



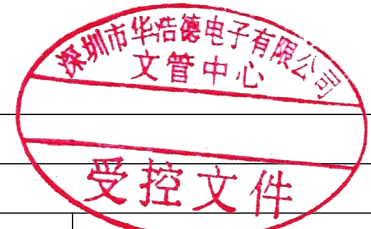
深圳市华浩德电子有限公司

Shenzhen Fahold Electronics CO.,LTD.

地址：深圳市宝安区石岩街道石龙社区石环路4号星光工业园C栋二、四、五、六楼

Address: Floor 2,4,5, 6 Building C, Starlight Industrial Park, NO. 4, Shihuan Road, Shilong Community, Shiyan Town, Bao'an District, Shenzhen, China.

Product Name: 产品名称	FD-200T 系列防水电源
Product Model: 产品型号	FD-200T-054*/B/C/D 27-54V 3.0-5.6A FCC <input checked="" type="checkbox"/> UL <input checked="" type="checkbox"/>



Customer/客户:		
Products code 产品代码:	Sample NO. 样品编码:	Customer ID 客户代码: F8888
Customer Model No. 客户型号:	Fahold Model No. 我司型号:FD-200T	Version. 版本: 01

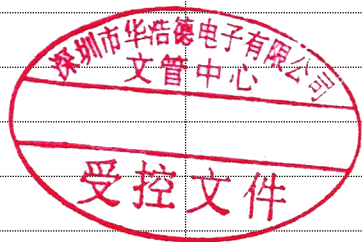
SIGNATURE AND SEAL BY US /我司签字盖章		
日期:	2019/7/6	
Prepared By 编制	Checked By 审核	Approved By 批准
覃小玲	谭永宗	

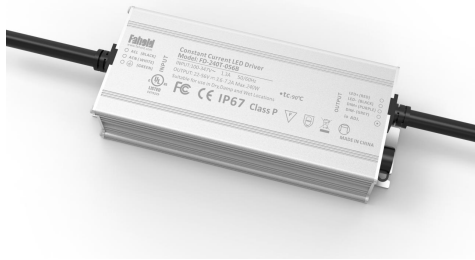
Please confirm and send it back with signature within 7 days. Otherwise we will assume your acceptance. And if any quality dissent, will execute according to this product specification. 请确认后七日内回签，如不回签则视贵公司默认接受，在发生品质异常时按此份产品规格书执行。		
CUSTOMER APPROVED SIGNATURE /客户承认盖章		
日期:		
ENG./工程	QA/品管	OTHER/其他

Comments 建议:

ECN History ECN 变更

Rev.	Description of Change 修改描述		Changed Date 修改日期	Notes 备注
	Before 修改前	After 改前后		
00	Original Release 首次发行	---	2019/7/3	
01	输出电压为 27-56V	输出电压为 27-54V	2019/7/6	





Feature特征:

- ◆ IP65防护等级
- ◆ Max output power 200W.最大输出功率200W
- ◆ Constant current design. 恒流设计
- ◆ 3 in 1 dimming mode:0-10V,PWM,RX. 三合一调光
调光模式: 0-10V, PWM,RX
- ◆ Smoothly dimming(0-100%),can dim to off.
从0%-100%平滑调光, 且调光输出可关断
- ◆ TUV CB CE UL FCC Certified.多个国家与机构认证
- ◆ PROTECTION: Short Circuit, Open Circuit
保护: 短路保护, 开路保护
- ◆ Surge protection: 2KV.Differential mode
protectio:4KV.Common mode protection:6KV浪涌保
护2KV,差模保护4KV, 共模保护6KV
- ◆ Axiliary Output 12V可带12V辅助源

Application应用

- ◆ Street lights、High bay lights.路灯、工矿灯

Introduction 介绍

The document detail the electrical, mechanical and environmental specifications of a 200W constant current LED driver with 0(1)-10V Dimming. This LED drive power supply is suitable only for LED load.

此份资料详细描述了 200W 系列带 0(1)-10V 调光的 LED 恒流驱动电源的电器性能, 环境要求等。此款电源只适用于 LED 负载。

Model and Key parameters 型号和关键参数 Table 1, 表 1

Model 型号	功率 (W)	Output volgag 输出电压(V)	Max output voltage (Vdc)最大空载电压	output current 输出电流(A)	Efficiency 效率(%) @120V	Efficiency 效率(%) @347V
FD-200T-056*/B/C/D	200	27-54	63	3.0-5.6	89	91

Note:

1:带载最大电压测试 Max output voltage test

2: 可选字母 B,C,D 或空位, 表示输出增加不同的可选功能。默认空位表示可调电流 (基础机型);B 字母表示可三合一调光并可调电流, C 字母表示不可调光不可调电流, D 字母表示可三合一调光。

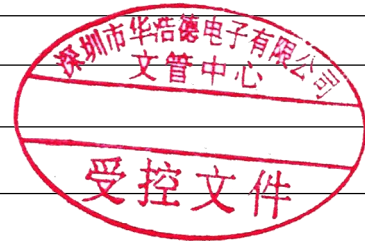
2: Optional letters B, C, D or empty, indicating that the output increases with different optional functions. The default position indicates that the current can be adjustable(basic model); letter B can be three-in-one dimming and fine-tuning current, letter C indicates that non dimmable and output current unadjustable, letter D refers to three-in-one dimming.

3:型号 C/D 后面标签上要写 YYYY,YYYY 代表输出电流, 如 FD-200T-056C-5500

The model C / D on the back of the label to write YYY and YYY for the output current, such as FD-200T-056C-5500

■ Technical data 技术参数

Input characteristics 输入特性	
Input Voltage 输入电压	100-347Vac
Input Frequency 输入频率	50/60Hz
Input Current (Typ.) 输入电流 (典型值)	2.3A @ 100-347 Vac, 100% load
No load Voltage 空载功耗	5Wmax
Inrush Current 浪涌电流	60Amax. @ 230Vac, 25°C
Power factor (Typ.) 功率因数 (典型值)	PF>0.92 @ 100-347 Vac, 100% load, 见图 2
THD 总谐波失真	THD<20% @ 100-347 Vac, 100% load 见图 3
Output characteristics 输出特性	
Current accuracy 电流精度	± 5% I _o
No load Voltage 空载电压	V _{out} 63V max
Efficiency 效率	≥89% @ 120 Vac, ≥91% @ 347 Vac, 见图 1
Output Voltage 输出电压	Table 1, 见表 1
Ripple and Noise 纹波与噪声	800mVp-p
Line Regulation 线性调整率	3%I _o
Load Regulation 负载调整率	3%I _o
Turn On Delay Time 开机延时	Under normal conditions, the maximum delay time is 2 second 最大延迟时间小于 2 秒
Protection functions 保护功能	
Open circuit 开路保护	When the LED disconnection the product is protected such as hiccup or when it is at the highest point of output voltage, the power supply shall be self-recovery when the fault condition is removed.当 LED 开路时, 产品进入保护状态, 如打嗝或钳在某输出最高电压状态, 产品不会损伤, 当故障排除或重新开机时, 电源恢复工作正常。
Short Circuit 短路保护	The input power shall decrease when the output rail short, the power supply shall be self-recovery when the fault condition is removed.当输出短路时输入功率会相应减小, 短路情况解除后, 电源自动恢复正常。
Environmental conditions 环境条件	
Operating Temperature 工作温度	-40°C to +60°C
Operating Relative Humidity 湿度	10% to 90% RH, non-condensing
Storage Temperature 储存温度	-40°C to +85°C
Storage Relative Humidity 储存湿度	10% to 90%RH, non-condensing (Sea level to 2,000 m)

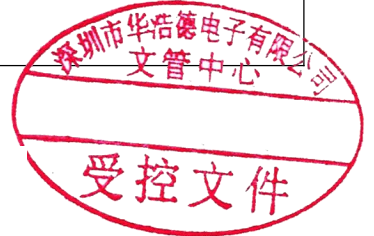


Dimmable 调光范围

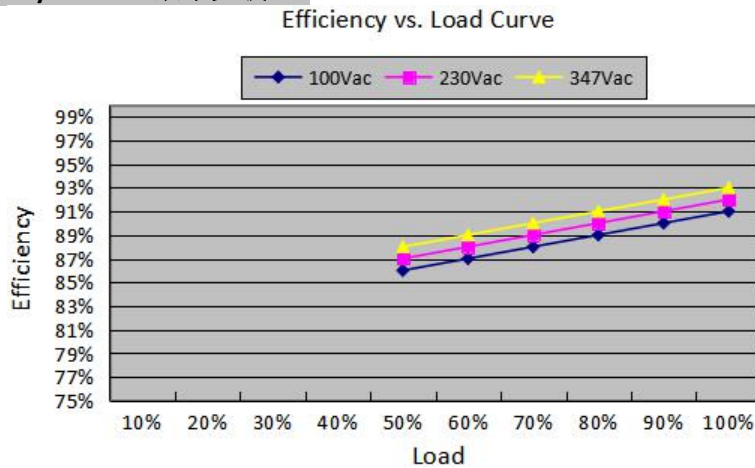
Function			0-10V			PWM			RX			
Yes Or No			Y			Y			Y			
0-10V	0	1	2	3	4	5	6	7	8	9	10	open
Ir	0	10%	21%	31%	40%	50%	60%	70%	80%	90%	100%	100%
PWM	0	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%
Ir	0	9%	19%	29%	39%	49%	59%	69%	79%	89%	100%	100%
RX	0	9K Ω	19K Ω	33K Ω	41K Ω	51K Ω	61K Ω	70K Ω	82K Ω	92K Ω	96K Ω	95-108K Ω
Ir	0	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%

Note:

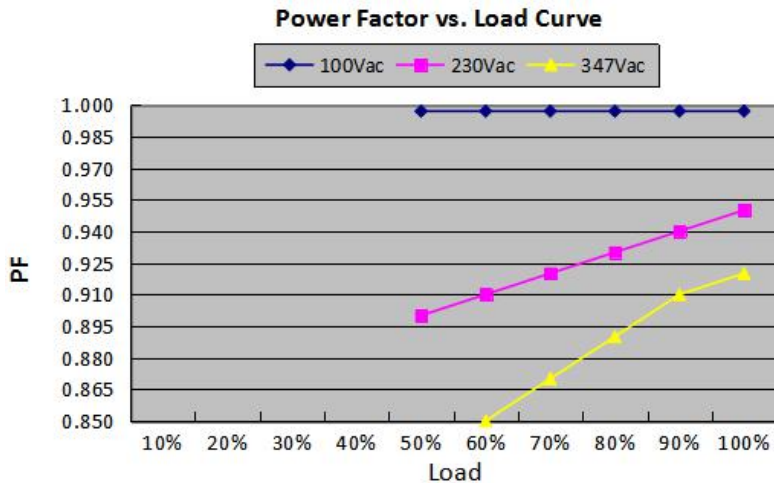
- Ir is the output current percentages. Ir 为输出电流百分比
- Ir above is typical values. 以上 Ir 均为典型值



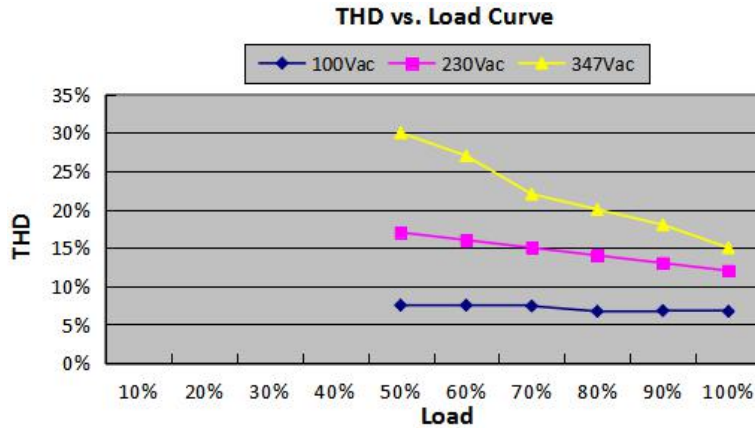
Efficiency vs. Load 效率负载



Power Factor 功率因素

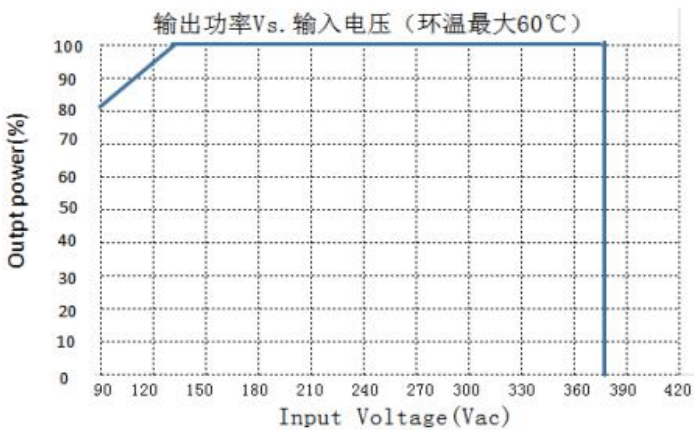


THD vs. Load THD 和负载



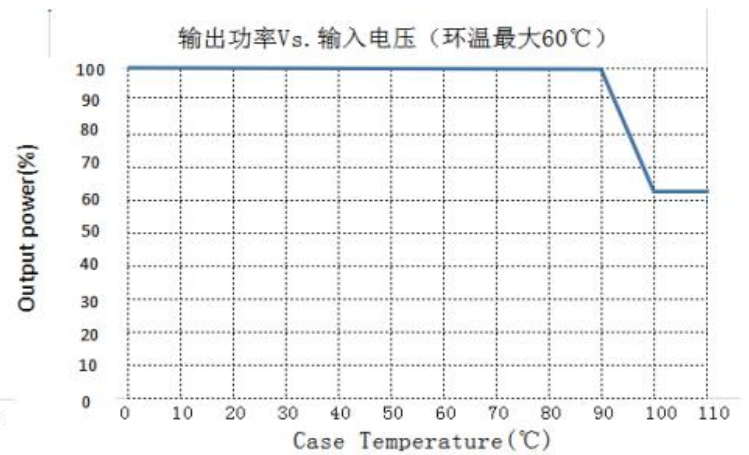
■ 输出功率 Vs. 输入电压 (环温最大 60°C)

■ Output power VS Input voltage



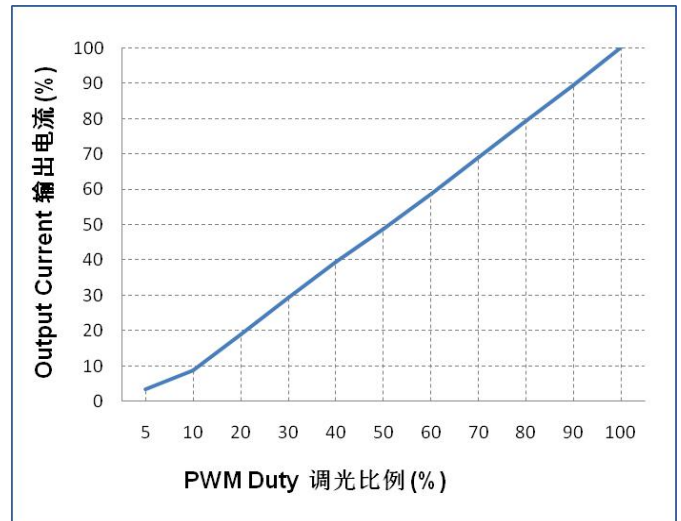
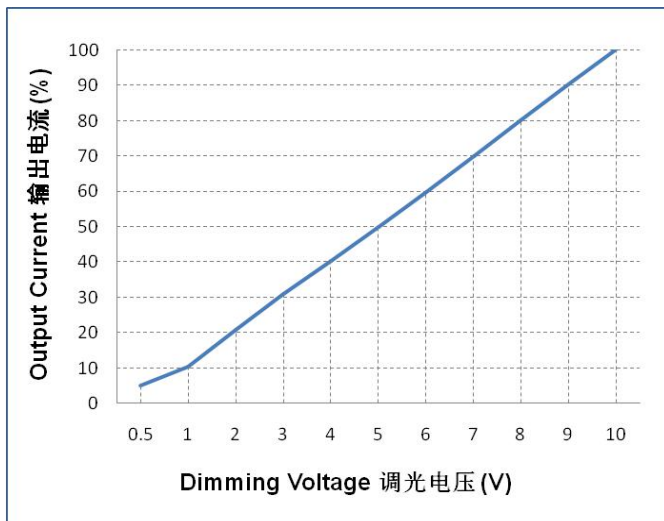
■ 输出功率 Vs. 壳温

■ Output power VS Shell temperature

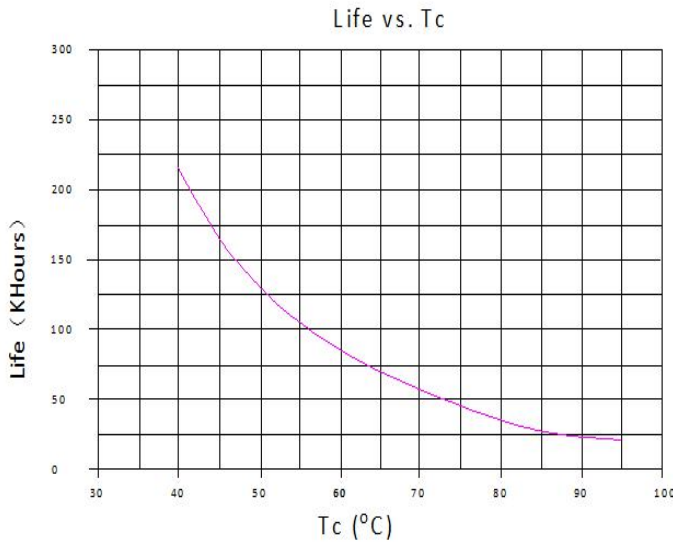


■ Dimming 调光曲线

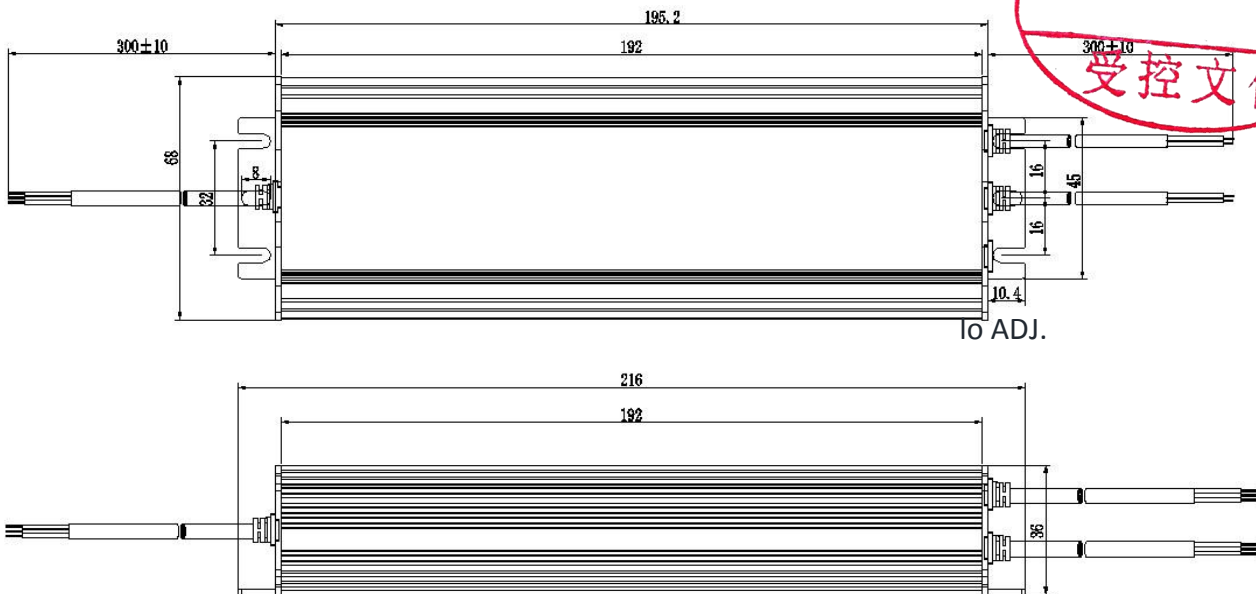
P4, 图 4



■ Life vs. Tc 寿命和温度 P5, 图 5



■ Dimensional Drawing (unit: mm)尺寸



1:AC Power wires: UL SJTW18# 3x0.824MM(OD7.8MM) Black PVC Skin;
Triaxial cables with Black, White, Green. Black: L, White: N, Green: GND

1:AC 电源线: UL SJTW18# 3x0.824MM(OD7.8MM)黑色 PVC 外皮, 黑白绿三芯线, 黑 L, 白 N, 绿 GND

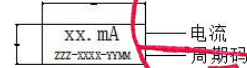
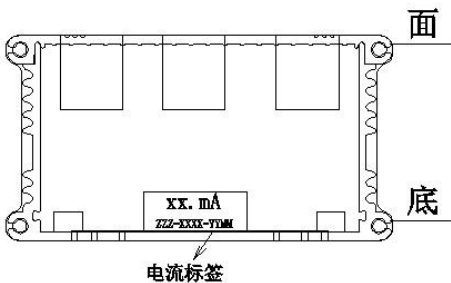
2:DC power wires: UL SJTW18# 2x0.824MM(OD7.8MM) Black PVC Skin;
Two cables with black and red, Red LED+, Black LED-.

2:DC 电源线: UL SJTW18# 2x0.824MM(OD7.2MM)黑色 PVC 外皮, 红黑两芯线, 红 LED+, 黑 LED-

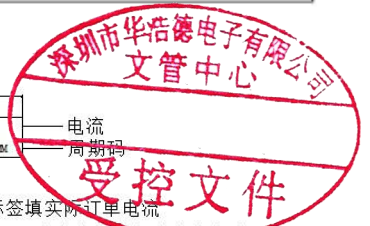
3:Dimming Wires: UL2464(OD6.5MM) 20# Black PVC Skin,
Two cables with Purple and Grey, Purple DIM+, Grey DIM-.

3:调光线:UL2464(OD6.5MM)20#黑色 PVC 外皮, 紫灰两芯线, 紫 DIM+, 灰 DIM-

■ LABEL 标签示例



XX mA为电流, 电流标签填实际订单电流
ZZZ-XXXX-YYMM为周期码, 在电流标签上比电流略小
周期码编码为: ZZZ(业务员代码) +XXXX(订单号末4位) +YY(当年)+MM(当月), 假设: 业务员代码为B01, 订单号为: S20180803213, 当年为2019年当月为3月, 周期码为: B01-3213-1903
电流标签优先贴于输出端



安装注意事项 Installation considerations

1. 若产品有外部可调电位器, 请在调整好电流之后, 建议用 704 硅胶将调整电流的孔密封好, 将防水胶塞盖好。

If the power supply has adjustable external potentiometer, after adjust output current, suggest using 704 silicone sealing good the hole and plug waterproof rubber.

2. 电源的防雷等级满足 IEC61000-4-5 等各国的标准要求, 如果用在雷电多发地区或电网环境相对复杂的地区, 建议在电源的 AC 输入端加装专业的防雷模块。

Lightning protection level to meeting IEC61000-4-5 standard requirement, if you use the lightning occurs or the area of power grid environment is relatively complex, suggest in the power supply of the AC input terminal equipped with professional lightning protection module.

包装, 运输, 贮存 Package, Transportation & Storage

1. 包装 Package

- 包装箱的外形尺寸为 (单位: mm): 长 X 宽 X 高;
package box outside dimension: L×W×H (unit: mm);
- 每箱产品的包装数量为 台;
product number in each box: PCS;
- 整箱毛重 KG
whole box gross weight: kg;

2. 运输 Transportation

适用于车，船，飞机运输，运输中应遮蓬，防晒，文明装卸。

Packaging is designed suitable for transportation by truck, ship, and plane. The products should be shielded from sunshine, and loaded and unloaded carefully.

3. 贮存 Storage

产品贮存应符合 GB3873-83 的规定。

贮存期限超过一年的产品要重新检验，合格后方可使用。

The product storage meet the standard of the GB 3873-83.

Product should be rechecked over 1 year.

免责声明：

本手册内容根据产品现有信息制作，由于产品版本升级或其他原因，其内容有可能变更，本公司保留不作预先通知的情况下对产品进行改进的权利，对公司产品的性能说明保留最终解释权， 本公司致力于改善产品的质量，不断对产品进行升级优化。

产品安装与使用注意事项

- 请勿将 AC 供电接入 DC 输出端口及调光端口。
- 请调好电流之后用 704 硅胶将电位器孔堵住。
- 请勿私自调节可调电位器，以免电流变化影响功率。
- 请勿超过电源标称功率 200W 使用。
- 请勿将电源并联使用在同一灯具上。
- 本产品为恒流 LED 电源，仅适用于 LED 灯具。



安全及注意事项

为了减少对人身伤害、电击、火的危险，以及电源的损坏，请仔细阅读以下规格，并遵守这些规则，以防危险。

- 请勿将电源安装在有易燃易爆物区域，以免引起爆炸及火灾。
- 请勿私自拆装电源、更换器件，以免触电。