



产品规格书

SPECIFICATION

产品型号 Model. NO:LN-AFS28XW-P72-23

XW=CW,PW,NW or WW

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描述 Description:

- 型号 (P/N) :高功率白光 High Power White Led
- 尺寸 Package : 28*28mm LED COB
- 发光颜色 Emission Color: 冷白 Cold white
正白 Pure white
自然白 Neutral white
暖白 Warm white

深圳市联佑光电技术有限公司			客户/Customer (加盖公章)	
技术部/TD		市场部/MKT Dept		
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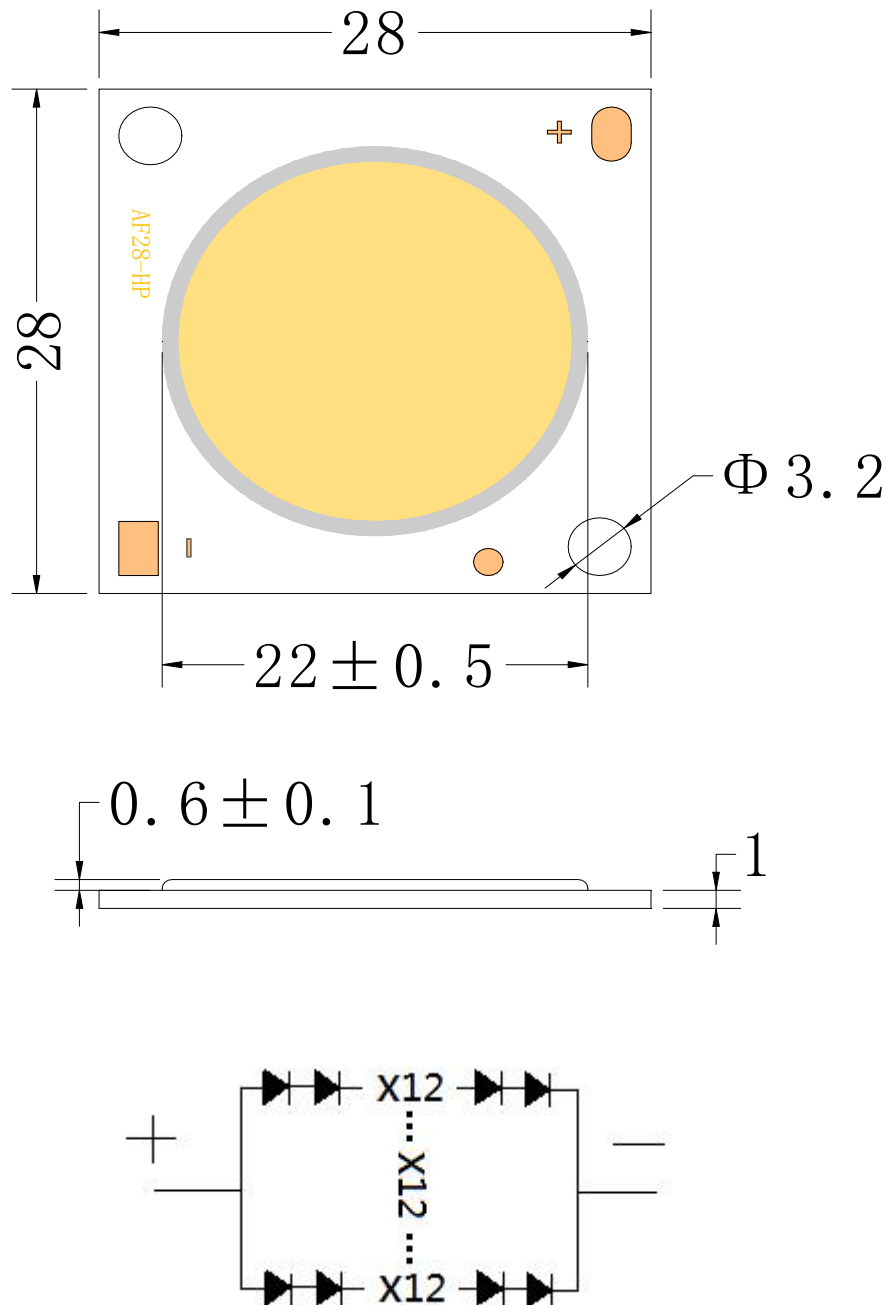
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1. 外形尺寸 Dimensions

单位(Units):毫米(mm)



注意:

所有尺寸单位为 mm ， 如无特殊说明误差范围为 ± 0.1 mm

All dimensions area in mm tolerance is ± 0.1 mm unless otherwise noted.



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2.光电特性 Electrical / Optical characteristics

(1) 最大额定参数 Absolute Maximum Ratings (TA=25°C)

项目 Item	符号 Symbol	参数值 Ratings	单位 Unit
正向电流 Forward Current	IF	1350-2200	mA
正向峰值电流 Pulse Forward Current	IFP	2400	mA
反向电压 Reverse Voltage	VR	60	V
工作温度 Operating Temperature	Topr	-20°C To +80°C	-
贮藏温度 Storage Temperature	Tstg	-20°C To +100°C	-
焊接温度 Soldering Temperature	Tsol	350(for 5 seconds)	°C
抗静电能力 Antistatic Ability	ESD	3000	V
热阻 Thermal Resistance	Rj-c	0.58	°C/W

IFP条件: 占空比≤1/10, 脉冲宽度≤0.1msec IFP conditions: pulse of 1/10 duty and 0.1ms width

(2) 本样品光电参数 Initial Electrical/Optical Characteristics (TA=25°C)

符号 Symbol	项目 Item	单位 Units	最小值 Min.	规格值 Typ.	最大值 Max.	测试条件 Test Conditions
VF	正向电压 Forward Voltage	V	35		38	IF=1350/2200mA
CCT	色温 Color Temperature	K	7000	--	7500	IF=1350/2200mA
Φ	光通量 Luminous Intensity	lm	8300	-	9000	IF=2200mA
			5800	-	6300	IF=1350mA
Ra	显色指数 Color-rendering index	-	-	80	-	IF=1350/2200mA
IR	反向电流 Reverse Current	uA	-	-		VR=60V
2θ½	半功率视角 Viewing Angle	deg	-	120	-	IF=1350/2200mA
X	色座标 Chromaticity Coordinate	7075EF	0.29	-	0.46	IF=1350/2200mA
Y			0.30	-	0.42	IF=1350/2200mA

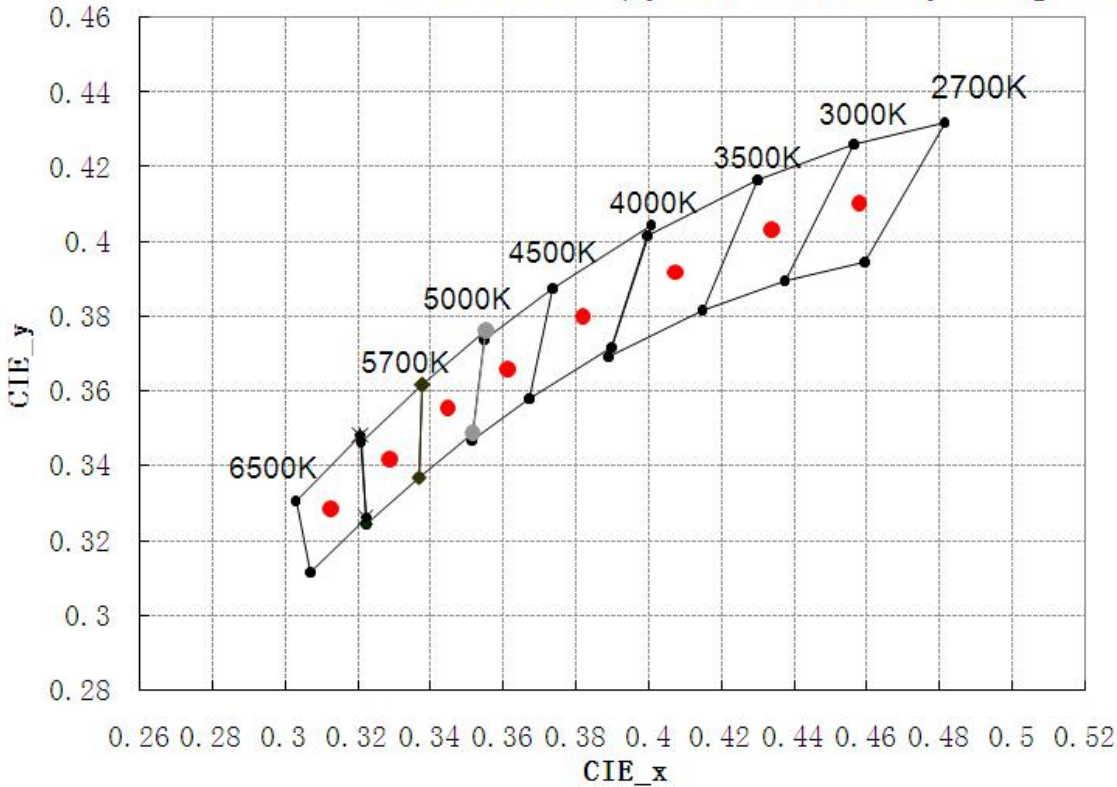


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(3) 色区参考图(Chromaticity Coordinate)

CIE 1931 x, y Chromaticity Diagram



色区坐标值											
色区代码	CIE X	CIE Y	色区代码	CIE X	CIE Y	色区代码	CIE X	CIE Y	色区代码	CIE X	CIE Y
2932EF	0.4147	0.3814	3742EF	0.367	0.3578	5560FG	0.3132	0.3136	6065EF	0.3231	0.33
	0.4299	0.4165		0.3736	0.3874		0.3102	0.3335		0.3217	0.3525
	0.4562	0.426		0.4006	0.4044		0.3217	0.3525		0.3325	0.37
	0.4373	0.3893		0.3898	0.3716		0.3231	0.33		0.3323	0.3455
	0.4147	0.3814		0.367	0.3578		0.3132	0.3136		0.3231	0.33
2870-3250k			3710-4250k			5500K-6000K			6000K-6550K		
7075EF	0.3021	0.3023	7581EF	0.2969	0.2926	8190EF	0.2922	0.2832	9010EF 非主色区	0.2875	0.273
	0.2973	0.3194		0.292	0.308		0.2864	0.2965		0.2811	0.2857
	0.3028	0.3304		0.2973	0.3194		0.292	0.308		0.2864	0.2965
	0.3068	0.3111		0.3021	0.3023		0.2969	0.2926		0.2922	0.2832
	0.3021	0.3023		0.2969	0.2926		0.2922	0.2832		0.2875	0.273
7000-7500k			7500-8100k			8100-9000k			9000-10000K		

常规出货色区坐标 Chromaticity Coordinate in regular order

中心色温 Center CCT	2725K	3045K	3985K	5028K	5665K	6530K
X	0.4578	0.4338	0.3818	0.3447	0.329	0.3123
Y	0.4101	0.403	0.3797	0.3553	0.3417	0.3282



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(4) 光通亮标准分档

等级	最小值	最大值	单位
1	4500	5000	lm
2	5000	5500	lm
3	5500	6000	lm
4	6000	6500	lm
5	8500	9000	lm
6	9000	9500	lm
7	9500	10000	lm
8	10000	10500	lm

(5) 电压分档

代码	最小值	最大值	单位
1	9	12	V
2	12	21	V
3	21	36	V
4	36	72	V

(6) 显色指数分档

等级	最小值	最大值	AVG
1	70	75	72
2	75	80	77
3	80	85	82
4	85	90	87

正向电压允许误差±1V Tolerance of measurement of Vf is ±1 V..

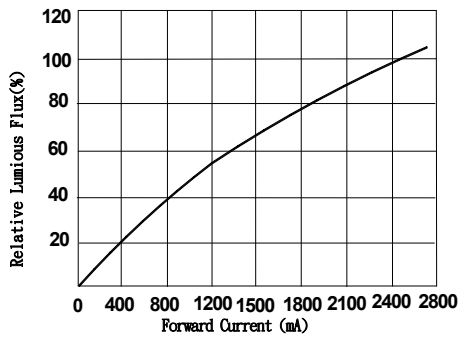
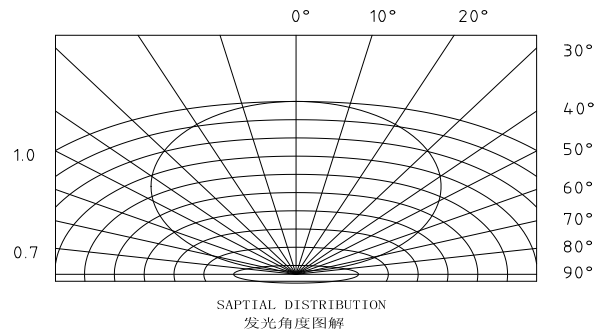
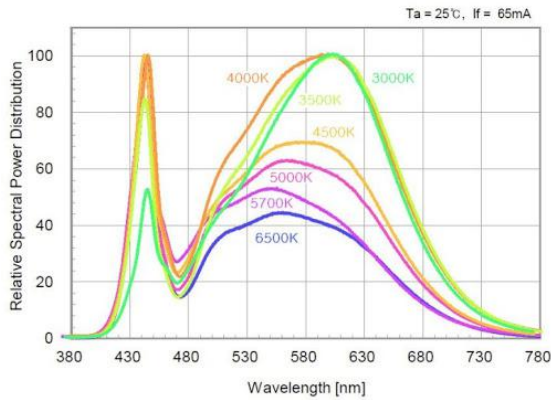
光通量的允许误差±10% Flux error is ± 10%.

色温误差范围±100k Colour Temperature Measurement allowance is ±100k

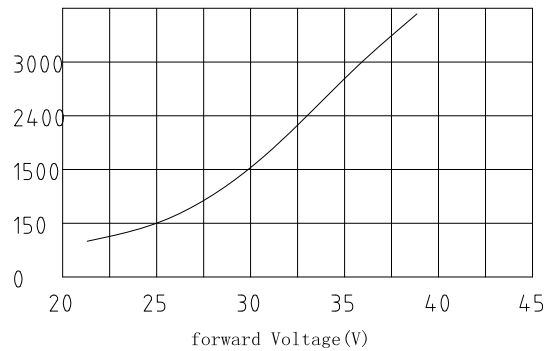
显色指数允许误差±1 Color Rendering Index Measurement allowance is ± 1



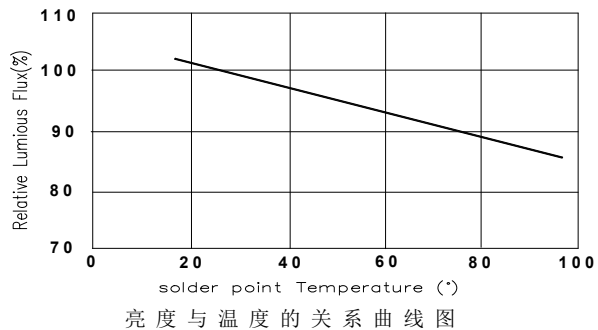
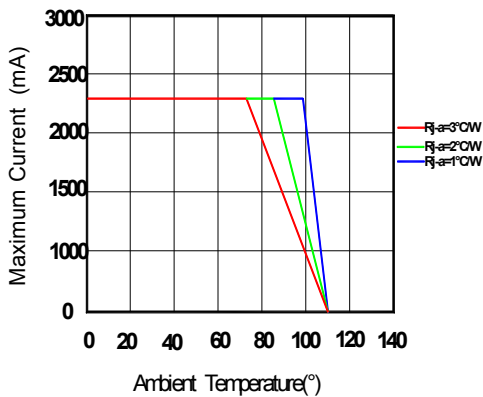
2. 特性曲线 Characteristic curve



LUMINOUS INTENSITY VS FORWARD CURRENT
 亮度和正向电流关系曲线图



FORWARD CURRENT VS FORWARD VOLTAGE
 正向电流和正向电压的关系曲线图



亮度与温度的关系曲线图



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4.可靠性 RELIABILITY

(1)可靠性试验标准 Reliability test items and conditions

序号 Items	试验项目 Test Item	试验条件 Test Conditions	取样数量 QTY Of Sanple	Ac/Re
1	常温试验 Test under room temp	测试电流 2400mA Test $I_F=2400mA$ 温度: 室温 Temp:Room temperature 测试时间: 1000 小时 Test time=1000hrs	10	0/1
2	高温高湿 High Temperature High Humidity	温度 85°C Temp =+85°C 湿度 85% RH=85%HR 测试时间: 1000 小时 Test time=1000hrs	10	0/1
3	冷热冲击 Thermal Shock	-40°C~+100°C 15min~15min 测试 500 回合 Test time=500cycles	10	0/1
4	高温贮存 High Temperature Storage	高温 100°C High temp=+100°C 测试时间: 1000 小时 Test time=1000hrs	10	0/1
5	低温贮存 Low Temperature Storage	低温-40°C Low temp=-40°C 测试时间: 1000 小时 Test time=1000hrs	10	0/1
6	温度循环 Temperature Cycle	-40°C ~ +100°C 30min 5min 30min 测试 500 回合 Test time=500cycles	10	0/1
7	耐焊性 Reflow Soldering	操作条件: Operation heating 最高温度 350 度, 最大时间 10 秒 350°C(Max),within 10sec (Max)	10	0/1

可靠性判断标准 Judgment criteria of failure for zhe reliability

序号/Items	项目/Item	符号/Symbols	试验条件/Test Conditions	判断标准/ Criteria
1	正向电压 Forward Voltage	V _F	$I_F=2400mA$	初始值±10% The initial value of ±10%
2	反向电流 Reverse Current	I_R	$V_R=60V$	≤10uA
3	光通量 Luminous Intensity	Φ_V	$I_F=24000mA$	平均衰减≤10% Average attenuation ≤10%
4	可焊性 Solderability	-	-	沾锡面积达 95%以上 Soldering area of more than 95%



5.注意事项: Notes

(1) 防静电措施 (ESD countermeasure)

静电及高压会对LED 造成损坏,特别是晶片材质为InGaN 的产品对静电防护要求更加严格,要求在使用和检验产品时戴防静电手腕带或防静电手套,焊接工具及设备外壳需可靠接地,焊接条件遵循此份规格书中的条件。

Static electricity and high volt can damage led, The production whose Die material is InGaN must strictly required to prevent ESD, Must put on static glove and static fillet, Soldering tool and the cover of device must connect the ground, soldering condition follows the related stating of production specification manual.

(2) 过电流保护 (Protecting countermeasure when over current)

为避免由于电压的变化引起大电流冲击而造成产品损坏,需要加入保护电阻。

Need add the protecting resistor in circuit in order to avoid damaging led due to big current and voltage fluctuation.

(3) LED 安装方法LED (installation method)

1、在应用中必须将大功率LED安装在适当的散热片上,并将安装LED的位置打磨平整,在散热片和大功率之间打上散热膏。

When using it ,should smear silicon glue on the back of power LED and install it on a proper heatsink .

2、注意在拿、放和安装、使用大功率时,不能给大功率上的芯片区施加任何压力,防止里面金线开路。

Don't press the wafer area of power LED in case of the gold wire open ,When touching the production.

(4) 存储时间 (Storage time)

1、在温度5℃~35℃,湿度RH60%条件下,产品可保存一年。超过保存期的产品需重新检测后方能使用。

Led can be stored for a year under the condition: the temperature of 5℃~35℃and humidity of RH60%, These production must be re-inspected and tested before use if their storage time exceed a year.

2、如果打开的产品在5℃~35℃,RH60%的空气条件下放置超过一周,则需要将产品在65℃±5℃的环境中放置24小时以上,并尽量在十五天内使用。

If led is exposed in air for a week under the condition: the temperature of 5℃~35℃, humidity of RH60%, must place the led in the ambience of 65℃±5℃for 24 hours and use it in 15 days for best.

(5) 清洗 (Cleaning)

当用化学用品清洗胶体时必须特别小心,因为有些化学品对胶体表面有损伤并引起褪色如三氯乙烯、丙酮等。可用乙醇擦拭、浸渍,时间在常温下不超过3分钟。

Be careful of some chemical results in the led colloid fades and damage when using chemical clean the led, such as chloroethylene, acetone etc. can use ethanol to wash or soak led but the time don't exceed 3 minutes.

(6) 对分光产品,请分类使用,避免出现色差及灯暗

For the LED sorted light,please sort the different package to use and cann't mix them in case of dark light and color error.