

Spec for 5050 SMD White

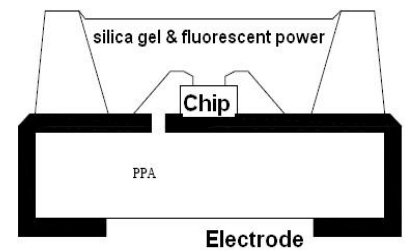
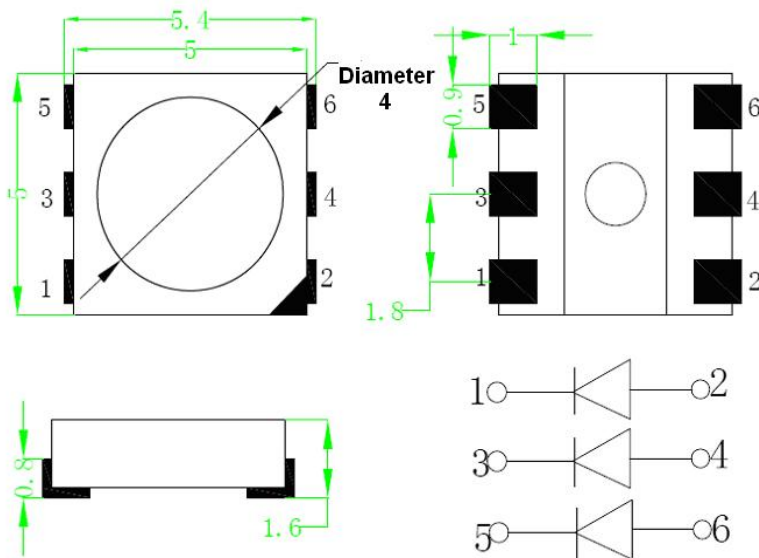
Character

- ◆ Viewing angle: 120 degree
- ◆ size: 5.40mm×5.0mm×1.6mm
- ◆ Resist high temperature, Can be used for reflow soldering
- ◆ Chip material: InGaN

Application

- ◆ Indicator Light
- ◆ Decoration and Light
- ◆ LCD
- ◆ Home Lighting

Size



Parameters **Ta=25°C**

Item	Description	Spec	Unit
If	Forward Current	90	mA
Ifp	Peak current	100	mA
Vr	Reverse Voltage	5	V
Pd	Power consumption	315	mW
Top	Working temperature	-40 ~+100	°C
Tstg	Storage temperature	-40~+100	°C

Main Optical Parameters **Ta=25°C**

Item	Description	Test	Parameter			Unit	
			Min	Typ	Max		
Vf	Forward Voltage	If=60mA	2.9	---	3.5	V	
Iv	Luminous intensity	If=60mA	L	4000	-	5000	mcd
			M	5000		6000	
			H	6000	7000	8000	
φ	Flux	If=60mA	L	-	-	-	lm
			M		16	18	
			H	18	22	25	
2θ 1/2		If=60mA	-	120	-	°	
Ir	Reverse Leakage	Vr=5V	-	-	10	uA	

Color Zone **Ta=25°C**

	X1	Y1	X2	Y2	X3	Y3	X4	Y4
C01	0.3052	0.3400	0.3038	0.3472	0.3100	0.3560	0.3110	0.3480
C02	0.3066	0.3328	0.3052	0.3400	0.3110	0.3480	0.3120	0.3405
C03	0.3080	0.3255	0.3066	0.3328	0.3120	0.3405	0.3130	0.3324
C04	0.3094	0.3184	0.3080	0.3255	0.313	0.3324	0.314	0.3248
C05	0.3110	0.3095	0.3094	0.3184	0.314	0.3248	0.3152	0.3151
W01	0.3110	0.3480	0.3100	0.3560	0.3170	0.3656	0.3177	0.3578
W02	0.3120	0.3405	0.3110	0.3480	0.3177	0.3578	0.3185	0.3496
W03	0.3130	0.3324	0.3120	0.3405	0.3185	0.3496	0.3192	0.3412
W04	0.314	0.3248	0.313	0.3324	0.3192	0.3412	0.3198	0.3331
W05	0.3152	0.3151	0.314	0.3248	0.3198	0.3331	0.3206	0.3228
W06	0.3177	0.3578	0.3170	0.3656	0.3248	0.3763	0.3250	0.3680
W07	0.3185	0.3496	0.3177	0.3578	0.3250	0.3680	0.3254	0.3595
W08	0.3192	0.3412	0.3185	0.3496	0.3254	0.3595	0.3257	0.3508
W09	0.3198	0.3331	0.3192	0.3412	0.3257	0.3508	0.3260	0.3420
W10	0.3206	0.3228	0.3198	0.3331	0.3260	0.3420	0.3262	0.3313
W11	0.3250	0.3680	0.3248	0.3763	0.3325	0.3870	0.3325	0.3780
W12	0.3254	0.3595	0.3250	0.3680	0.3325	0.3780	0.3324	0.3690
W13	0.3257	0.3508	0.3254	0.3595	0.3324	0.3690	0.3323	0.3595
W14	0.3260	0.3420	0.3257	0.3508	0.3323	0.3595	0.3322	0.3510
W15	0.3262	0.3313	0.3260	0.3420	0.3322	0.3510	0.3322	0.3400
W16	0.3325	0.3780	0.3325	0.3870	0.3420	0.3940	0.3415	0.3860
W17	0.3324	0.3690	0.3325	0.3780	0.3415	0.3860	0.3410	0.3760
W18	0.3323	0.3595	0.3324	0.3690	0.3410	0.3760	0.3403	0.3660
W19	0.3322	0.3510	0.3323	0.3595	0.3403	0.3660	0.3400	0.3565
W20	0.3322	0.3400	0.3322	0.3510	0.3400	0.3565	0.3394	0.3450

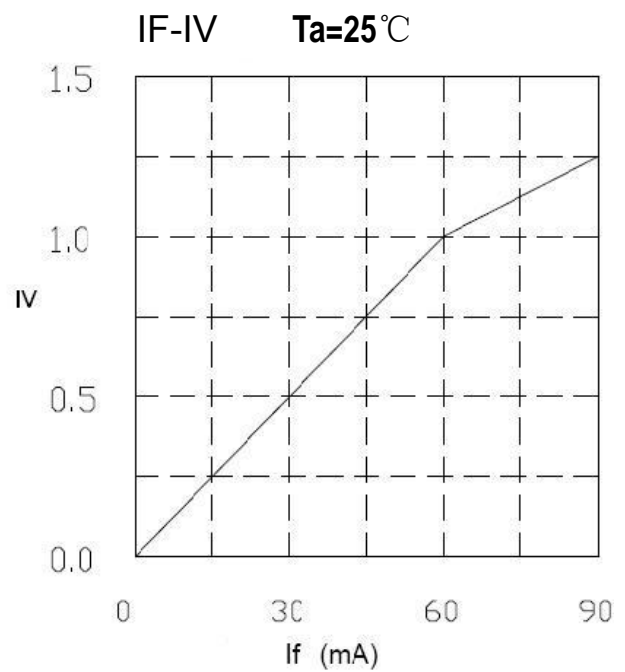
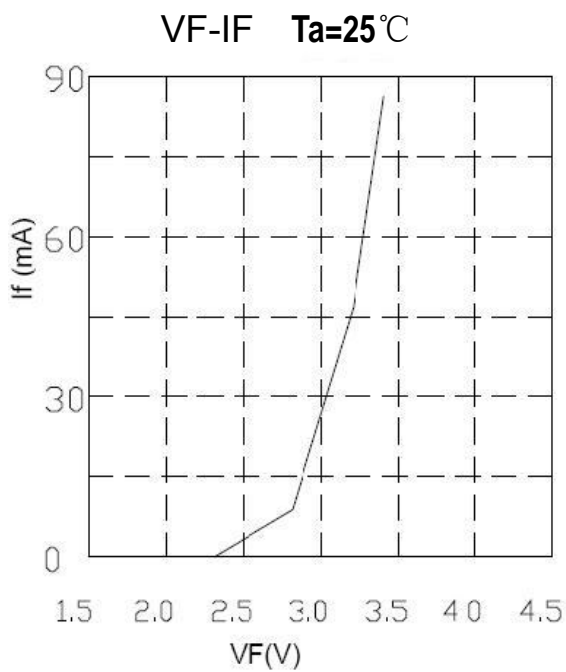
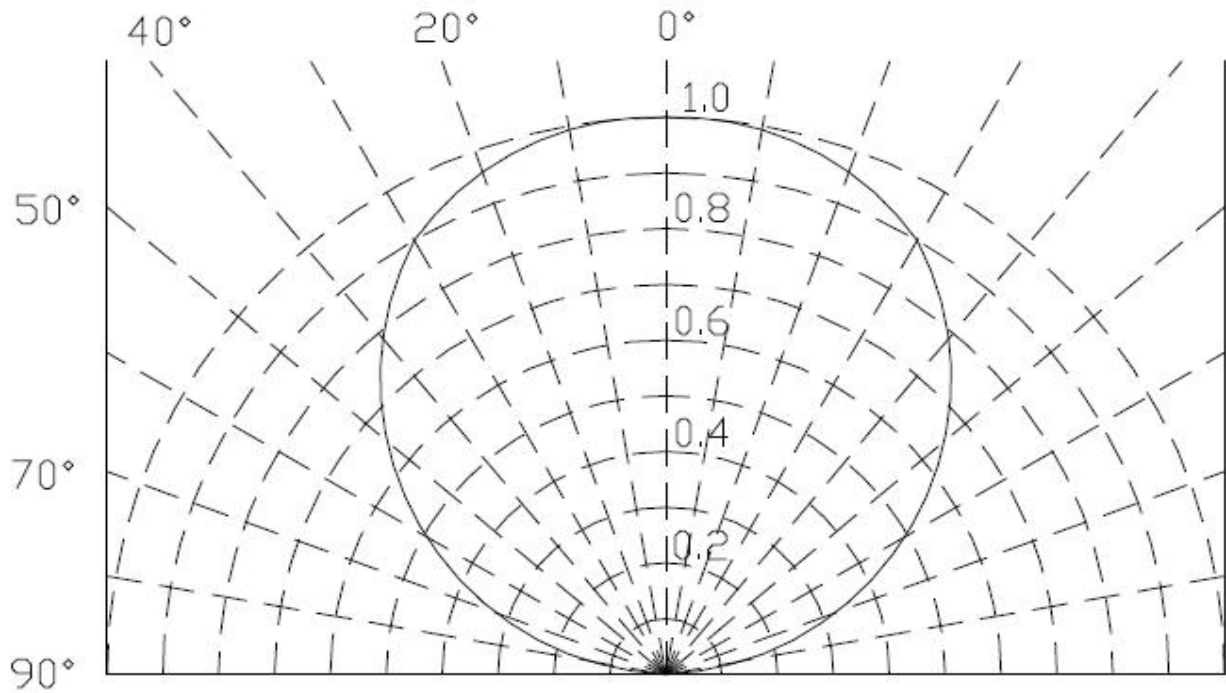
Remak:

- 1: Light Intensity Tolerance Test:±10%
- 2: Dominant wavelength testing tolerance: ±2nm
- 3: Forward Voltage Testing Tolerance: ± 0.05V
- 4: Color coordinate testing Tolerance: ± 0.01
- 5: Maximum pulse current conditions: Pulse width: ≤ 10msec Space ≤ 1/10

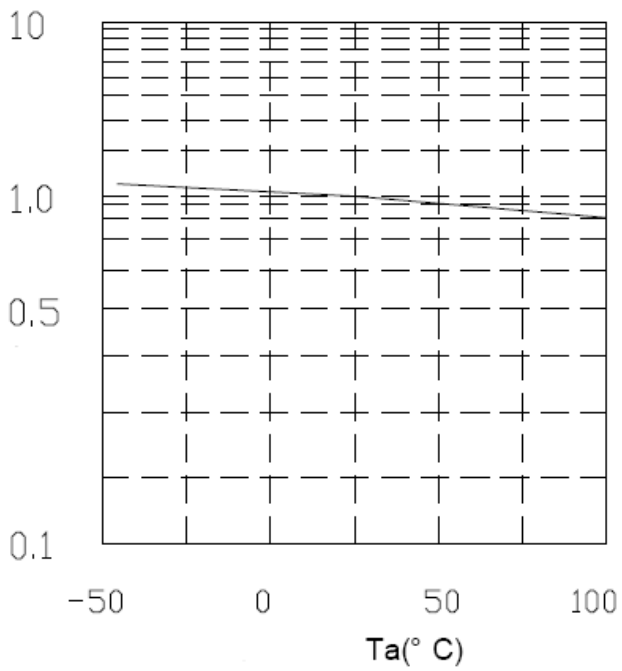
Above parameters due to Chip distribution, Please attention the use range.

Optical characteristic

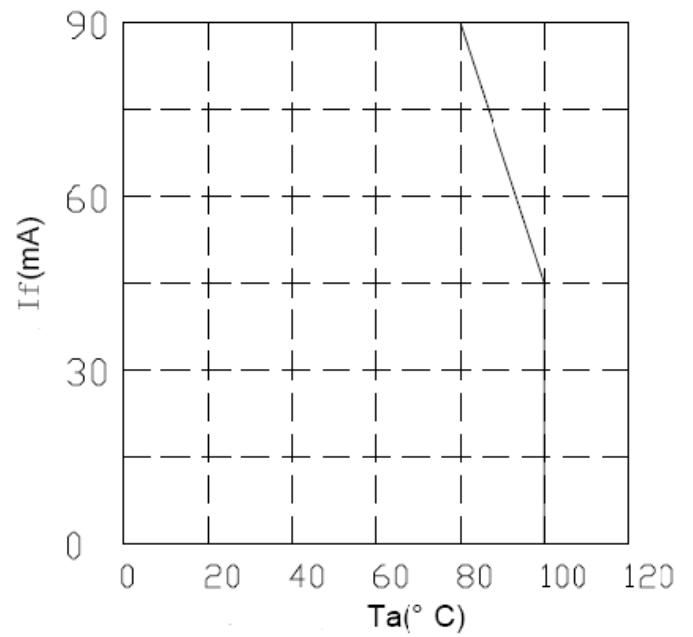
Curve of Relative brightness and emitting angle



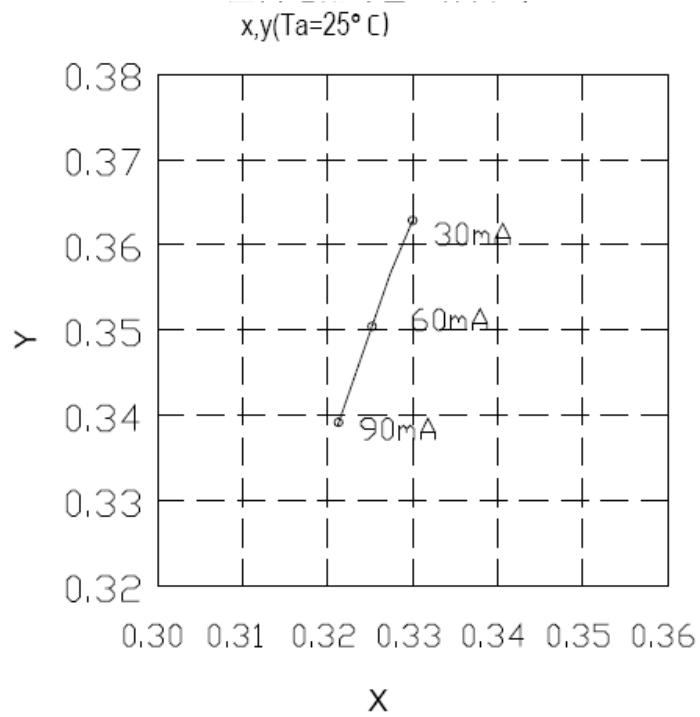
IV- Environment Temperature



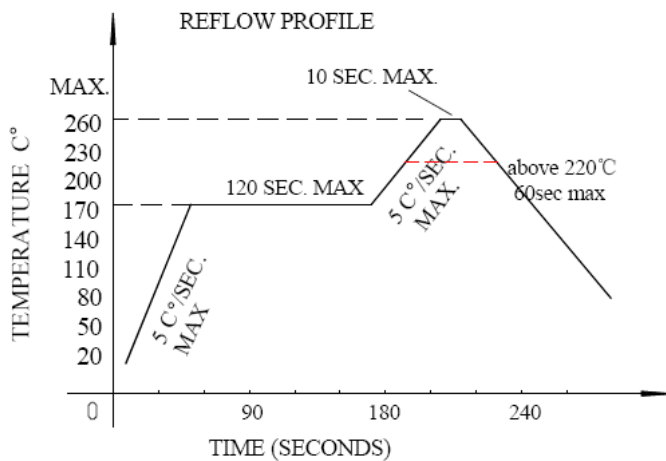
IF- Environment Temperature



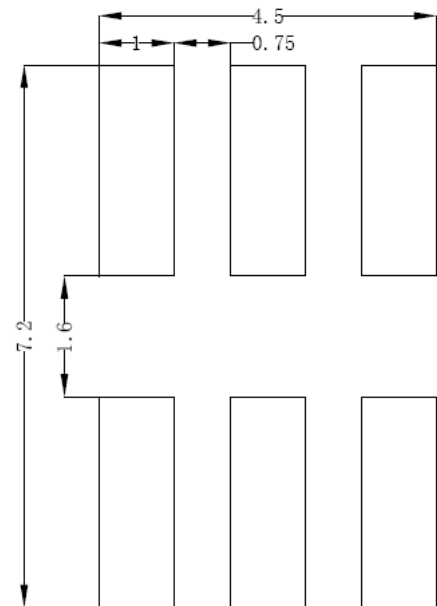
Forward Current-CRI



Application and reflow soldering requirements



Reflow soldering Curve Set



Recommended pad size

I : Attention of Auto-patch and reflow soldering:

- 1: Note that reflow soldering no more than two times.
- 2: In order to ensure production quality and reliability of LED. We use silicone packaging, colloid surface is relatively soft, in process of heat welding LED surface can not be exert pressure
- 3: Select the appropriate nozzle size and pressure in order to avoid excessive pressure to damage products.
- 4: LED is static sensitive products, when you operate it please wear anti-static wristband, make sure the workbench is antistatic and machine equipment, ensure connect ground.

II : Attention of Hand soldering:

1: When soldering, soldering iron to maintain the temperature below 320 degrees, and the welding time is less than 3 seconds, electric iron can not attach colloid.

2: Hand soldering only one time, repeated welding does not guarantee that products are intact.

Reliability

Test Item	Test condition	Test description	Failure Number
Reflow solder	260°C,10sec	3 times	0/22
Aging test	25°C, 90mA	1000 hours	0/22
High temperature aging	60°C	1000 hours	0/22
High temperature storage	80°C	1000 hours	0/100

Storage conditions

I : Package: 2000pcs per reel with anti-static bag.

II :Before opening the package:

The temperature does not exceed 30 °C and humidity no more than 80% RH condition, LED can be saved for one year, we recommend using aluminum bag with desiccant packaging.

III:After opening the package:

LED in the condition of $\leq 30^{\circ}\text{C}$ °C, $\leq 70\%$ RH relative humidity, within 24 hours to complete patch operation, unused product to re-vacuum sealed and placed in a sealed container, at the same time must be used desiccant.
