



Data Sheet

Customer: _____
CL-SFC281DWW-3K-90CRI

Sample No:

Description: 2835 Warm White SMD

Item No:

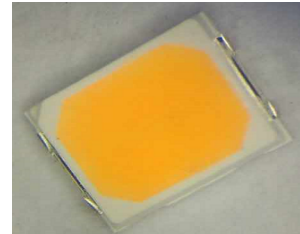
Customer			
Check	Inspection	Approval	Date



CL-SFC281DWW-3K-90CRI

Features:

- . Reflow Solderable
- . High Luminous Intensity and Low Power Dissipation
- . Good Reliability and Long Life
- . Complied With RoHS Directive

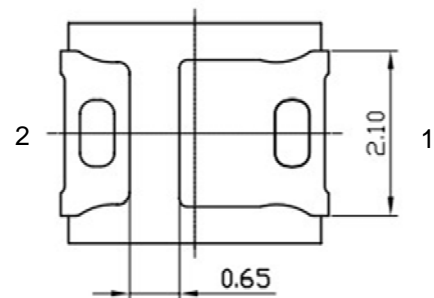
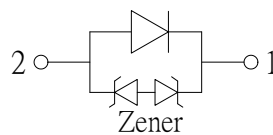
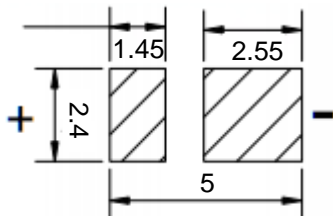
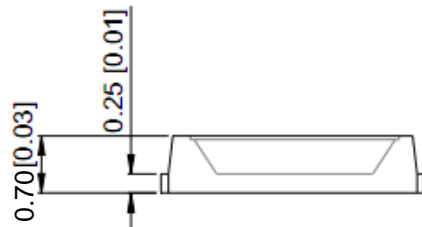
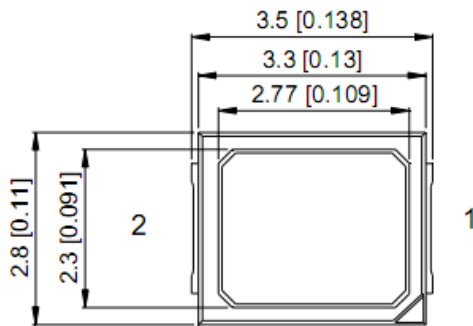


Technical Data Sheet

This product is generally used as indicator and luminary for electronic equipment such as household appliance, communication equipment, and dashboard.

Applications

- Optical indicator
- Indoor display
- Backlighting in dashboard and switch
- Flat backlighting for LCD, symbol and display
- General use



Notes:

- 1 . All dimension units are millimeters.
2. All dimension tolerance is ± 0.2 mm unless otherwise noted.

CL-SFC281DWW-3K-90CRI

Selection Guide

Part No.	Dice	Lens Type	Luminous Flux(Lm) 60mA			Viewing Angle
			Min	Typ	Max	
CL-SFC281DWW-3K-90CRI	White (InGaN)	Yellow Diffused	30	31	32	2θ1/2 120

Note:

1. 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

2. 30 lm the following Products lumens allow differences: ±0.2LM.

Electrical / Optical Characteristics at Ta=25°C

Parameter	Symbol	Min.	Typ.	Max	Units	test conditions
Forward Voltage	VF	2.6	2.8	3.0	V	IF=60mA
Reverse Current	IR	--	--	10	uA	VR = 5V
Color Rendering Index	CRI	80	--	--		IF=60mA
Color Temperature	Tc	2550	2700	2850	K	IF=60mA

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Units
Power Dissipation	Pd	240	MW
DC Forward Current	IF	80	mA
Peak Forward Current [1]	IFP	100	mA
Reverse Voltage	VR	5	V
Electrostatic Discharge (HBM)	ESD	4000	V
Operating Temperature	Topr	-30~+85	°C
Storage Temperature	Tstg	-40~+100	°C

Note:

1. 1/10 Dut cycle, 0.1ms pulse width.

2. The above forward voltage measurement allowance tolerance ±0.1V.

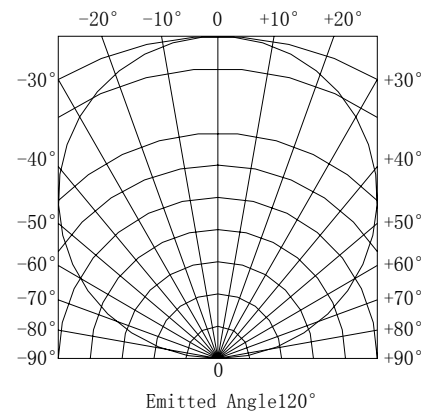
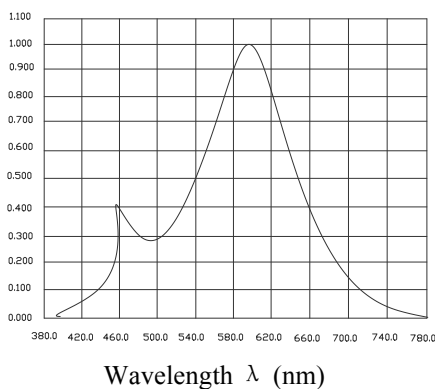
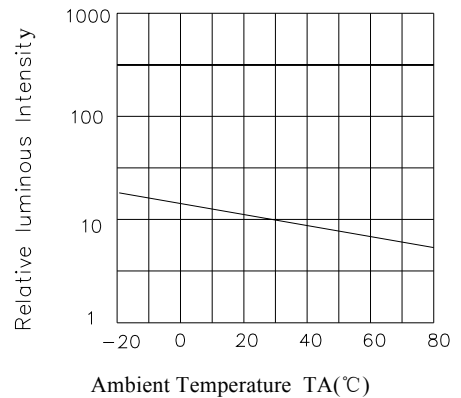
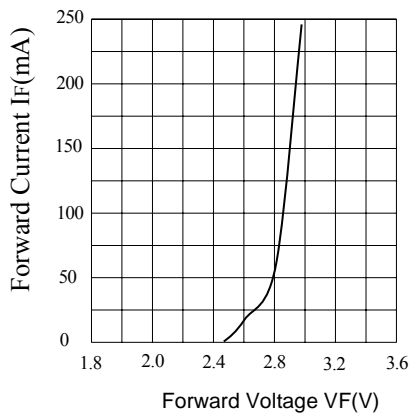
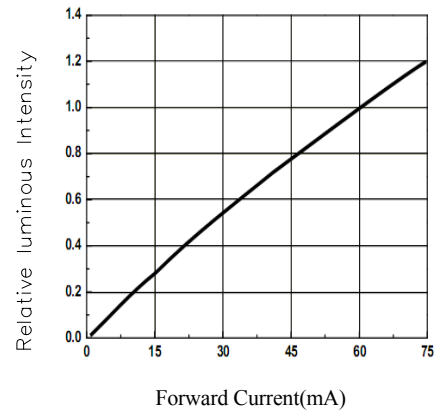
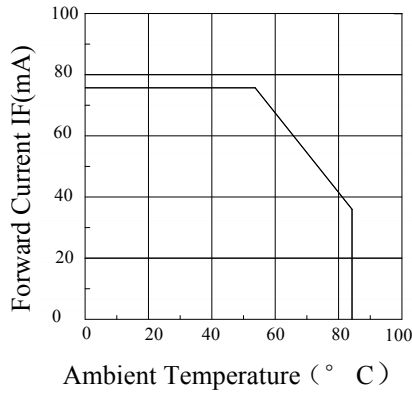
3. 5000K above Color temperature product Color temperature allow differences ±100K.

4. Colour rendering index allow differences -1Ra.

CL-SFC281DWW-3K-90CRI

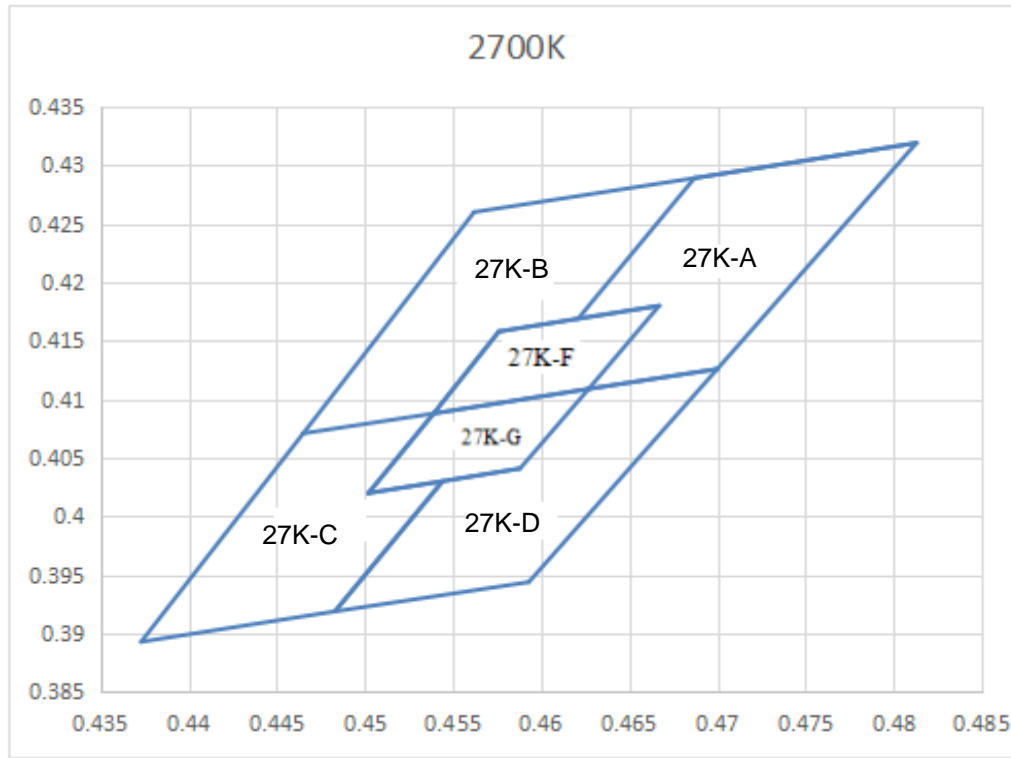
Typical optical characteristics curves

Ambient Temperature VS. Forward Current



CL-SFC281DWW-3K-90CRI

Color area distribution



CCT	2700K		CCT	2700K	
BIN	X	Y	BIN	X	Y
27K-A	0.4813	0.4319	27K-C	0.4465	0.4071
	0.4687	0.4289		0.4373	0.3893
	0.4621	0.4169		0.4483	0.3919
	0.4667	0.418		0.4544	0.403
	0.4627	0.4109		0.4502	0.402
	0.47	0.4126		0.4539	0.4088
	0.4813	0.4319			
27K-B	0.4687	0.4289	27K-D	0.47	0.4126
	0.4562	0.426		0.4627	0.4109
	0.4465	0.4071		0.4588	0.4041
	0.4539	0.4088		0.4544	0.403
	0.4576	0.4158		0.4483	0.3919
	0.4621	0.4169		0.4593	0.3944
			0.47	0.4126	
27K-F	0.4667	0.418	27K-G	0.4627	0.4109
	0.4576	0.4158		0.4539	0.4088
	0.4539	0.4088		0.4502	0.402
	0.4627	0.4109		0.4588	0.4041

CL-SFC281DWW-3K-90CRI

Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.

Confidence level :90%

LTPD :10%

Test Items	Test conditions	Quantity	Judging Criteria
Thermal Shock Followed by High Temperature And High Humidity Cyclic	-40°→10min 5 Cycles ↑ ↓ shift(2~3)min 100°C →10 min. ☰ 25°C~55°C (90%~95%) RH 2 Cycles for 48 hrs., Recover for 2 hrs	11	C=0 & I**
Resistance For Soldering Heat	Reflow Soldering	15	C=0 & I**
DC Operating Life	1000 hrs. Forward Current: 60mA	22	C=0 & I**
High Temperature Storage	100°C ☐ → 1000 hrs	15	C=0 & I**
High Temperature And High Humidity Cyclic	25°C~55°C (90%~95%) RH 6 Cycles for 144 hrs., Recover for 2 hrs.	11	C=0 & I**

The technical information shown in the data sheets are limited to the typical characteristics and circuit examples of the referenced products. It does not constitute the warranting of industrial property nor the granting of any license.

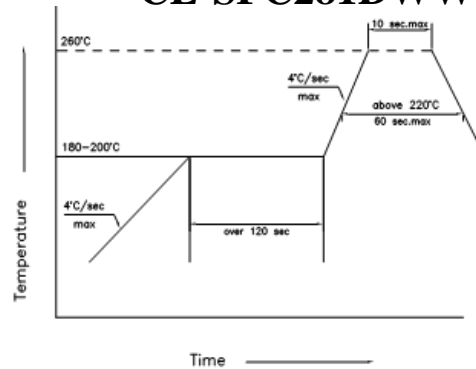
CL-SFC281DWW-3K-90CRI

SMT Reflow Soldering Instructions

1. Reflow soldering should not be done more than two times.

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

3. Product is highest resistant to 260°C, reflow but suggested the highest temperature of 240°C within.



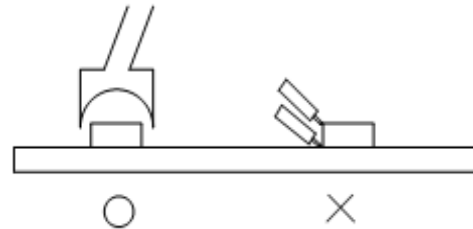
Soldering iron

1. When hand soldering, the temperature of the iron must be less than 300°C for 3 seconds.

2. The hand solder should be done only one time.

Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of LEDs will or will not be damaged by repairing.



Cautions

Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will influence the reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when use the picking up nozzle, the pressure on the silicone resin should be proper.

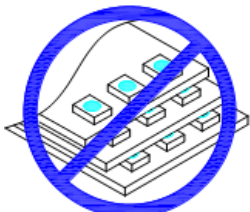
storage

1. Recommended storage condition: At 5°C~30°C and relative humidity 60% RH max.
2. After this bag is opened, devices that will be applied to infrared reflow, vapor-phase reflow,
 - a. Completed within 24 hours.
 - b. Stored at less than 30% RH.
3. Devices require baking before mounting, if 2a or 2b is not met.
4. If baking is required, devices must be baked under below conditions 12 hours at 60°C±3°C.
5. It is recommended that SMD out of their original packaging are used within one year.
6. Open the packing Within 24 hours has not used up, need a new bake packaging.

Handling Precautions

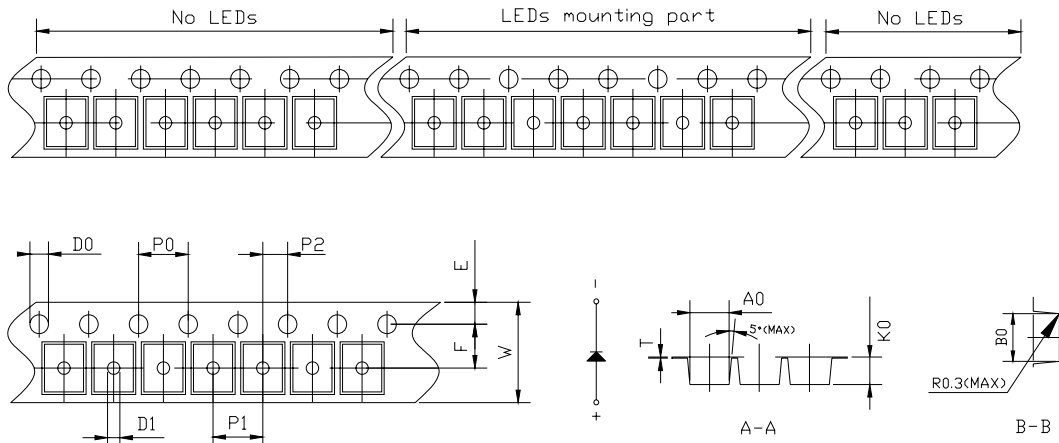
1. Do not stack together assembled PCBs containing LEDs. Impact may scratch the silicone lens or damage.

2. Not available in the situation of acidity for PH.



CL-SFC281DWW-3K-90CRI

Carrier tape



All dimensions in mm, tolerances unless mentioned is ± 0.1 mm.

Moisture Resistant Packaging

