

## Surface Mounted Chip LED

Model No. : CL-SP190SR

■ Features :

- Compatible with automatic placement equipment
- Compatible with reflow solder process

■ Applications :

- Automotive\_Telecommunication
- Indicators
- LCD Back-lights
- Illuminations

Dice Material	Light Color	Lens Color
AlGaAs	Super Red	Water Clear

### Absolute Maximum Ratings

( Ta=25°C )

Item	Symbol	Maximum	Unit
Power Dissipation	P <sub>D</sub>	69	mW
Continuous Forward Current	I <sub>F</sub>	30	mA
Peak Forward Current (1/10 Duty Cycle 0.1ms Pulse Width)	I <sub>FP</sub>	100	mA
Reverse Voltage	V <sub>R</sub>	5	V
Derating Linear From 25°C		0.4	mA/°C
Operating Temperature Range	T <sub>opr</sub>	-30 to +80	°C
Storage Temperature Range	T <sub>stg</sub>	-40 to +85	°C

### Electrical / Optical Characteristics

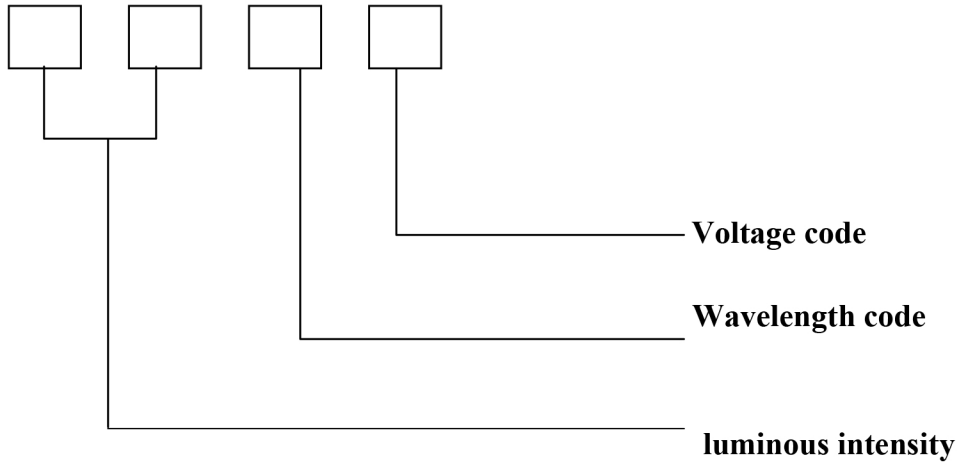
( Ta=25°C )

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	IF=5mA		1.8	2.1	V
Reverse Current	I <sub>R</sub>	VR=5V			10	uA
Peak Emission Wavelength	λ <sub>P</sub>	IF=5mA		660		nm
Dominant Wavelength	λ <sub>D</sub>	IF=5mA		643		nm
Viewing Angle	2θ 1/2	IF=5mA		130		Deg
Luminous Intensity	I <sub>V</sub>	IF=5mA	2.2	5.1		md

ISSUE	DIMENSION NO :	VERSION :	DATE :
		A	2007/02/01
	APPROVAL :	CHECK :	EDIT :

◆ Packing coding principle

Notice: Bin code: luminous intensity / wavelength / voltage。



◆ The Luminous Intensity Grade of Super Red Chip-LED Products

● Test Condition : @ 5mA

Range,mcd	Bin code
2.2/3.6	C2
3.6/5.1	D1
5.1/7.2	D2

◆ Dominant Wavelength Grade of Super Red Chip-LED Products

● I type @ 5mA

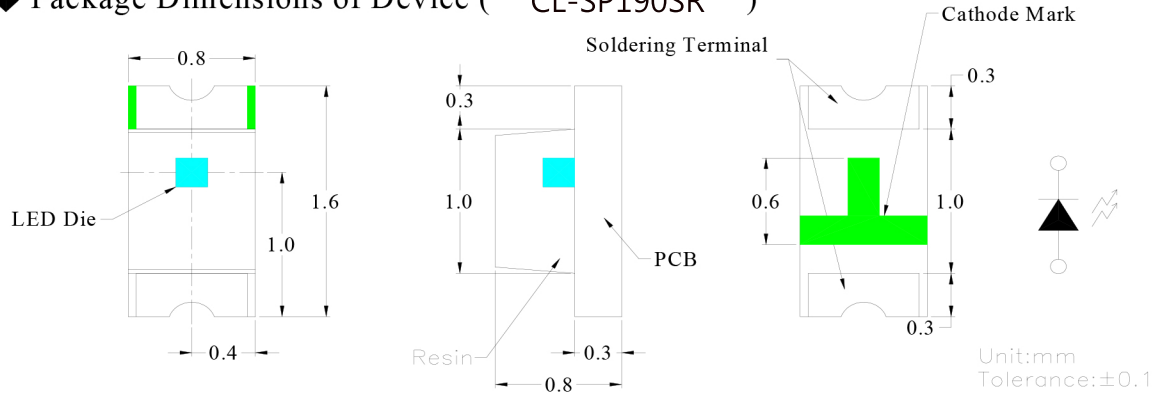
BIN	Range
1	632/640
	640/660

Forward Voltage Grade of Super Red Chip-LED Products

● I type @ 5mA

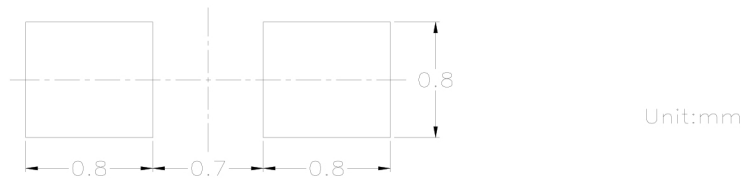
BIN	Range	BIN	Range
2	1.6/1.7	4	1.8/1.9
3	1.7/1.8		

◆ Package Dimensions of Device ( CL-SP190SR )



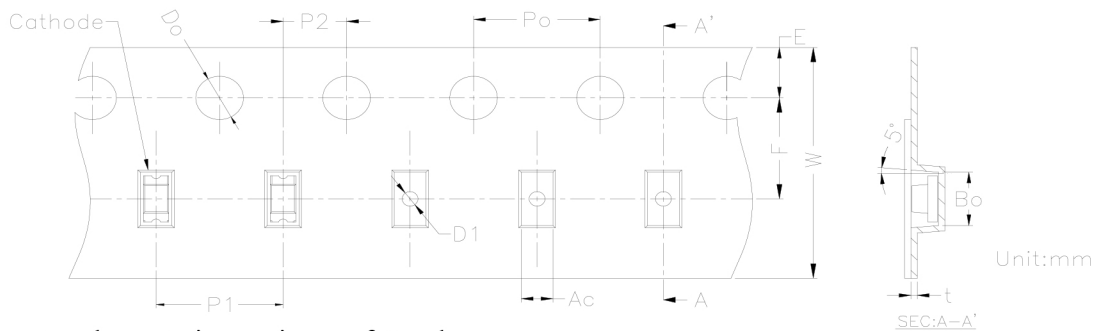
1. Soldering terminal may shift in x, y direction.
2. Polarity referring onto the cathode mark is reversed on the UR/HR/SR

◆ Recommended Soldering Pad Dimensions



◆ Tape Specification : 4000pcs Per Reel

Packing Size													
Item	W	P1	E	F	Do	D1	Po	10Po	P2	Ao	Bo	Ko	t
Spec.	8.00	4.00	1.75	3.50	1.50	0.5	4.00	40.00	2.00	0.95	1.80	0.96	0.22
Tolerance	±0.20	±0.10	±0.10	±0.05	$\begin{smallmatrix} +0.10 \\ -0.00 \end{smallmatrix}$	±0.05	±0.05	±0.20	±0.05	±0.10	±0.10	±0.10	±0.05



◆ Package Dimensions of Reel

