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Technical Data Sheet

MODEL NO： S3020ANW4-BH Package:3.0*2.0*1.3mm PLCC-2 LED

Features：

●Package in 8mm tape on 7” diameter reel

●Compatible with automatic placement equipment

●Compatible with reflow solder process

Applications：

● Optical Indicator

● Indoor Display

● Automotive Lighting

● Backlight for LCD, Display

● Tubular Light Application

Dice material	Emitted color	Lens Color
InGaN	White	Yellow Diffusion

Electrical/Optical Characteristics(Ta=25℃)

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Color Temperature	I_F=30mA	K	6000	6500		K
Forward voltage	I_F=30mA	V_F	2.8	3.2	3.4	V
Luminous intensity	I_F=30mA	Iv	13	17		Lm
Viewing angle at 50% Iv	I_F=10mA	2θ 1/2		120		Deg
Reverse current	V_R=5V	I_R		10		μA
Color Rendering Index	I_F=30mA	Ra		80		-

Absolute Maximum Ratings(Ta=25℃)

Parameter	Symbol	Value	Unit
Power dissipation	Pd	200	mW
Forward current	I_F	60	mA
Reverse voltage	V_R	5	V
Operating temperature range	Top	-20 ~+80	℃
Storage temperature range	Tstg	-40 ~+85	℃
Peak pulsing current (1/10 Duty Cycle,0.1ms Pulse Width)	I_{FP}	200	mA

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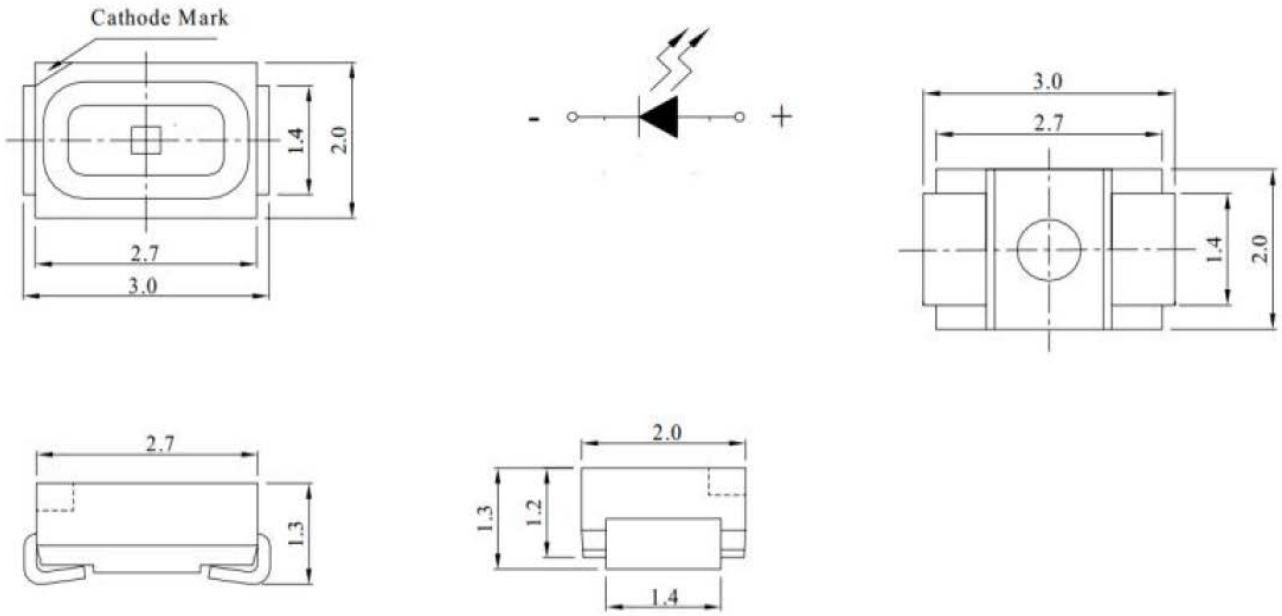
PACKAGING DIMENSIONS (mm):



Notes:（备注）

1. All dimension units are millimeters.（所有标注尺寸单位为毫米）

2.All dimension tolerance is ±0.15mm unless otherwise noted.（除特别标注外，所有尺寸允许公差±0.15mm ）

Binning instruction:

Color Temperature	500K per bin
Forward Voltage	0.2V per bin
Luminous Intensity	2lm per bin

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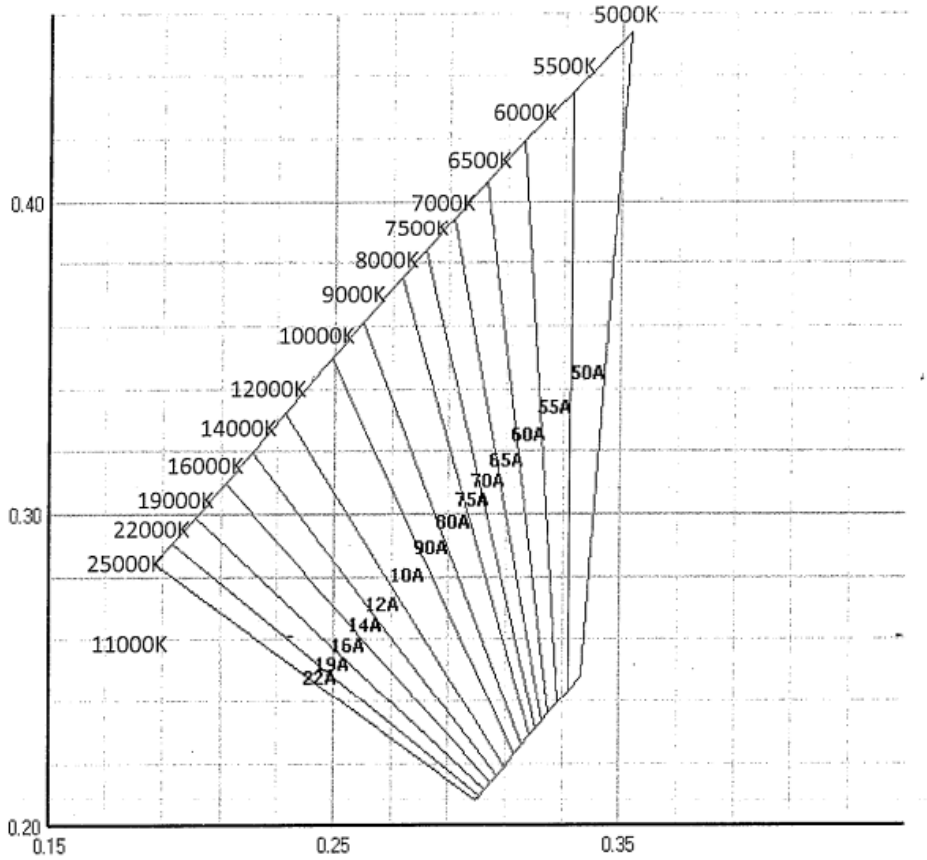
XY chromaticity coordinate



Chromaticity coordinates Ranks combination

四、以下为色区设定

色温：5000-25000K								
BIN	X1	Y1	X2	Y2	X3	Y3	X4	Y4
50A	0.3321	0.2429	0.3325	0.4344	0.3529	0.4532	0.3368	0.2478
55A	0.3284	0.2391	0.3160	0.4192	0.3325	0.4344	0.3321	0.2429
60A	0.3253	0.2359	0.3025	0.4058	0.3160	0.4192	0.3284	0.2391
65A	0.3228	0.2331	0.2912	0.3938	0.3025	0.4058	0.3253	0.2359
70A	0.3206	0.2307	0.2817	0.3837	0.2912	0.3938	0.3228	0.2331
75A	0.3187	0.2286	0.2734	0.3749	0.2817	0.3837	0.3206	0.2307
80A	0.3157	0.2252	0.2597	0.3605	0.2734	0.3749	0.3187	0.2286
90A	0.3133	0.2226	0.2489	0.3490	0.2597	0.3605	0.3157	0.2252
10A	0.2326	0.3317	0.2489	0.3490	0.3133	0.2226	0.3097	0.2185
12A	0.2207	0.3191	0.2326	0.3317	0.3097	0.2185	0.3071	0.2156
14A	0.2116	0.3095	0.2207	0.3191	0.3071	0.2156	0.3051	0.2134
16A	0.2012	0.2986	0.2116	0.3095	0.3051	0.2134	0.3028	0.2110
19A	0.1933	0.2902	0.2012	0.2986	0.3028	0.2110	0.3010	0.2091
22A	0.1871	0.2836	0.1933	0.2902	0.3010	0.2091	0.2996	0.2077

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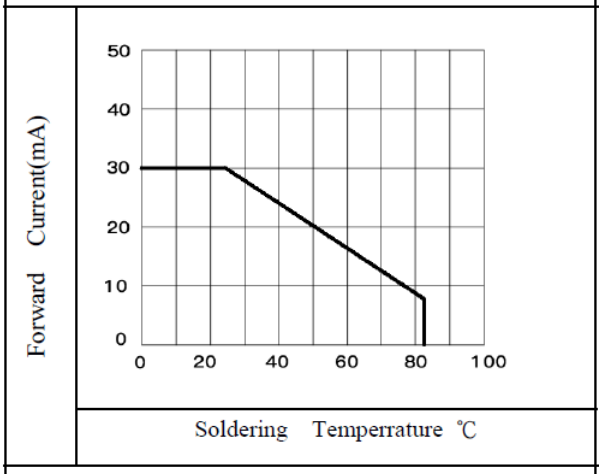
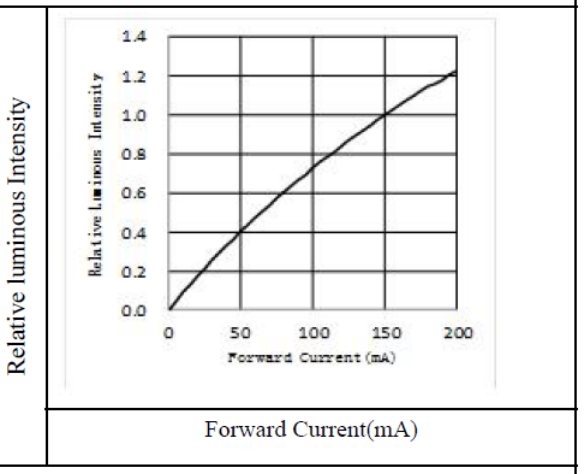
Typical optical characteristics curves　典型光学特性曲线

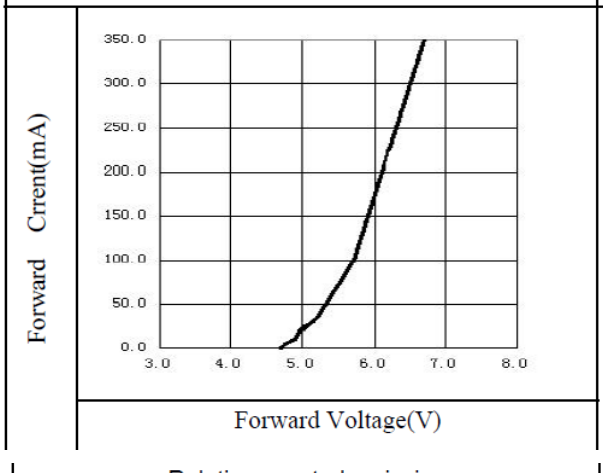
Ambient Temperature vs. Forward Current
环境温度与正向电流特性曲线



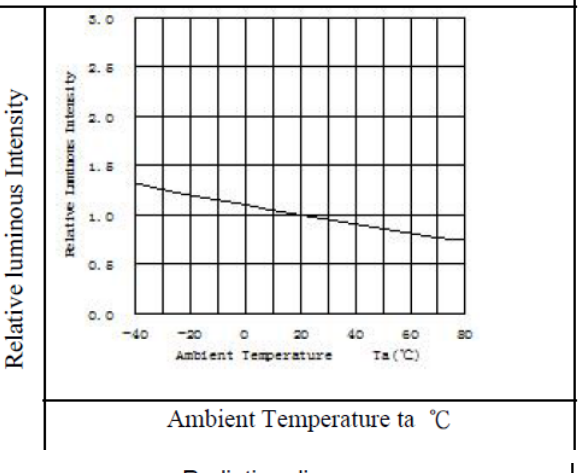
Forward Current VS. Relative Intensity
正向电流与相对光强特性曲线



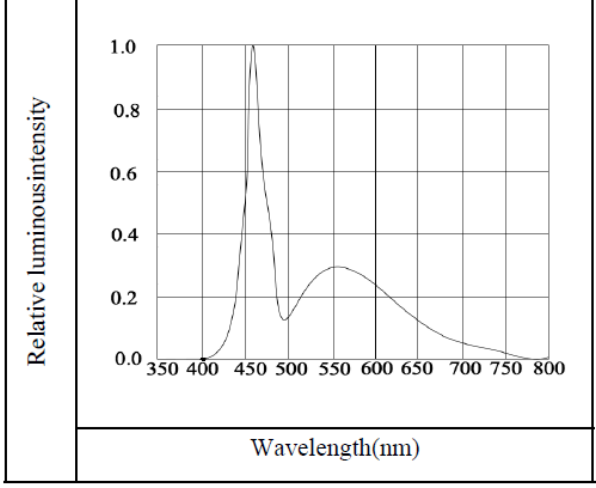
Forward Voltage VS. Forward Current
正向电压与正向电流特性曲线



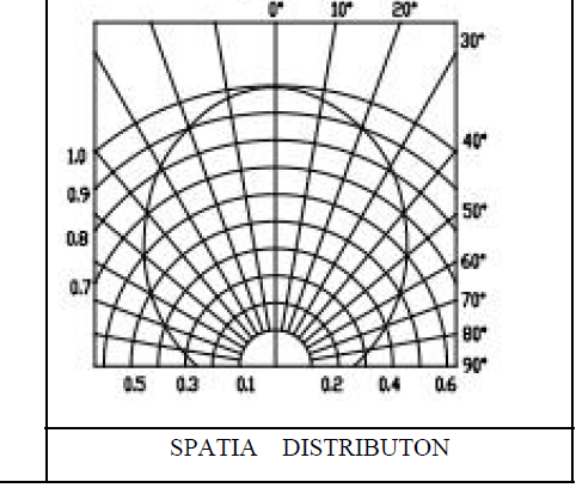
Ambient Temperature VS. Relative Intensity
环境温度与相对光强特性曲线



Relative spectral emission
相对光谱分布特性曲线



Radiation diagram
辐射图特性曲线



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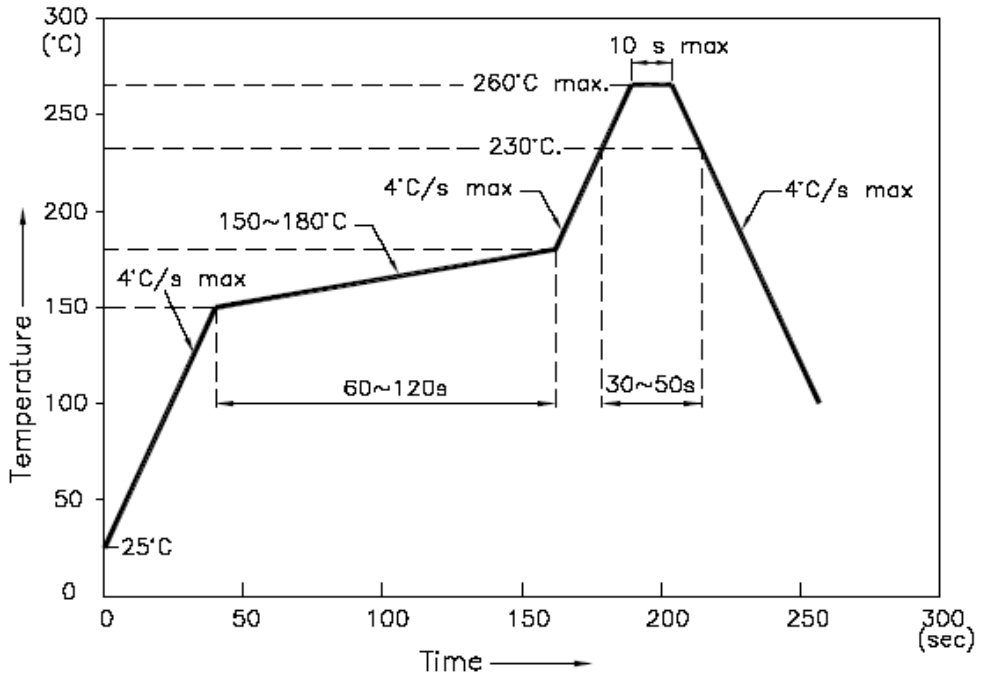
Precautions For Use：
Over－current－proof
Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change （Burn out will happen）
Storage
1. The operation of temperature and R.H. are：5℃～30℃, 60％R.H. Max.
2. Once the package is opened, the products should be used within a week. Otherwise, they should be kept in a dampproof box with desiccating regent. Considering the tape life, we suggest our customers to use our products within 1.5 year（from production date）.
3. It’s recommended to bake before soldering when the package is unsealed after 72 hrs. The condition is：60℃±5℃ for 15hrs.

■ Reflow Temp/Time



NOTES:

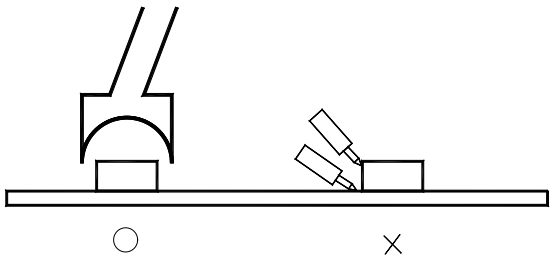
1. We recommend the reflow temperature 245℃(±5℃).the maximum soldering temperature should be limited to 260℃.
2. dont cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

■Soldering iron

Basic spec is ≤ 5sec when 260℃. If temperature is higher, time should be shorter (+10℃→ -1sec).Power dissipation of iron should be smaller than 20W, and temperatures should be controllable .Surface temperature of the device should be under 230℃ .

■Rework

1. Customer must finish rework within 5 sec under 260℃.
2. The head of iron can not touch copper foil
3. Twin-head type is preferred.



■ **Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow 、 solder etc.**