Data Sheet

Customer:

Part No: CL-SFC3030UHRIR-660,850-02

Sample No:

Description: 3030 RED,IR 300mA

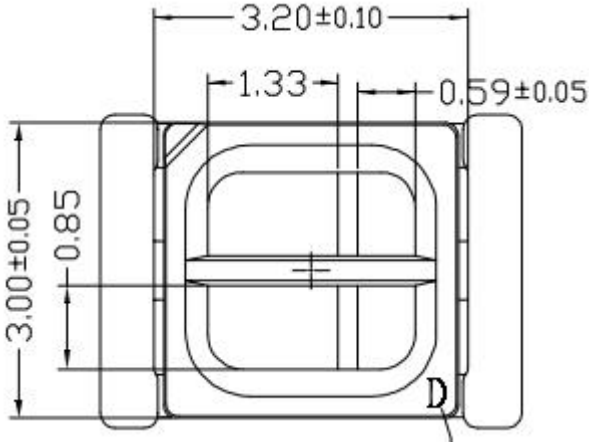
Item No:

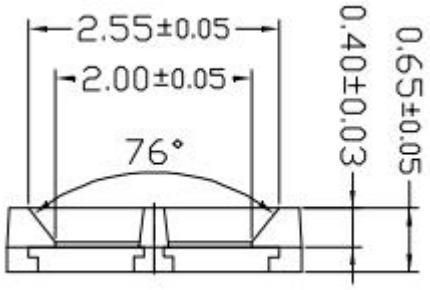
Customer			
Check	Inspection	Approval	Date

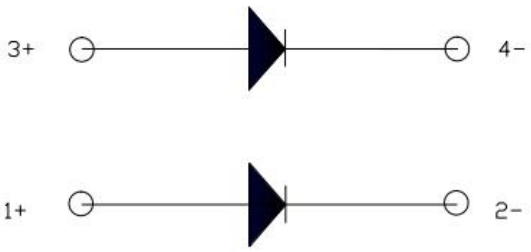
1. Features

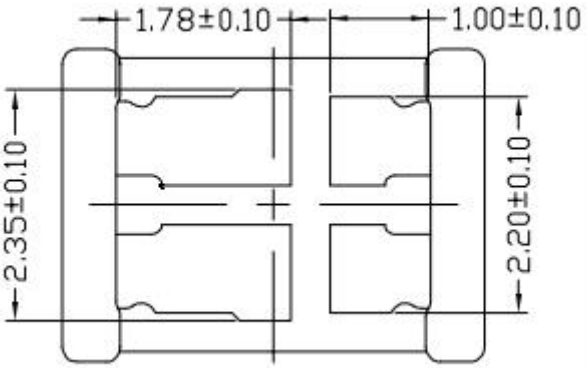
1.1. Viewing angle 120°
1.2. High reliability performance
1.3. Suitable for all SMT assembly and solder process
1.4. omplied with ROHS directive

2. Dimensional drawing









NOTES:
2.1. All dimension units are millimeters.
2.2. All dimension tolerance is ±0.05mm unless otherwise noted.

3.Mass production list

Part no.	WLP(nm) Rank	WLP(nm) Min	WLP(nm) Max	Φ(lm) min	Φ(lm) max	Test condition
SFC3030UHRIR-660,850-02	660	655	665	8	12	IF=150mA
	WLP(nm) Rank	WLP(nm) Min	WLP(nm) Max	Φ(e)(mw) min	Φ(e)(mw) max	Test condition
	850	840	860	50	100	IF=150mA

4.Electrical / optical Characteristics at (Ta=25℃)

Parameter	Symbol	Min	Typ	Max	Units	Test condi-tion
Forward Voltage	vf	1.4		2.4	v	IF=150mA
Viewing Angle	2θ1/2		120		dag	IF=150mA
Reverse Current	IR	--	--	2	μA	Vr=5V

Note:

5.1. 2θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 optical centerline
Value

5.2.The above luminous flux measurement allowance tolerance is ±10%

5.3.The above forward voltage measurement allowance tolerance is ±0.1V

5.Absolute Maximum Ratings at Ta=25℃

Parameter	Symbol	Value	Unit
Power Dissipation	Pd	0.5	W
Forward current	IF	150	mA
PulseForwardCurrent	I_{FP}	180	mA
ElectrostaticDischarge(HBM)	ESD	2000	V
Operating Temperature	Topt	-35～+85	℃
Storage Temperature	Tstc	-30～+80	℃
Soldering temperature	Tsol	260±5℃（for2sec）	℃
Junction Temperature	Tj	≤120	℃
Thermal Resistance	Rth	21	℃/W
Normally Lighted, the temperature of the bonding pa	Th	≤95 PCT 支架	℃

6.1 Typical optical characteristic curves(IR)

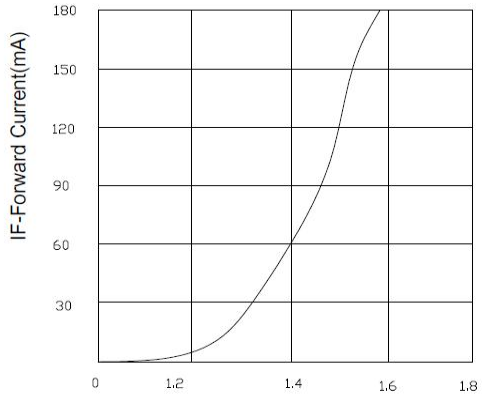


Fig1.Forward Current vs Forward Valtage

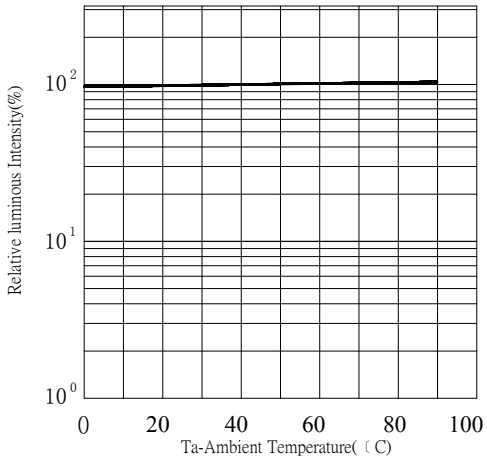


Fig.2 Relative luminous Intensity vs.Ambient Temperatu

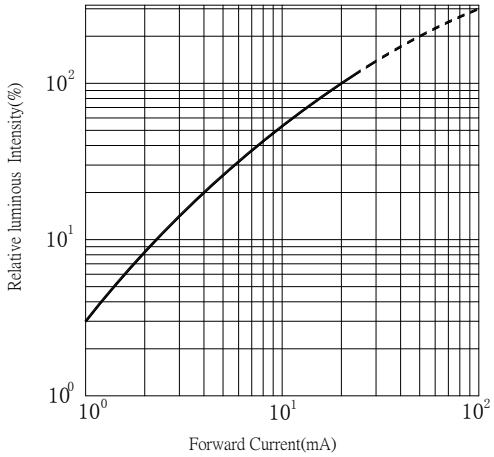


Fig.3 Relative luminous Intensity vs.Forward Current

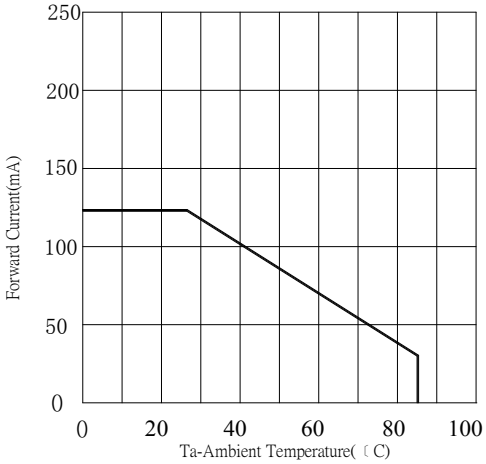


Fig.4 Forward Current vs.Ambient Temperature

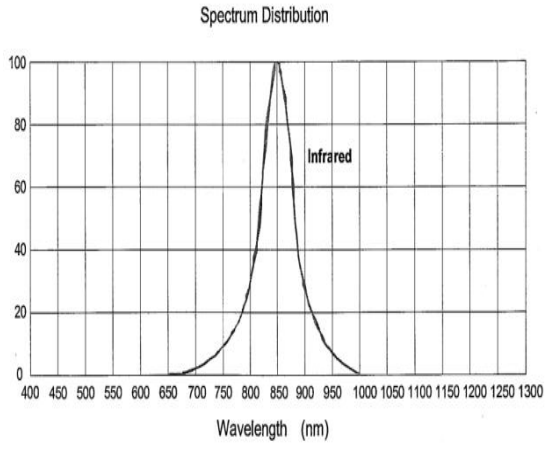


Fig.5 Relative Intensity vs Wavelength

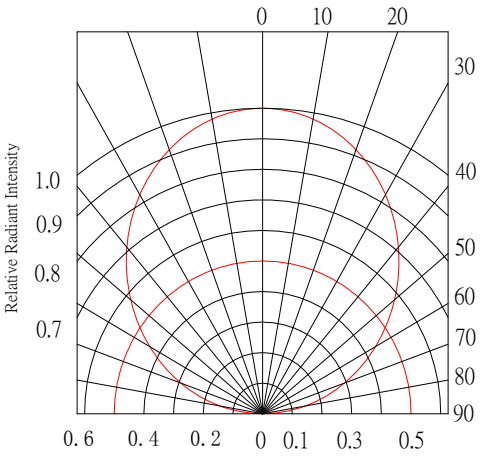


Fig.6 Relative Radiant Intensity vs.Angular Displacement

6.2 Typical optical characteristic curves (RED)

Fig.1 Forward current vs Valtage

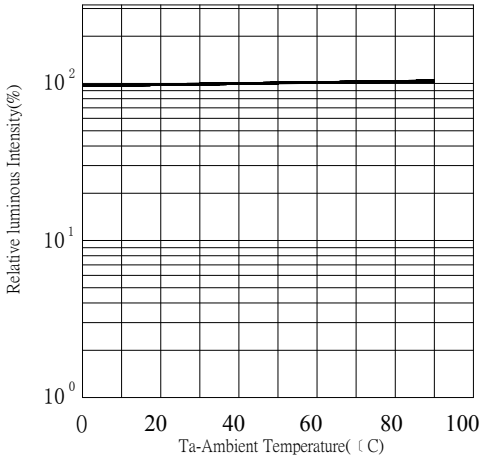
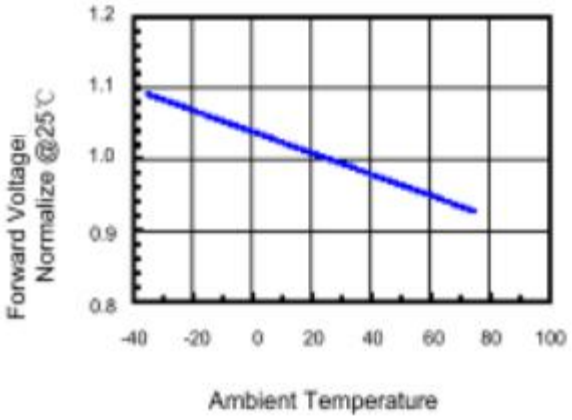
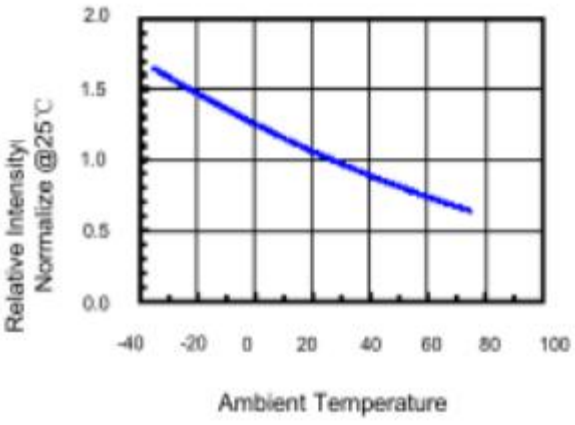


Fig.2 Relative luminous Intensity vs.Ambient Temperature





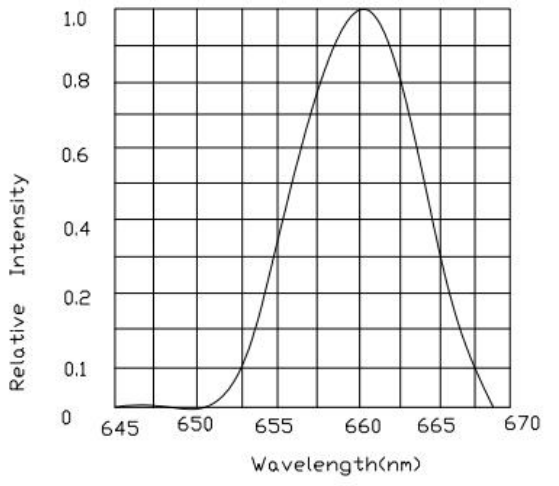


Fig.5 Relative Intensity vs Wavelength

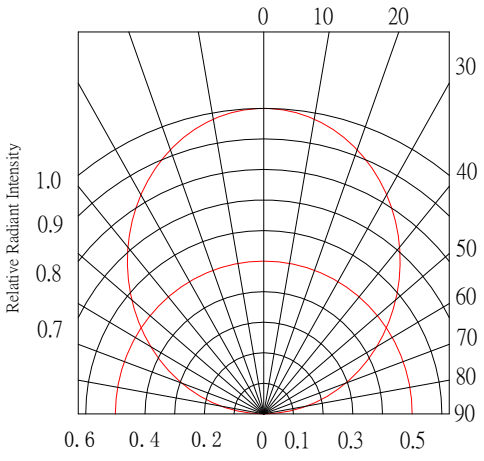


Fig.6 Relative Radiant Intensity vs.Angular Displacement

7.Reliability Test Items And Conditions

Tst Items	Ref.Standard	Test Condition	Time	Time	Ac/Re
Temperature Cycle Test	JESD22-A104	-40℃→25℃→+100℃→25℃; 30min, 5min,30min, 5min	500 Cycles	22	0/1
High Temp. Storage	JESD22-A103	Temp:100 ℃±5 ℃	1000Hrs	22	0/1
Low Temp. Storage	JESD22-A119	Temp:-40 ±5 ℃	1000Hrs	22	0/1
High Temp. High Humidity Storage		Temp:60 ℃, 90 % RH	1000Hrs	22	0/1
Operation Life Test	JESD22-A108	Ta=25±5 ℃ IF=150mA	1000Hrs	22	0/1
HighTemp.OperationLifeTest		Temp:85 ℃ , IF=150mA	1000Hrs	22	0/1
High Temp.High Humidity Operation Life Test		Temp:85℃,85 % RH IF=150mA	1000Hrs	22	0/1
Soldering Heat Test	JESD22-B106	Temp:260±5 ℃ max T=10sec	3times	22	0/1
Solderability		Tsol=235℃±5℃, 使用助焊剂 With soldering flux	1sec	22	0/1

8.Failure Criteria

Tst Items	Symbol	Test Condition	Failure Criteria	
			Min.	Max.
Forward Voltage	VF	IF=150mA	--	U.S.L*)×1.1
Luminous Flux	LM	IF=150mA	U.S.L*)×0.7	--

U.S.L: Uppr Specification Limit L.S.L:Lower Specification Limit

9. Soldering Instrutions

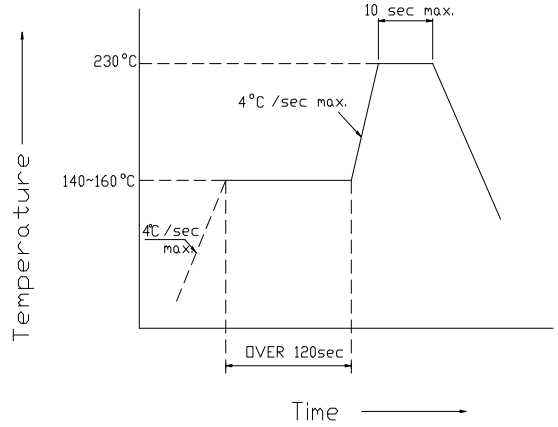
9.1. Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and Second soldering process.

9.2. When soldering , do not put stress on the LEDs during heating

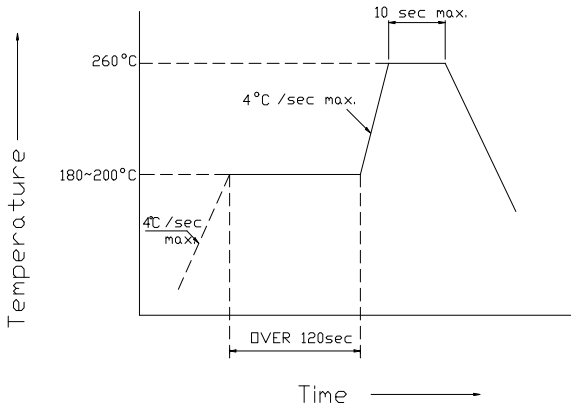
9.3. Recommended soldering conditions

Reflow Soldering			Hand Soldering	
Pre-heat	Lead Solder	Lead-free Solder	Temperature	350° C Max.
Pre-heat time	140 ~ 160° C	180 ~ 200° C	Soldering time	3 sec. Max. (one time only)
Peak temperature	120 sec. Max.	120 sec. Max.		
Soldering time	230° C Max.	260° C Max.		
Condition	10 sec. Max.	10 sec. Max.		

(Lead Solder)



(Lead-Free Solder)



10. Cautions

10.1. Before opening the package: the LED should be kept at 30oC or less and 80 % RH or less.

10.2. After openning the package : the LED should be kept at 30 oC or less and 50%RH or less. TheLED should be soldered with in 24h(1days)after opening the package. If unused LEDs remain, they should be stored in moisture proof package, such as sealed containers with packages of moisture absorbent material(silica gel). It is also recommended to return the LEDs to the original moisture proof bag and to seal the moisturebagagain.

10.3. The LED is an ESD sensitive device. All the equipment and machine must be properly grounded.

10.4. When make use of it,please use static-free container,operator showld ware antistatic clothes and rope-satic-ring also should make effective ground.

10.5. Damaged device will appear some symptoms,lower forward voltage,higher leak current,or even short current.

10.6. After soldering the LED should keep out off any shake or outer force before it cometonormaltempreture

10.7. Reflow soldering should not be done more than two times,when soldering,do not put stress on the LEDs during heating. After soldering,do not warp the circuit board.。Repair should not be done after the LEDs have been soldered. When repairing is unavoidable,a double-head soldering iron shoud be used. It should be confirmed before hand whether the characteristics of the LEDs will not be damaged by repairing.

10.8. LED is one-way continuity, please check electrode before mount, if mount wrong ,the LED chip will damage or fail when LED applied voltage。

10.9. Please design the PCB board to keep a distance between LED and other emit heat component

10.10. Strongly recommend design the board according setting current other than setting voltage .if you are really need setting voltage type please consider there may cause influencearisebydifferencevoltageofdifferenceLED

10.11. The outer voltage change will bring the current index change .unsuitable design and current control,easy cause LED fail .for example excess current will cause LED lifeshortorevenburndown,toolittleelectricitywillcauselackinglight

10.12. If you need make difference BIN LED in the one module .please confirm whether it can meet the electric and optics characteristic require such as the current balance, emittingandbrightnessconsistency.

10.13. Not suitable to operate in acidic environment, Ph<7 .

10.14. Led operating environment and sulfur element composition cannot be over 100PPM in the LED mating usage material.