



洲光源
CHAULIGHT

产品规格书 SPECIFICATION

客户名称: _____

Customer Name

产品类型: 显尘模组规格书

Product Name

产品型号: ZSBM-9032-G180

Part No.

☐ 技术参考 Technical Reference		☐ 样品 Sample		☐ 量产供货 Mass Product	
客户审核（加盖公章） Client approval（Stamp）			洲光源审核 Chaulight approval		
核准 Approval	确认 Checked	核准 Approval	确认 Checked	制作 Edited	
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☐ 接收 Qualified ☐ 不接收 Disqualified			日期 Date: 2025.07.11		

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本规格书仅用于双方交流用需经双方签订后方可生效，自签订后有效期为两年，期满后需以书面形式续签。最终解释权为洲光源所有。

This product specification is only used for technical communication.Only after the signature or seal, the specifications have the force of law.since the signing of the validity period of two years, after the expiration of the written renewal. The final interpretation right is owned by the CHAULIGHT.

5. 产品效果

➤ 整体效果

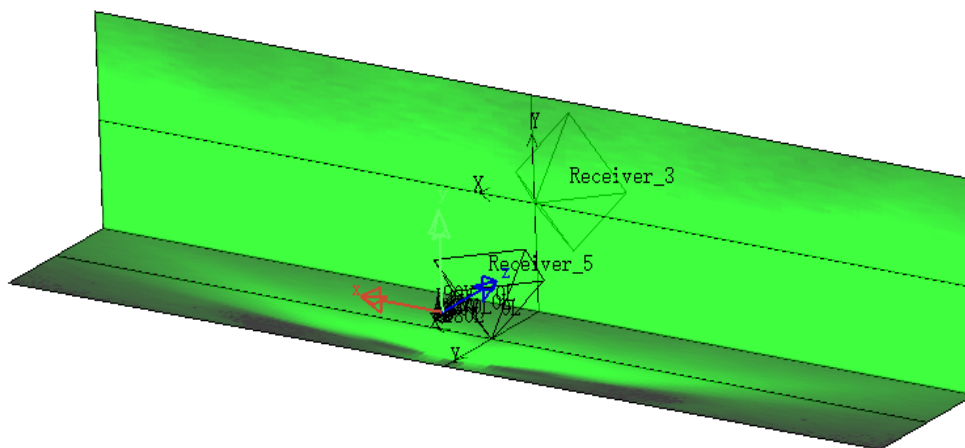
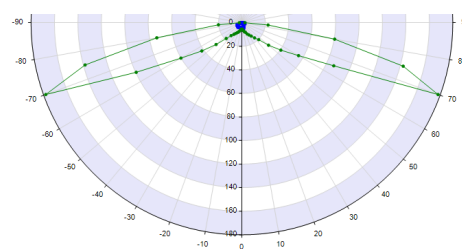
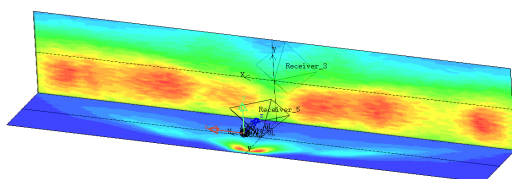


图 1：仿真整体效果图

➤ 地面光斑和照度（照射区域前方 30cm，发光角度 $175^\circ \pm 5^\circ$ ）



➤ 墙面光斑和照度

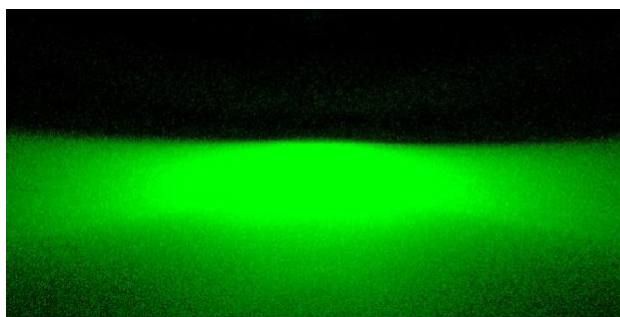


图 4：墙面光斑效果

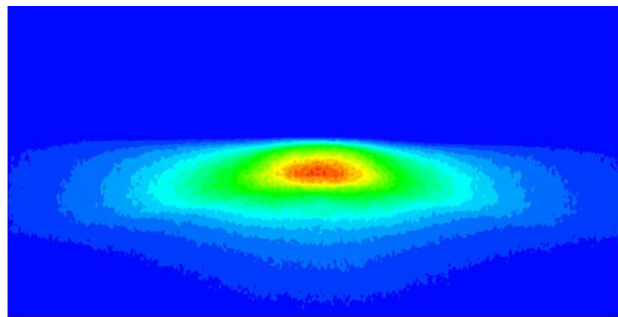
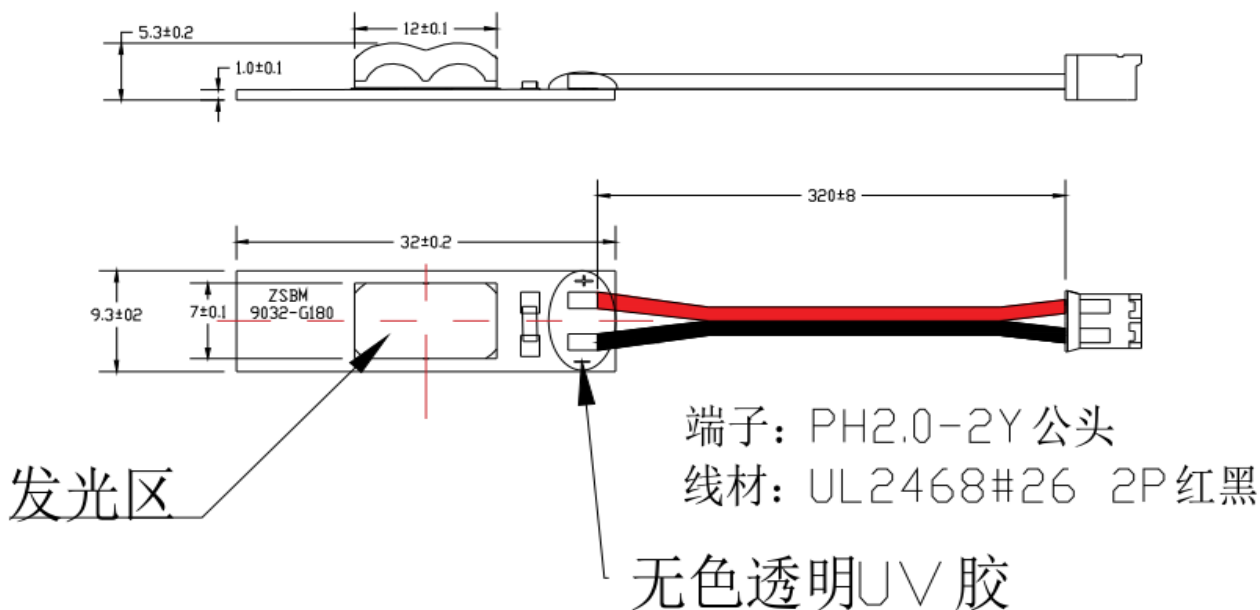


图 5：墙面照度分布

7. 产品尺寸



8. 材料清单

序号	材料名称	规格型号	单位	用量
1	PCB	1) 尺寸: 32*9.3*1.0mm 2) 材料: 铝基板 3) 工艺: 无铅喷锡, 白油黑字	PCS	1
2	LED	3535 封装, 翠绿灯	PCS	1
3	透镜	PC塑料材质	PCS	1
4	端子线	1) 线材长度 : 325±5mm 2) 端子线序 : 黑 (GND) 红 (VCC) 并线 3) 线材型号: 26AWG 并线	PCS	1

4. 产品参数

项目 Item	符号 Symbol	最小值 Min	典型值 Typ	最大值 Max	单位 Unit	条件 Condition
辐射波长 Domiant Wavelength	λ	510	-	540	nm	IF=100mA
输入电压 Input voltage	V	.	5		V	-
正向电流 ForwardCurrent	IF	-	100		mA	-
出光角度 View Angle	2 θ 1/2	170	175	180	°	-
工作温度 OperatingTemperature	Topr	-20	-	60	°C	-
存储温度 StorageTemperature	Tstg	-20		60	°C	-
照度 illuminance	Lx		110	-	Lux	IF=100mA
光斑 Light type	-	-	2000*400	-	mm	IF=100mA

- 模组为单 LED 电路，为避免电流超过最大额定值、保证亮度一致性、防止电网波动损害、提高 LED 可靠性和延长 LED 使用寿命，需要恒流驱动电源为模组提供稳定电流。

The module is a single LED circuit. In order to avoid the current exceeding the maximum rated value, ensure the brightness consistency, prevent the grid fluctuation damage, improve the LED reliability and extend the service life of the LED, the constant current drive power supply is required to provide a stable current for the module.

- led 的结温越高，光源越早出现光衰，寿命就越短。

The higher the junction temperature of the led, the earlier the light source appears, and the shorter the life span is.

- 如果操作条件超过我们的参数范围，led 属性可能与上表中的建议值不同。

If the operating condition exceeds our parameter range, the led property may be different from the recommended values in the table above.

- 所有测量均在 GOPRO LED 的标准化环境下进行，Ta =25°C。

All measurements were made under the standardized environment of GOPRO LED, Ta =25°C.

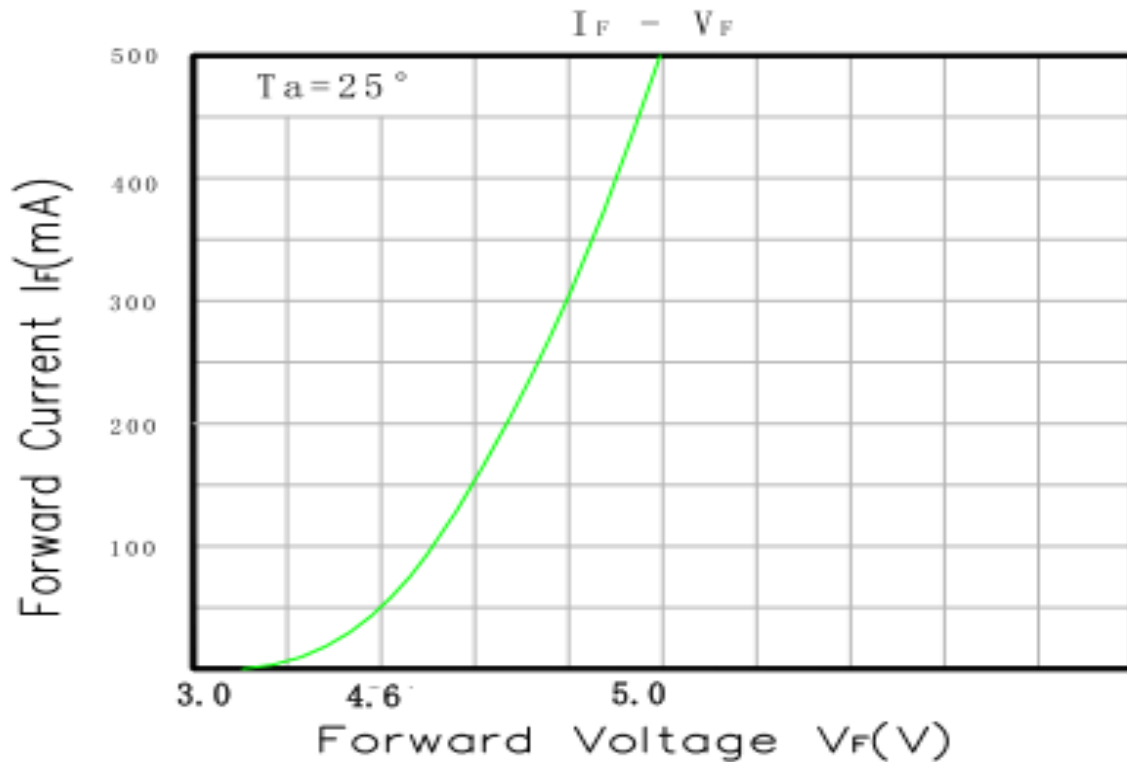
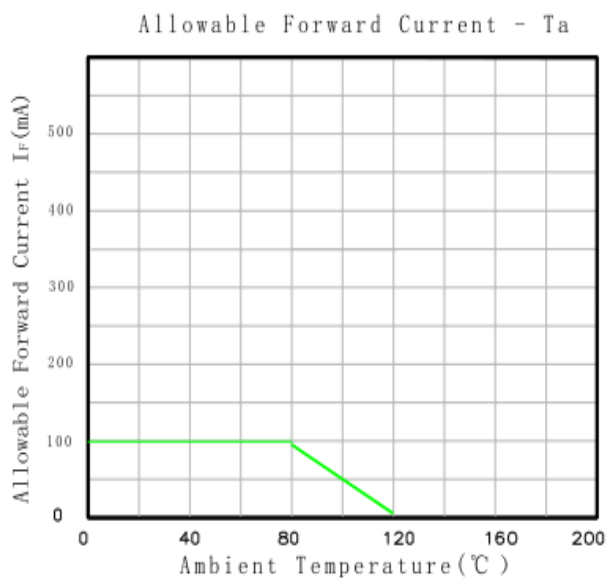
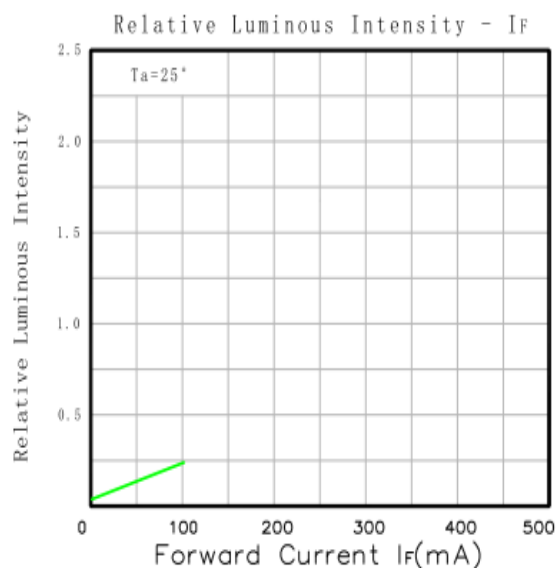
■ Absolute Maximum Ratings(At TA =25℃) 极限参数

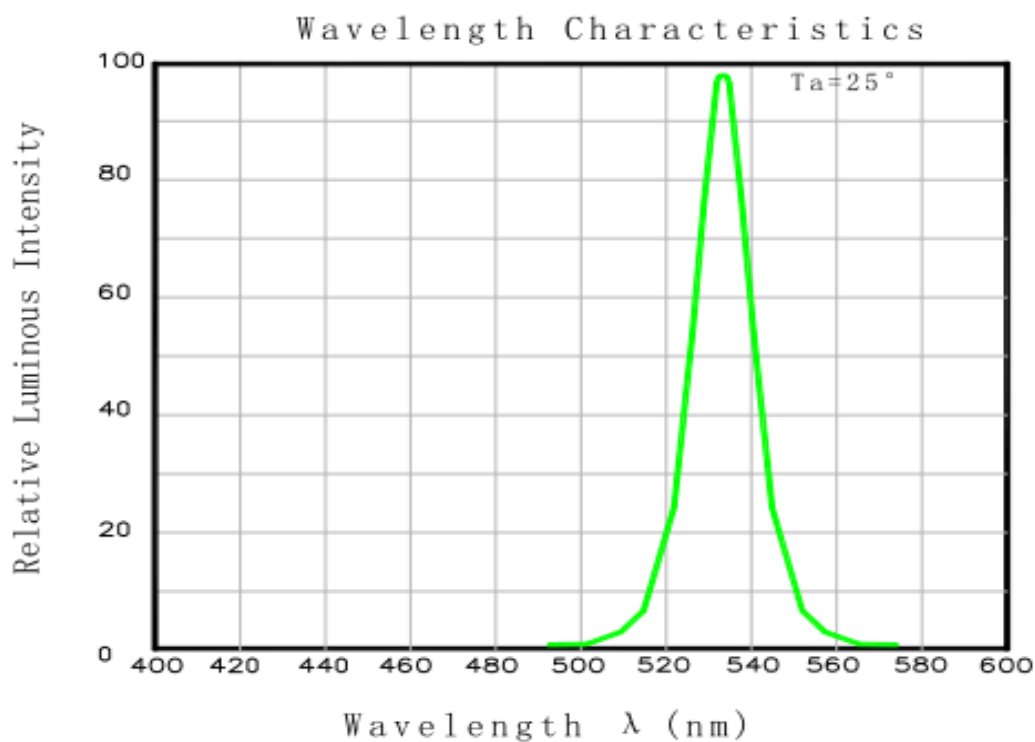
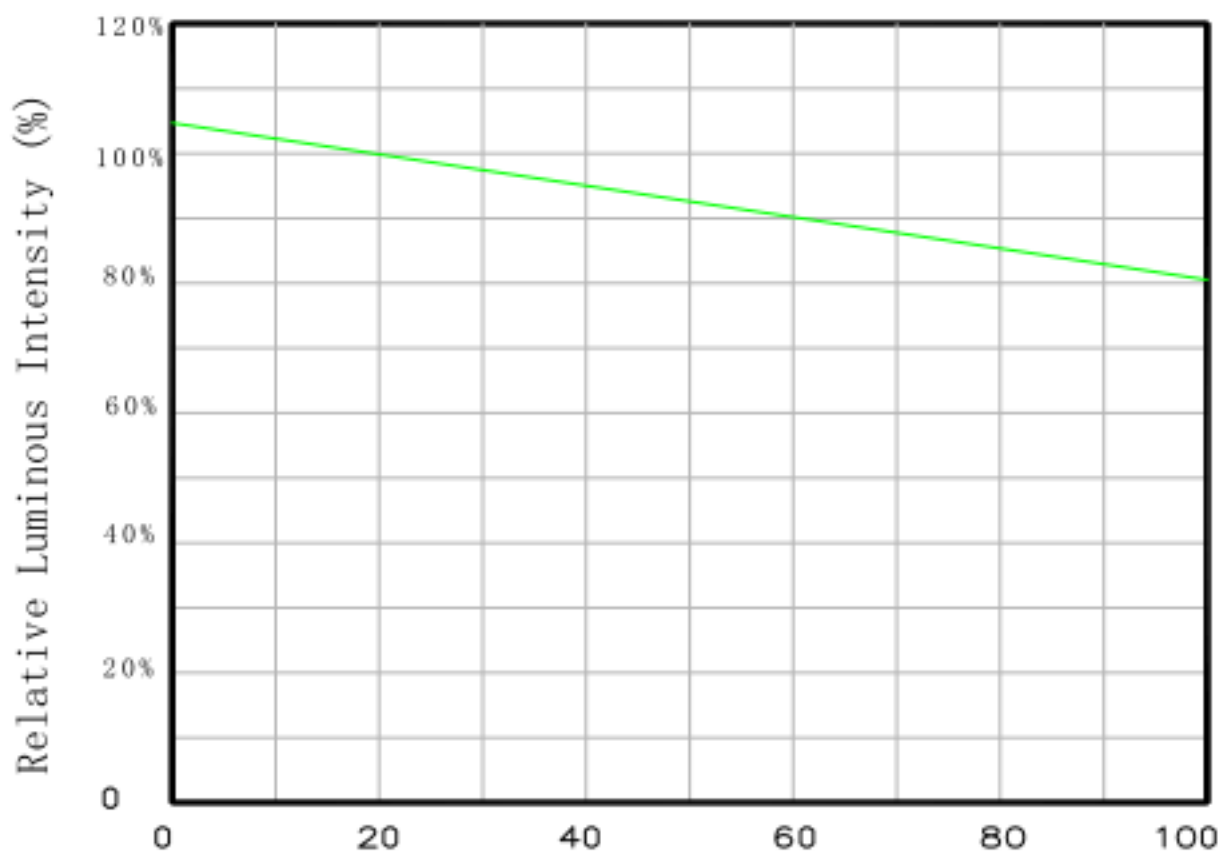
Parameter	Symbol	Rating	Unit
DC Forward Current (正向电流)	I _F	100	mA
Peak pulse Current* (脉冲电流)	I _{FP}	150	mA
Power Dissipation (功率)	P _D	1	W
Reverse Voltage (反向电压)	V _R	5	V
Reverse Current (反向电流)	I _R	10	μA
Operating Temperature Range (工作温度)	T _{OPR}	-40 ~ +85	°C
Storage Temperature Range (储存温度)	T _{STG}	-40 ~ +100	°C
LED Junction Temperature (结点温度)	T _J	120	°C

■ Electrical/Optical Characteristics- (At TA=25℃) 光电特性参数

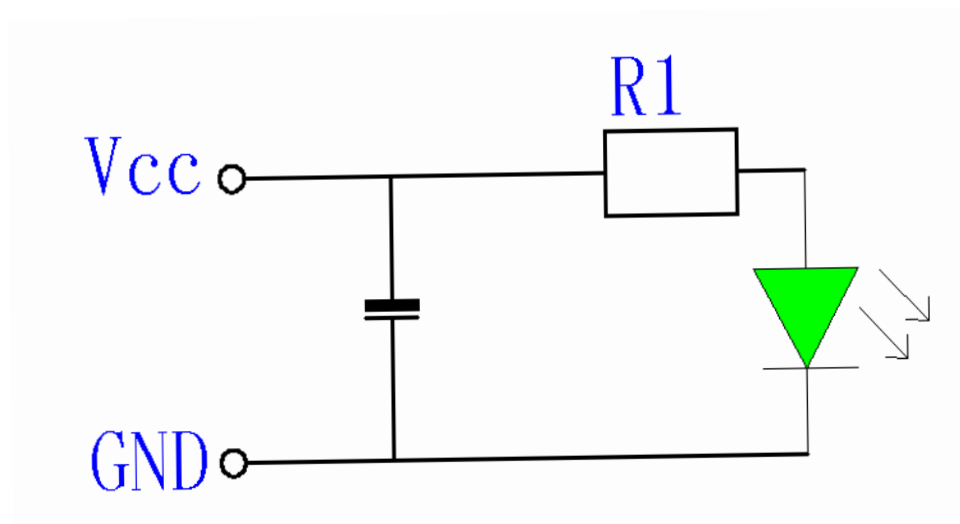
Parameter	Symbol	Conditions	Min	Avg.	Max	Units
Forward Voltage (正向压降)	V _F	I _F =100mA	--	5.0		V
Thermal Resistance Junction To Board (热阻)	R _{ΘJ-B}	I _F =100mA	--	5.0	--	°C/W
Luminous Flux (光通量)	Φ _v	I _F =100mA	100	--	120	lm
Dominant wavelength (主波长)	λ _d	I _F =100mA	520	--	530	nm
Reverse Current (反向漏电流)	I _R	V _R =5V	--	--	10	μA
Viewing Angle ^[1] (发光角度)	2Θ _{1/2}	I _F =100mA	--	175	--	Deg

Typical Optical/Electrical Characteristics Curves 典型光电参数曲线





9. 产品推荐应用电路



10. 使用建议

1) 产品存放 Product storage:

- 请将本产品存放在阴凉、干燥的地方，注意防水防尘防潮。

Please store this product in a cool and dry place, pay attention to waterproof, dust and moisture-proof.

- 避免暴露于极端温度、高湿度或腐蚀性环境中。

Avoid exposure to extreme temperatures, high humidity, or corrosive environments.

2) 产品的取用与安装 Use and installation of the products:

- 取用本产品时建议配戴手套或指套，工作台面确认接地状态，包装袋开口后需及时封口；

When using this product, it is recommended to wear gloves or finger covers, the working surface confirms the grounding state, and the packaging bag should be sealed in time after opening;

- 请在本规格书标定的电压和电流范围内使用，否则可能导致产品永久性损坏；

Please use within the voltage and current range specified in this

specification, otherwise it may cause permanent damage to the product;

- 请保持在远离热源及相对温和的环境下安装和使用本产品;

Please keep installing and using the product in a far away from heat source and relatively mild environment;

- 安装前, 请确保本地安装环境支持本产品, 建议安装在平稳环境中, 尽量避免震动、摇晃、挤压。

Before installation, please ensure that the local installation environment supports this product. It is recommended to install it in a stable environment and avoid vibration, shaking and extrusion as far as possible.

3) 重要安全提示 Important safety tips:

- 本产品为静电敏感产品, 安装和使用时请注意静电防护;



11. 注意事项

- 1) 本产品仅适用于灰尘细小、颜色相近的情况。如果灰尘颜色与地板相近, 或者灰尘颜色较深, 绿光显尘的效果将会大打折扣。

Only suitable for fine dust and similar color conditions. If the dust color is similar to the floor, or the dust color is darker, the effect of green light dust will be greatly reduced.

- 2) 本产品只是为了帮助用户更快地识别和清理灰尘, 还是需要通过吸尘器来收集灰尘, 保持家居清洁。

Conditions of premise:: green light dust is just to help users identify and clean dust faster, or need to collect dust through vacuum cleaners to keep the home clean.

- 3) 在使用本产品时，请确保使用环境通风良好，并远离易燃物品。

Use environment: When using this product, please ensure that the use environment is well ventilated and kept away from flammable products.

- 4) 高热或者散热不良的环境下，不建议长时间连续使用本产品。

It is not recommended to use this product continuously for a long time under the high heat condition or poor heat dissipation environment.

- 5) 清洁防护：为保持良好的显尘效果，透镜表面污垢请及时清洁，并定期清洁。

Regular cleaning:: In order to maintain a good dust display effect, please clean the dirt on the lens surface in time, and clean it regularly.

- 6) 建议佩戴口罩：绿光显尘会增加灰尘的能量和亮度，建议在使用时佩戴口罩，以防灰尘飞散对身体造成损害。

It is recommended to wear a mask: green light dust will increase the energy and brightness of dust. It is recommended to wear a mask when using it to prevent the dust from causing damage to the body.

12. 警告

- 1) 请勿将本产品正负极反接，造成的损伤不在质保范畴。

Do not reverse the positive and negative poles of this product, and the damage caused is not in the warranty category.

- 2) 请勿自行拆卸本产品，造成的损伤不在质保范畴。

Do not remove this product by yourself, and the damage caused is not in the warranty category.

- 3) 请勿将本产品靠近火源。有可能引起产品火灾、故障。

Do not close this product to the fire source. It may cause product fire and failure.

- 4) 请勿将本产品浸到水中。电气配线有可能进水，引起漏电或触电。

Do not immerse this product into water. Electrical wiring may enter water, causing electricity leakage or electric shock.

- 5) 请勿对本产品施加过大的冲击或磨损本产品，刮痕、扭曲或变形都将影响光效。

Do not apply excessive impact or wear to this product, scratches, distortion or deformation will affect the light efficiency.

- 6) 请勿长时间直射眼睛。绿光对眼睛友好，但仍应避免长时间直接照射眼睛，以免造成不适。

Do not shoot directly into the eye for a long time. Green light is eye-friendly, but it should still avoid direct exposure to the eyes for a long time to avoid discomfort.

- 7) 关于本产品的废弃应遵守当地环保机构的相关条例或法规(符合 RoHS)。

The abandonment of this product shall comply with the relevant regulations or regulations of local environmental agencies (in accordance with RoHS).