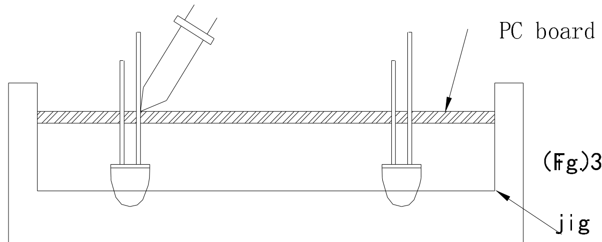
3) Similarly, when a jig is used to solder the LED to PC board, take care as much as possible to avoid steering the leads (See Fig.3).



4) Repositioning after soldering should be avoided as much as possible. If inevitable, be sure to preserve the soldering conditions with irons stated above: select a best-suited method that assures the least stress to the LED.
5) Lead cutting after soldering should be performed only after the LED temperature has returned to normal temperature.

•LED MOUNTING METHOD

1) When mounting the LED by using a case, as shown Fig.4, ensure that the mounting holds on the PC board match the pitch of the leads correctly-tolerance of dimensions of the respective components including the LED should be taken into account especially when designing the case, PC board, etc. to prevent pitch misalignment between the leads and board holes, the diameter of the board holes should be slightly larger than the size of the lead. Alternatively, the shape of the holes should be made oval. (See Fig.4)

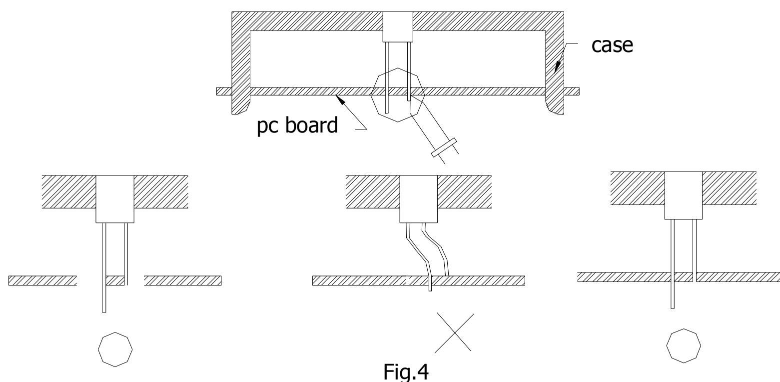


Fig.4

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2) Use LEDs with stand-off (Fig.5) or the tube or spacer made of resin (Fig.6) to position the LEDs.

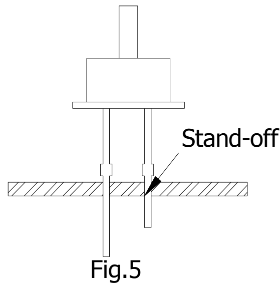

Fig.5

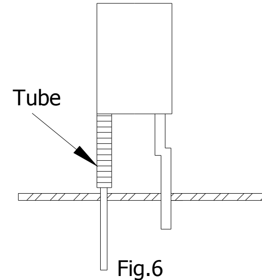

Fig.6

•FORMED LEAD

1) The lead should be bent at a point located at least 2mm away from the package. Bending should be performed with base fixed means of a jig or pliers (Fig.7)

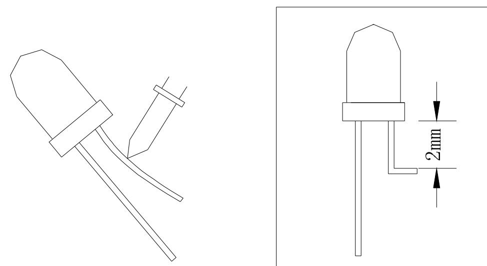

Fig. 7

2) Forming lead should be carried our prior to soldering and never during or after soldering.
3) Form the lead to ensure alignment between the leads and the hole on board, so that stress against the LED is prevented. (Fig.8)

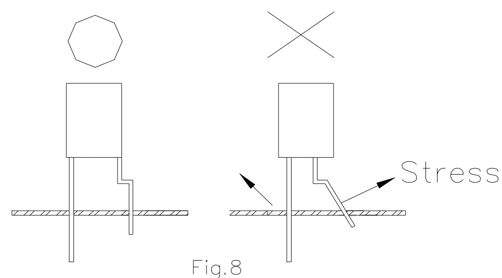

Fig.8

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•LEAD STRENGTH

1) Bend strength
   Do not bend the lead more than twice. (Fig.9)

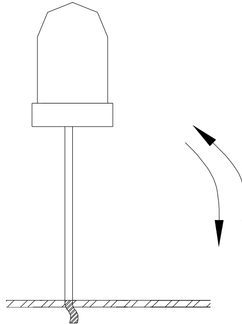

Fig.9

2) Tensile streng perature)
   If the force is 1kg or less, there will be no problem. (Fig.10)

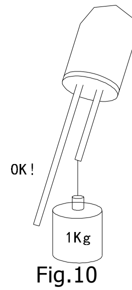

Fig.10

•HANDLING PRECAUTIONS

Although rigid against vibration, the LEDs may damaged or scratched if dropped. So take care when handling.

•CHEMICAL RESISTANCE

1) Avoid exposure to chemicals as it may attack the LED surface and cause discoloration.
2) When washing is required, refer to the following table for the proper chemical to be sued.
   (Immersion time: within 3 minutes at room temperature.)

SOLVENT	ADAPTABILITY
Freon TE	⊙
Chlorothene	╳
Isopropyl Alcohol	⊙
Thinner	╳
Acetone	╳
Trichloroethylene	╳

⊙--Usable ╳--Do not use.

NOTE: Influences of ultrasonic cleaning of the LED resin body differ depending on such factors as the oscillator output, size of the PC board and the way in which the LED is mounted.
Therefore, ultrasonic cleaning should only be performed after confirming there is no problem by c`onducting a test under practical.

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Experiment Item:

Item	Test Condition Lamp & IR	Reference Standard
HIGH TEMPERATURE HIGH HUMIDITY STORAGE	Ta： 65℃±5℃ RH： 90～95%RH TEST TIME：240HRS±2HRS	MIL-STD-202：103B JIS C 7021 ：B-1
TEMPERATURE CYCLING	105℃～25℃～-55℃～25℃ 30min 5min 30min 5min 10CYCLES	MIL-STD-202：107D MIL-STD-750：1051 MIL-STD-883：1010 JIS C 7021 ：A-4
THERMAL SHOCK	105℃±5℃～-55℃±5℃ 10min 10min 10CYCLES	MIL-STD-202：107D MIL-STD-750：1051 MIL-SYD-883：1011
SOLDER RESISTANCE	T，sol：260℃±5℃ DWELL TIME：10±lsec	MIL-STD-202：210A MIL-STD-750-2031 JIS C 7021：A-1
SOLDERABILITY	T，sol：230℃±5℃ DWELL TIME：5±lsec	MIL-STD-202：208D MIL-STD-750：2026 MIL-STD-883：2003 JIS C 7021 ：A-2

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LED Lamps:

L X R X XXX C XXX X

- X — Special code: by special request only Example: A Stand for Para USA's new projects.
- XXX — Serial number
- C — Color of LED lens: (C= water clear, T=color transparent, W= white diffused, D=color diffused)
- XXX — Colours of light:
  (G : Gap Green
  E : GaAs/Gap Orange & Hi-effi-Red
  H : Gap Red
  SR,LR,UR : GaAIAs Red
  Y : GaAsP/Gap Yellow
  VG3 : GaAlInp Green
  HUR : GaAlInP Red
  LE,VE : GaAlInP Orange
  LY,UY,VY : GaAlInP Yellow
  SPG4,LPG4 : InGaN Green
  UB5,VB5 : InGaN Blue
  UW5,VW5 UWT : InGaN White
  PU4: InGaN Purple)
- X — Diameter of LED lens
- R — Shapes of LED lens（R:round、E:ellipse、S:rectangular、F:super flux LED）
- X — Years of developmant:2006=F/2007=G/2008=H 2009=J/2010=K/2011=L/2012=M 2013=N/2014=O/2015=P
- L — L-LAMP products

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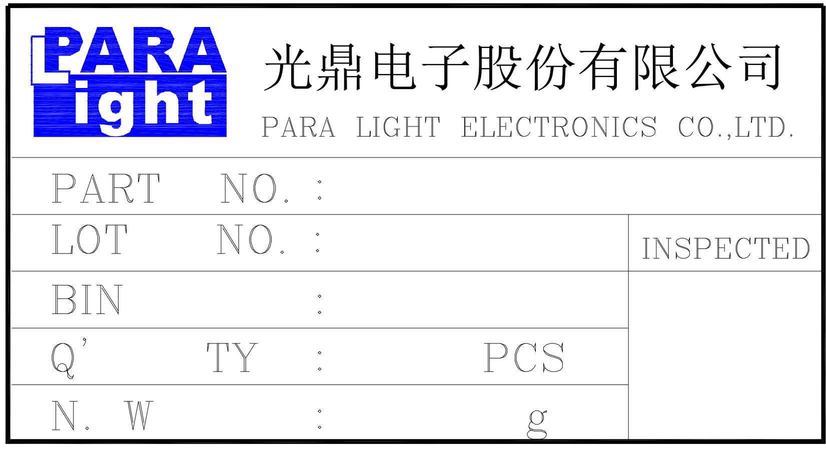
Label Explanation



PARA NO. : Refer to p11

LOT NO. : **E L L 4 7 0009**

A B C D E F

A---E: For series number

B---L: Local F: Foreign

C---L: LAMP

D---Year

E---Month

F---SPEC.

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Bin Code List

DominantWavelength (λ D), Unit:nm@20mA		
Bin Code	Min	Max
D5B	522.5	525.0
D6A	525.0	527.5
D6B	527.5	530.0
D7A	530.0	532.5
D7B	532.5	535.0

Tolerance of each bin are ± 1nm

Luminous Intensity (IV), Unit:mcd@20mA		
Bin Code	Min	Max
PA	15860	19030
PB	19030	22200
QA	22200	26640
QB	26640	31080
RA	31080	37295

Tolerance of each bin are±15%