



深圳市联佑光电技术有限公司

SHENZHEN LEARNEW OPTOELECTRONICS TECHNOLOGY CO.,LTD.
TEL:0755-29084995 FAX:0755-23224565 WEB:www.learnnew-led.com

产品规格书

SPECIFICATION

产品型号 Model. P/N NO.: LN- CVS4046IR-P100-25

文件编号 Document. NO.:

版 次 REV. NO.: V-1-001

送承日期 Documents. NO.: 2020-12-08

描述 Description:

- 型号 (P/N) :高功率红外光 High Power Infrared Led
- 尺寸 Package : 40*46mm LED COB
- 发光颜色 Emission Color: 红外光 Infrared

深圳市联佑光电技术有限公司 Shenzhen Learnnew Optoelectronics Technology Co.,Ltd.		客户/Customer (加盖公章)		
技术部/TD		市场部/MKT Dept		
制作 Maker	审核 Checked	业务员 Salesman	技术部 Technique department	采购部门 Purchasing Department

地址: 深圳市光明新区凤凰街道甲子塘第二工业区 2 号 A 栋 3 楼

Add: 3Floor,Block A,2nd Industry Estate Of Jiazitang, Phoenix street, Guangming area, Shenzhen City.

Tel/电话: 0755--29084995

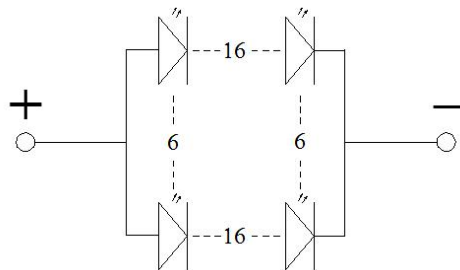
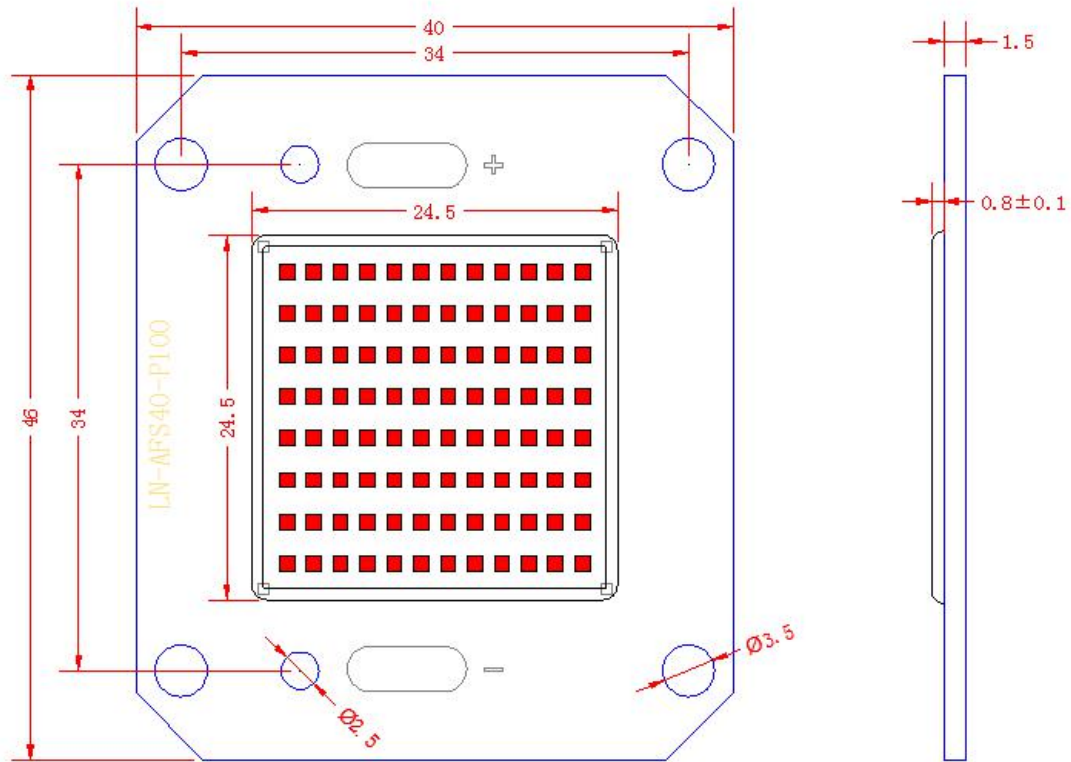
Fax/传真: 0755--23224565

Web/网址: <http://www.learnnew-led.com>



1. 外形尺寸 Dimensions

单位(Units):毫米(mm)



备注/Postscript:

所有尺寸单位为 mm ， 如无特殊说明误差范围为 ± 0.05 mm

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



2. 光电特性 Electrical / Optical characteristics

(1) .极限参数 Absolute Maximum Ratings

项目/Item	符号/Symbol	数值/Value	单位/Unit
正向电流 Forward Current	IF	3500	mA
工作温度 Operating Temperature	Topr	-20°C To +80.°C	°C
结点温度 Junction Temperature	Tj	120	°C
储存温度 Storage Temperature	Tstg	-40°C To +100°C	°C
静电击穿电压 ESD Sensitivity	~	±2,000V HBM	V
直流脉冲电 DC Pulse Current (@ 1 KHz ; 1/10 Duty Cycle)	IFP	5000	mA

(2) . 光电特性 Electrical / Optical characteristics

IF=3000mA Ta=25°C

项目 Item	符号 Symbol	最小值 Min.	规格值 Typ.	最大值 Max.	单位 Units
正向电压 Forward Voltage	VF	23	--	29	v
光功率 Optical power	φ P	20000	--	30000	mW
峰值波段 Peak wavelength	WLP	800	850	--	nm
发光角度 Viewing Angle	2θ1/2	--	120	--	deg.
热阻 Thermal Resistance	RθJ-B	0.34	--	0.55	°C/W

备注/Postscript:

正向电压允许误差± 0.5V. Tolerance of measurement of Vf is ±0.5 V..

光通量允许误差±3%. Luminous Intensity Measurement allowance is ±3%

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

参数仅为灯珠测试数据,应用于成品后会有变化.

Parameter is only lamp test data assembly of finished products will change



深圳市联佑光电技术有限公司

SHENZHEN LEARNOW OPTOELECTRONICS TECHNOLOGY CO.,LTD.
TEL:0755-29084995 FAX:0755-23224565 WEB:www.learnow-led.com

(3) 光通亮标准分档(Bin of Luminous flux,IF=3000mA)

等级(Class)	最小值 (Min)	最大值 (Max)	单位(AVG)
1	10000	11000	mw
2	11000	12000	mw
3	12000	13000	mw
4	13000	14000	mw
5	14000	14500	mw
6	14500	15000	mw
7	15000	20000	mw
8	20000	26000	mw

(4) 电压分档(Bin of voltage,IF=3000mA)

代码(Code)	最小值 (Min)	最大值 (Max)	单位(AVG)
1	9	12	V
2	12	21	V
3	21	36	V
4	36	72	V

(5) 显色指数分档(Bin of CRI,IF=3000mA)

等级(Class)	最小值 (Min)	最大值 (Max)	单位(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

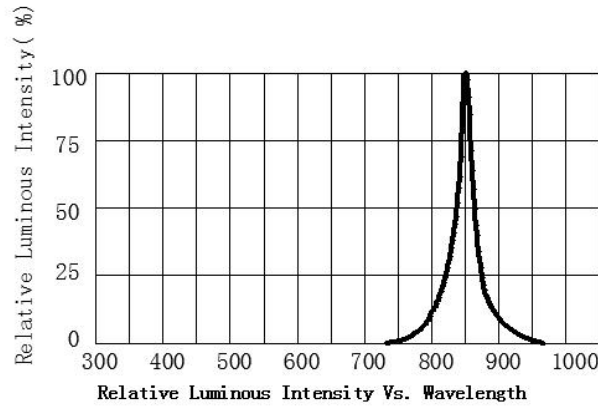
显色指数允许误差±1 Color Rendering Index Measurement allowance is ± 1



3.典型特性曲线/Typical Characteristic Curves

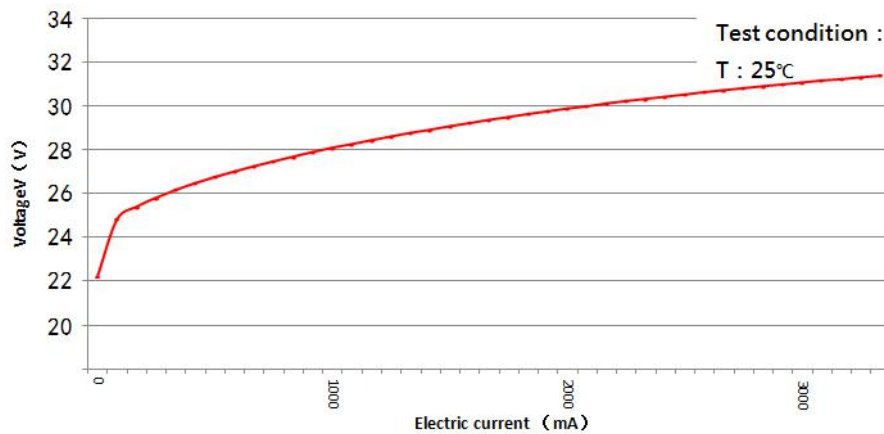
(1) .典型光谱分布

Typical spectral distribution



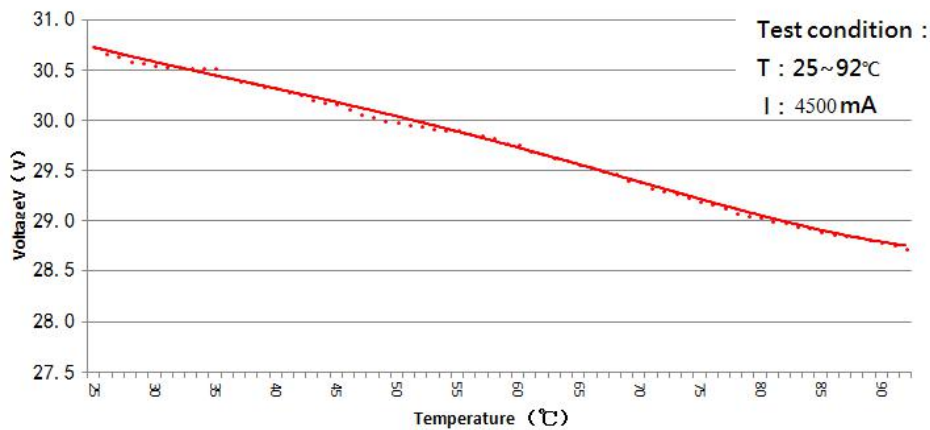
(2) .正向电流与电压变化曲线

Forward current versus voltage curve



(3) .正向电压与温度变化曲线

Curves of positive voltage and temperature





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 Sample	Ac/Re
1	常温试验 Test under room temp	测试电流 3500mA Test $I_F=3500mA$ 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 the 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	VF	$I_F=3500mA$	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	$I_F=3500mA$	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/Cautions

(1).安装 Install

1.1 光源必须使用高导热材料与散热体无缝连接。为保证光源底部散热面与散热体接触良好并固定，建议用配套卡扣将光源固定锁紧。

Light source must be used with high thermal conductivity and heat dissipation body seamless connection. In order to ensure that the light source is in contact with the heat sink and the heat dissipation body is in good contact with the heat dissipating body, and it is suggested that the light source is fixed with a matching card.

1.2 焊接引线温度控制在 420°C 以下；安装过程中避免胶体表面残留有异物，以免光源在工作时高温引起胶体发黑，引起失效。焊接时请注意不可有外力作用于胶体表面（如压力，摩擦或锋利金属钉等），以免造成金线变形或断线等异常；如果超出此使用条件，我司将不能保证产品的稳定性，如需使用超出的操作条件，请务必进行风险评估。

Welding wire temperature control in 420 DEG C; installation, avoid colloid surface residual foreign body, lest the light source at work caused by high temperature black colloid, caused by failure. Please make sure when soldering, there is no external force on the soldering surface (such as pressure, friction or sharp metal nails, etc.), to avoid gold wire deformation or Damage and other abnormalities. If beyond recommended conditions, we cannot guarantee the LED stability, please do the risk assessment first.

(2).储藏 Storage

打开包装袋之前,LED 在温度为 30°C 或更低湿度 60%RH 以下,可保存一年。

Before opening the package ,The LEDs should be kept at 30°C or less and 60%RH or less. The LEDs should be used within a year.

(3).其他注意事项 Other considerations:

3.1.此产品设计不针对下列任何条件，如在下列任何条件下使用产品，请确定其正常性能和可靠性；

如：潮湿，有露水凝霜，盐水空气，腐蚀性气体的地方（Cl,H2S,NH3,SO2,NOX,等）；太阳直晒下，户外暴露，多灰尘的地方。水中，油，医用液体和有机溶剂等。

This product design is not targeted at any of the following conditions, such as the use of the product in any of the following conditions, make sure the normal performance and reliability;Such as: wet with dew, frost, salt air, corrosive gases (Cl, H2S, where NH3, SO2, NOX); Exposure to the sun under, Outdoor exposure, Dusty place. Water, oil, medical liquid and organic solvent.

3.2.如果 led 光源使用超出规定的正向电流或散热系统不够良好时，有可能会增加产品失效率或衰减过高现象，请使用合适的驱动电流和散热体，以避免产品存在品质隐患。

If the LED light source used in excess of the prescribed forward current or cooling system is not enough good, may increase the product failure rate or attenuation phenomenon, please use the drive current and the radiating body fit, in order to avoid products are quality hidden danger.