



Data Sheet

Customer: _____

Part No: _____

CLF-1130UY1C-02(H)

Sample No: _____

Description: _____

Super Flex Yellow Color

Item No: _____

Customer			
Check	Inspection	Approval	Date

product description

◆ Applications

Applicable to backlight source,
company storefront signboard, lamp, light box,
luminescent logo, acrylic plastic car lighting, etc.

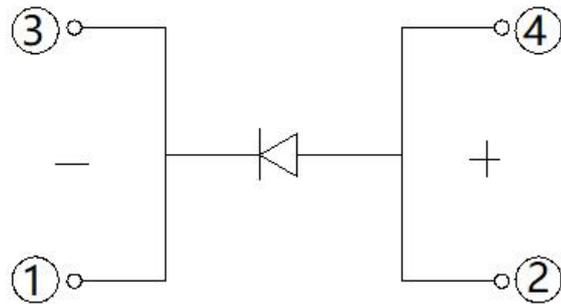
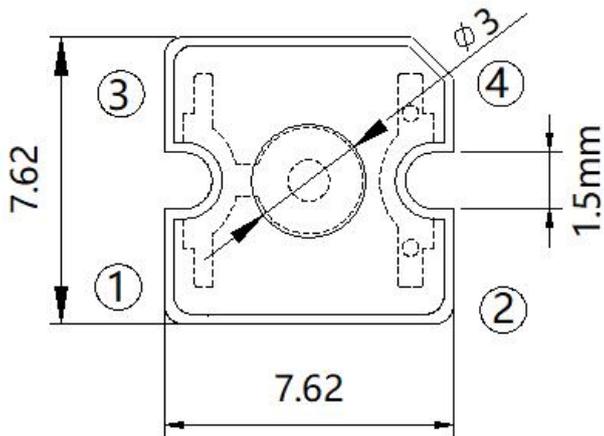
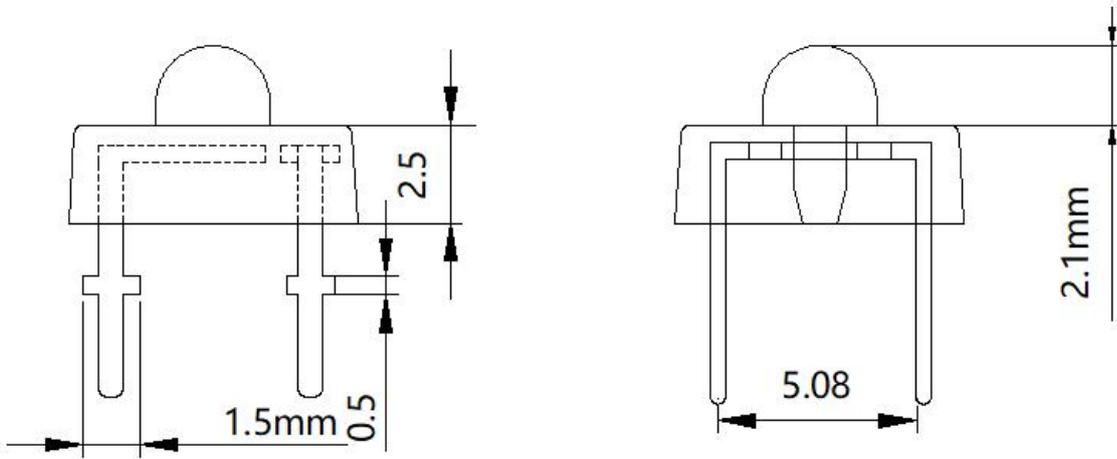
■ 特征 (Feature)

- Size(mm): ϕ 5mm
- 0.2W Low Power LED
- Suitable for peak welding and tin furnace welding
- Moisture sensitivity level:
Level 3.

Application parameters

- Dominant Wavelength/nm
Yellow (588-594nm)
- Luminous Intensity (mcd)
Yellow (10000-20000mcd)

Product Structure diagram



All annotated dimension tolerances are $\pm 0.1\text{mm}$

Material Description

Part No.	ChipMaterials	Lens Type
CLF-1130UY1C-02 (H)	AlGaInP	Transparent colloid

Limit parameter range values

Parameter	Symbol	Rating	Units
Power Dissipation	Pd	200	mW
Continuous Forward Current	IF	60	mA
Pulsed Forward Current (1/10Duty Cycle, 0.1ms Pulsewidth)	IFP	90	mA
Reverse Voltage	VR	5	V
Electrostatic Discharge (HBM)	ESD	2000	V
Operating Temperature	Topr	-40 to +85	°C
Storage Condition	Tstg	-40 to 40	°C
	Humidity	<60	%
Junction Temperature	Tj	≤125	°C

Note:

1/10Dutycycle, 0.1mspulsewidth

Electrical / Optical Characteristics at TA=25°C

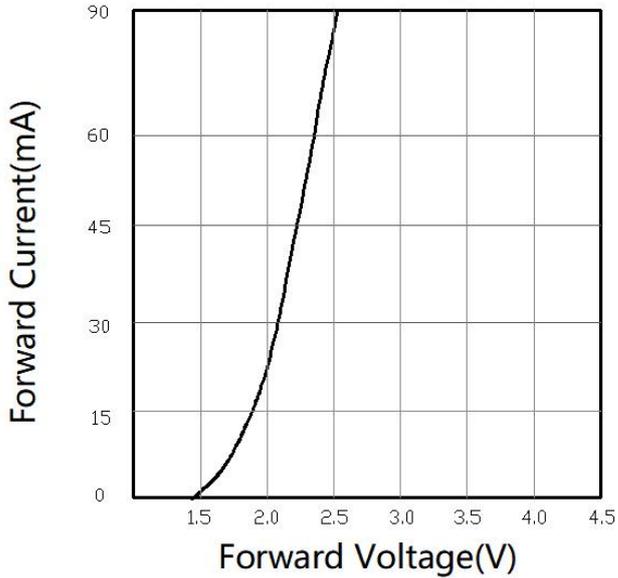
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Luminous Intensity	IV	10000		15000	mcd	IF=60mA
		15000		20000		
Viewing Angle	2θ _{1/2}		45		deg	Note 1
Dominant Wavelength	λ _d	588		592	nm	IF=60mA
		592		594		
Forward Voltage (R)	VF	1.8		2.0	V	IF=60mA
		2.0		2.2		
		2.2		2.4		
Reverse Current	IR	--	--	10	μA	VR=5V

Note:

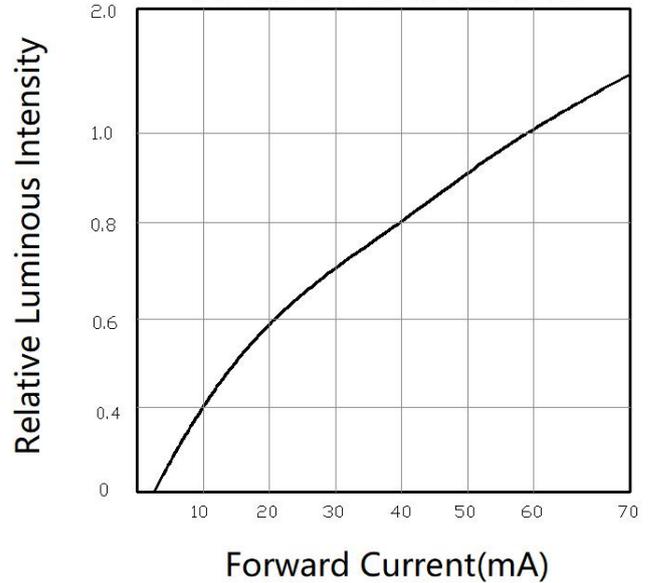
- 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value
- The above luminous flux measurement allowance tolerance is ±15%.
- The above Color Rendering Index measurement allowance tolerance is ±2
- The above forward voltage measurement allowance tolerance is ±0.1V

Typical optical characteristics curves

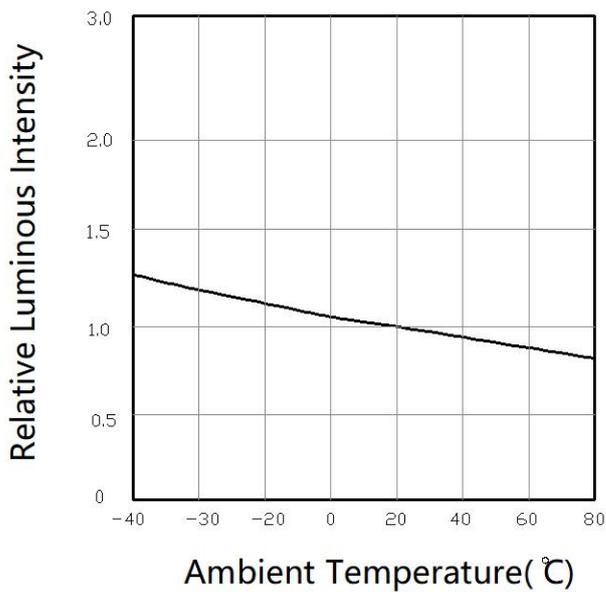
Forward Voltage VS.Forward Current
正向电压与正向电流特性曲线



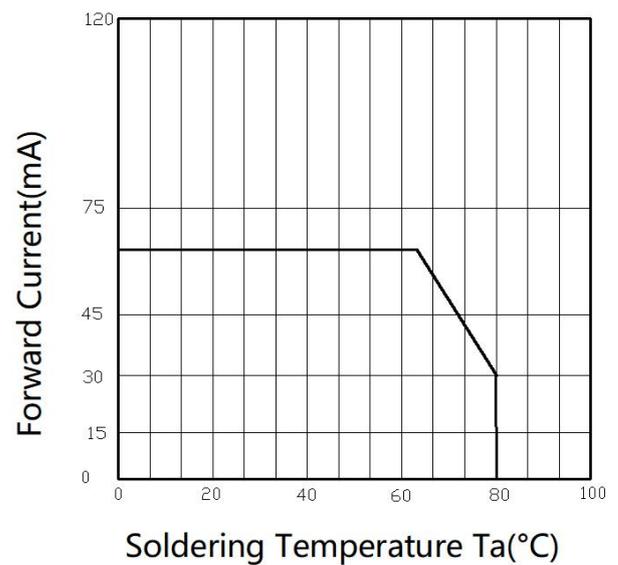
Forward Current VS.Relative Intensity
正向电流与相对光强特性曲线



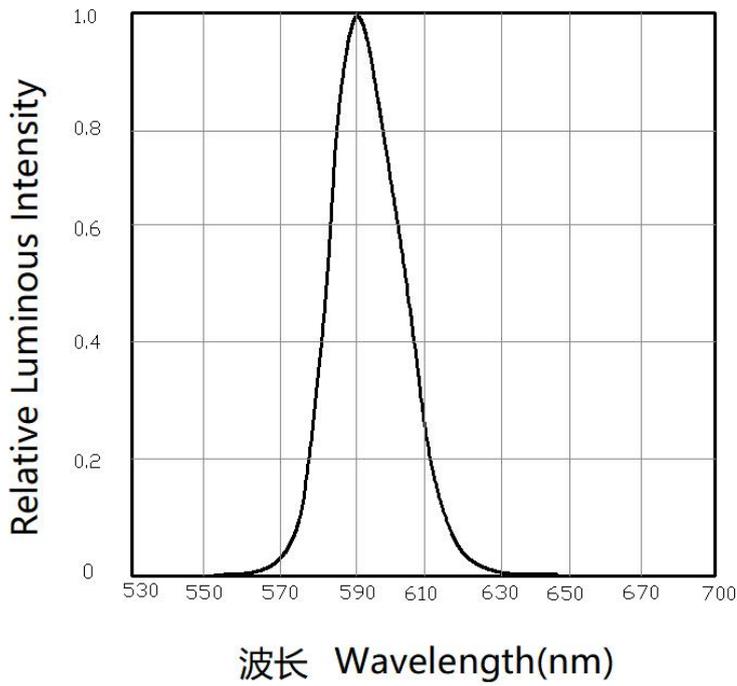
Ambient Temperature VS.Relative Intensity
环境温度与相对光强特性曲线



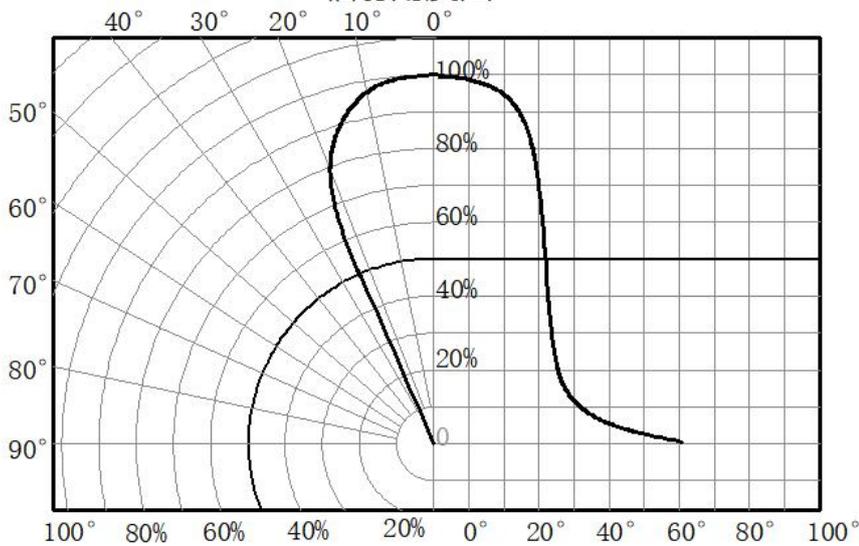
Soldering Temperature VS.Forward Current
焊盘温度与正向电流特性曲线



Relative Spectral emission
相对光谱分布特性曲线



Radiation diagram
辐射角度图



Reliability Test Items And Conditions

Classification	Test Item	Test Conditions	Sample Size	Num of Damaged	Reference Standard
Endurance Test	Operating Life	$I_f=30\text{mA}$ 1000Hrs	22	0	MIL-STD-750:1026 MIL-STD-202:107D JIS C 7021:B-4
	High Temp. High Humidity Storage	$85\pm 5^\circ\text{C}$ 85-90% RH 1000Hrs	100	0	MIL-STD-202:103D JIS C 7021:B-11
	Hi-Temp. Storage	$100\pm 5^\circ\text{C}$ 1000Hrs	100	0	MIL-STD-750:2031 MIL-STD-202:210A JIS C 7021:B-10
	Low-Temp. Storage	$-55\pm 5^\circ\text{C}$ 1000Hrs	100	0	JIS C 7021:B-12
Environmental Test	Temperature Cycling	$-40\pm 5^\circ\text{C}$ 15min Room Temp. 5min $100\pm 5^\circ\text{C}$ 30min 100 Cycles	100	0	MIL-STD-750:1051 MIL-STD-202:107D JIS C 7021:A-4
	Thermal Shock	$-30\pm 5^\circ\text{C}$ 5min $100\pm 5^\circ\text{C}$ 5min 100 Cycles	100	0	MIL-STD-750:1051 MIL-STD-202:107D JIS C 7021:A3
	Solderability	$230\pm 5^\circ\text{C}$ Dwell Time $\leq 5\text{sec}$	22	0	MIL-STD-202:208D MIL-STD-750:2026 MIL-STD-883:2003 JIS C 7021:A-2
	Solder Resistance	$260\pm 5^\circ\text{C}$ $10\pm 1\text{sec}$	22	0	MIL-STD-750:2031 MIL-STD-202:210A JIS C 7021:A-1

Failure Criteria

Test Items	Symbol	Test Condition	Failure Criteria	
			(MIN)	(MAX)
Forward voltage	VF	$I_f=20\text{mA}$	--	U.S.L*)x1.1
Reverse current	IR	$V_R = 5\text{V}$	--	10uA
Luminous flux	lm	$I_f=20\text{mA}$	L.S.L*)x0.7	

Precautions for using Prianha lamp beads

1. ESD countermeasure

Static electricity and high volt can damage led , The production whose Die material is InGaN must strictly required to prevent ESD , Must put on static glove and static fillet , Soldering tool and the cover of device must connect the ground , soldering condition follows the related stating of production specification manual.

2 Protecting countermeasure when over current

为避免由于电压的变化引起大电流冲击而造成产品损坏，需要加入保护电阻。

Need add the protecting resistor in circuit in order to avoid damaging led due to big current and voltage fluctuation.

3. LED installation method

- (1) Pay attention to the led polarity and avoid installation wrong。 Led can't be close to eutermic component , work condition should tally with it's specification.
- (2) Don't install the LED under the condition of the led pin deformation.
- (3) The led bracket don't load any pressure when installing the led into PCB or fitting hole.
- (4) Must avoid any strike and force on led before the soldering temperature return to room temperature.

4. Storage time

- (1) Led can be stored for a year under the condition: the temperature of 5°C ~ 35°C and humidity of RH60% , These production must be re-inspected and tested before use if their storage time exceed a year.
- (2) If led is exposed in air for a week under the condition: the temperature of 5°C ~ 35°C , humidity of RH60% , must place the led in the ambience of 65°C±5°C for 24 hours and use it in 15 days for best.

5. Cleaning

Be careful of some chemical results in the led colloid fades and damage when using chemical clean the led , such as chloroethylene, acetone etc. can use ethanol to wash or soaked led but the time don't exceed 3 minutes.

6. Kinked

The kinked tooling scrape easly the pin of led, where the led bracket is rusting easly, especisal expose it in Moist air. To decredse the led bracket rust, advise using platse tin led bracket

7. Reference graph of wave crest welding

