

CHIP LED 0603 Series Data Sheet

SOL-0603C006-XX



SOL-0603C006-XX

White

➤ Features:

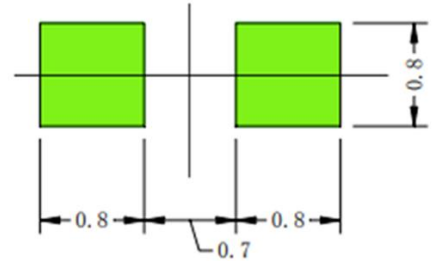
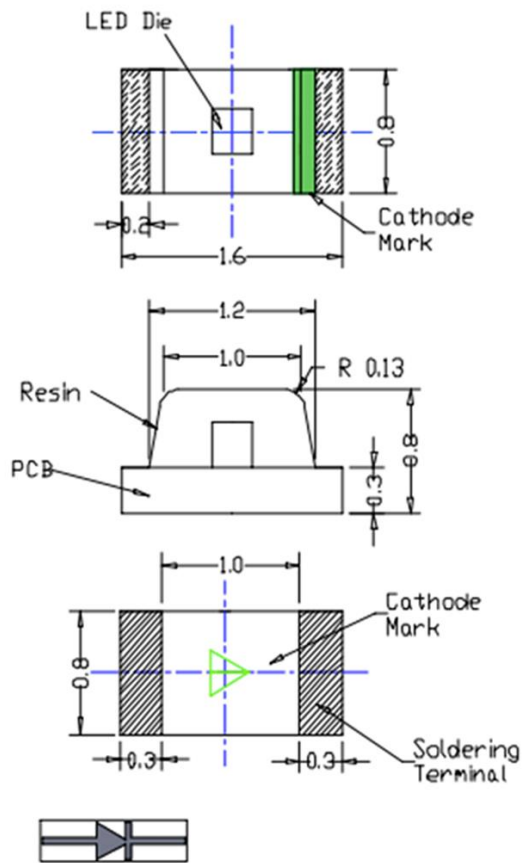
- Emitting Color: White
- Lens Type: Yellow Diffused
- Device Outline: 1.6×0.8×0.8mm
- Complied with RoHS directive

➤ Application:

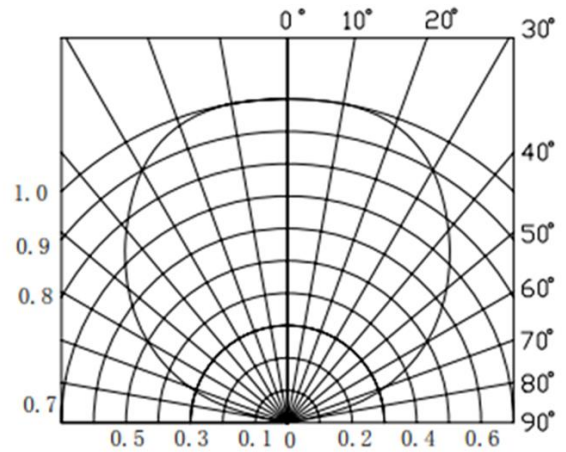
- Backlight for Mobile, Machine Vision, LCD Display
- Backlight in Dashboard and switch of Automotive



➤ Outline Dimensions:



SPATIAL DISTRIBUTION



Note:

- Tolerance is 0.1mm

➤ Absolute Maximum Ratings (Ta = 25°C) :

Parameter	Symbol	Test Condition	Value		Unit
			Min.	Max.	
Power Dissipation	Pd	---	---	70	mW
Reverse Voltage	VR	IR = 30μA	5	---	V
Pulse Current	IFp	Duty=0.1, 1kHz	---	100	mA
Forward Current	IFm	---	---	20	mA
Operating Temperature	Topr	---	-40	+85	°C
Storage Temperature	Tstr	---	-40	+85	°C

➤ Electrical and optical characteristics (Ta = 25°C) :

Parameter	Symbol	Test Condition	Value			Unit
			Min.	Typ.	Max.	
Forward Voltage	VF	IF = 5mA	---	3.0	3.6	V
Reverse Current	IR	VR = 5V	---	---	30	μA
Chromaticity coordinates	CIE-X	IF = 5mA	---	0.31	---	----
	CIE-Y			0.31		
Luminous Intensity	IV	IF = 5mA	102	200	---	mcd
Viewing Angle	2θ1/2	IF = 5mA	---	120	---	Deg.

➤ Forward Voltage And Intensity Bin Limits

(1) Forward Voltage Bin Limits (IF=5mA)

Rank	VF (V)	
	Min	Max
H	2.6	2.7
J	2.7	2.8
L	2.8	2.9
N	2.9	3.0
Q	3.0	3.1

Tolerance: $\pm 0.05V$

(2) Intensity Bin Limits (IF=5mA)

Rank	IV (mcd)	
	Min	Max
L	102	145
M	145	200
N	200	280
P	280	390

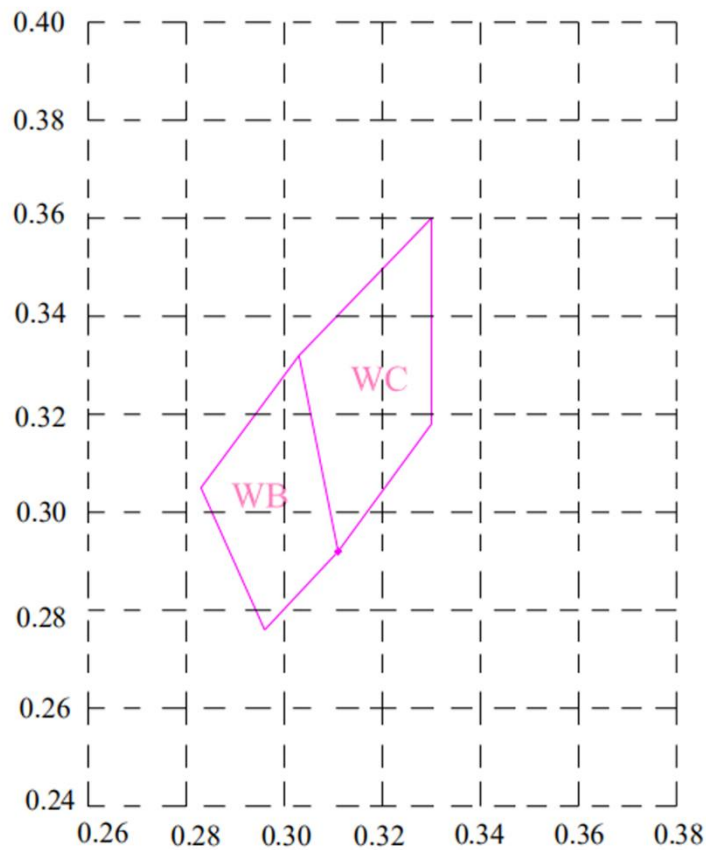
Tolerance: $\pm 12\%$

➤ Chromaticity coordinates:

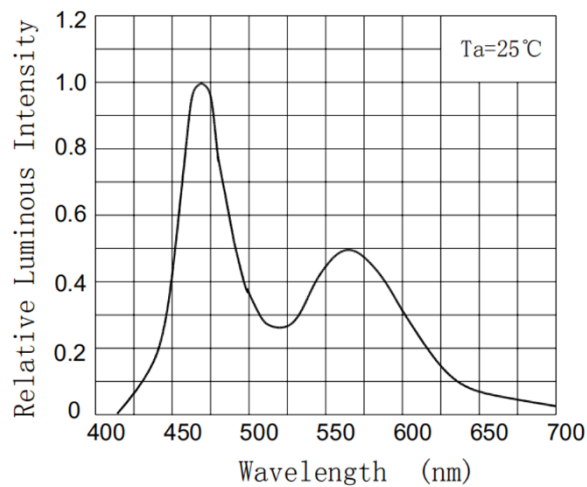
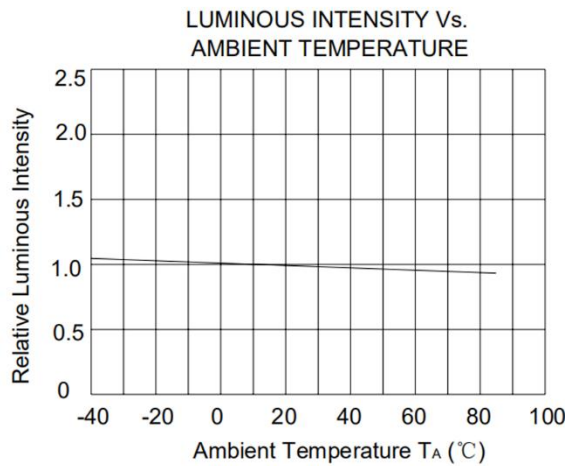
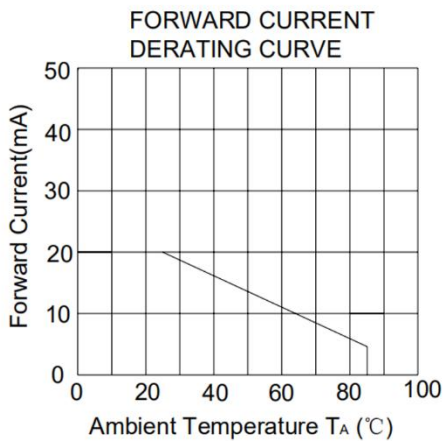
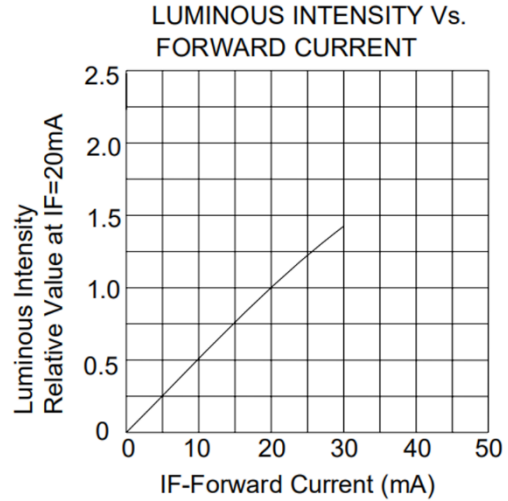
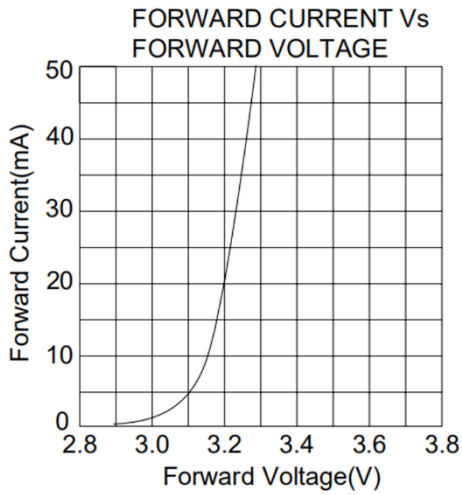
Color coordinate error: ± 0.01

Bin Code	CIE-X	CIE-Y
WB	0.296	0.276
	0.283	0.305
	0.303	0.332
	0.311	0.292
WC	0.311	0.292
	0.303	0.332
	0.330	0.360
	0.330	0.318

Diagram



➤ Typical electrical/optical characteristic curves :



➤ Reliability Analysis:

9.1 Test Items And Results

No.	Item	Test Condition	Spec.	Q'ty	Time	Standard
1	IR Reflow (Reflow Soldering)	Tsld=260°C, 10sec	GB/T 4937, II, 2.2	20	2times	ALL PASS
2	Solder ability	Tsld=235±5°C, 3sec			1times Over 95%	ALL PASS
3	Temperature Cycle	-40°C— 100°C 30min ~ 30min The cut is not more than 1 min	GB/T 4937, III, 1	20	50cycles	ALL PASS
4	Moisture Resistance Cyclic	25°C/12hr~ 55°C/12hr 95%RH	GB/T 4937, III, 4	20	6cycles	ALL PASS
5	High Temperature Storage	Ta=100°C	GB/T 4937, III, 2	20	1000hrs	ALL PASS
6	Low Temperature Storage	Ta=-40°C	GB/T 4937, III, 2	20	1000hrs	ALL PASS
7	Steady State perating Life	IF=20mA Ta=25°C	GB/T18904.3 Part A	20	1000hrs	Iv decay <30%

9.2 Criteria For Judging Damage

Item	Symbol	Test conditions	Criteria for Judgement	
			Min.	Max.
Luminous Intensity	Iv	IF=20mA	Iv*0.7	/
Forward Voltage	VF	IF=20mA	/	U.S.L*1.1
Reverse current	IR	VR=5v	/	U.S.L*2

*U.S.L.: Upper Standard Level

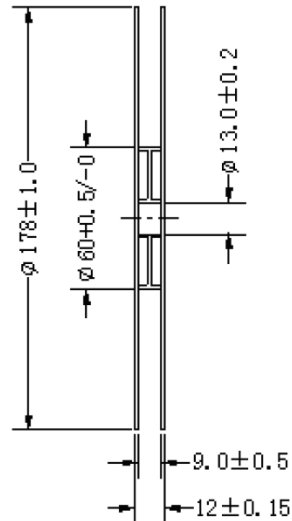
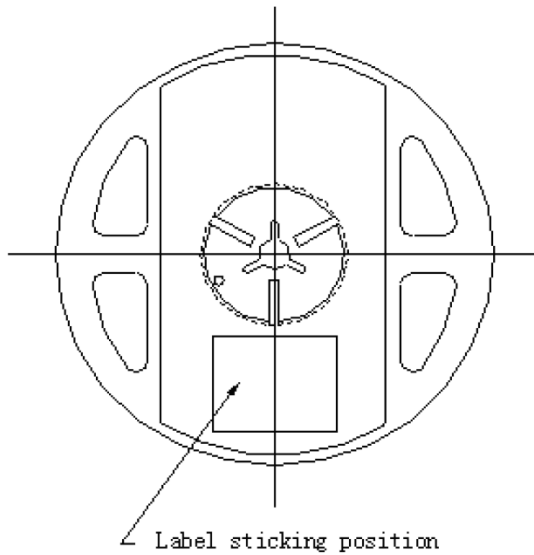
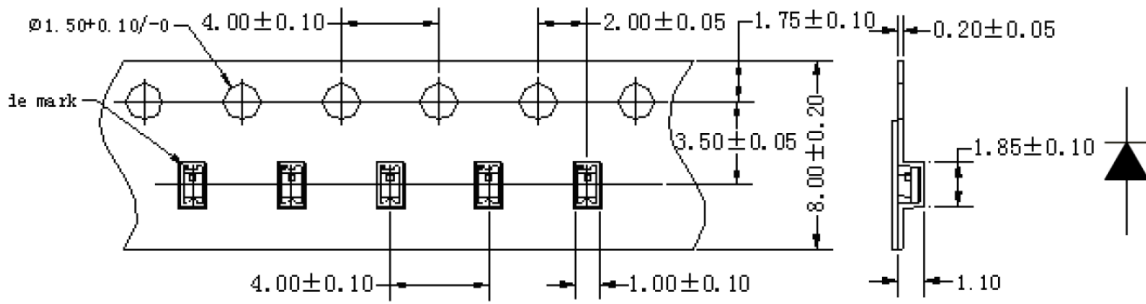
*L.S.L.: Lower Standard Level

➤ Specification of Packing Specification of Packing:

Taping and Orientation

Quantity: 4000 units/reel

Diameter: 178 mm



Specification of Packing



Thank You!