

RWP21AS-1HMC

Summary

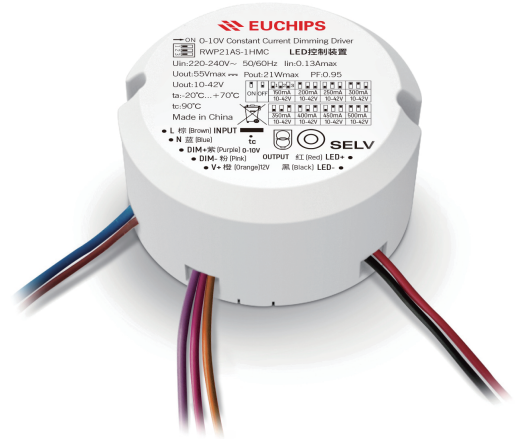
RWP21AS-1HMC is a 21W 0-10V dimming constant-current LED driver equipped with a auxiliary power supply, an 8-position current DIP switch and ultra-wide output voltage of 10-42V. With its compact body design and round shell, it is widely used in downlights and spotlights.

Product Features

- Single-channel constant current output
- Supports 12V 100mA auxiliary source, and can be customized to 5V 100mA
- Input voltage range: 198VAC - 264VAC
- Double-stage flicker-free isolated power supply.
- THD <10%
- TA: -20-70 °C
- Dimming depth: 1%
- Lifespan of 50,000 hours, five-year warranty
- Compact housing design
- Comprehensive protection: Overload/Over-temperature protection

Technical Parameters

Model	RWP21AS-1HMC																																																					
Input	Rated Input Voltage Range	220VAC-240VAC																																																				
	Max. Input Voltage Range	198VAC-264VAC																																																				
	Frequency Range(Hz)	50/60Hz																																																				
	Input Current	0.13Amax@230VAC																																																				
	Power Factor	0.95@230VAC, full load																																																				
	Efficiency	86%@230VAC, full load																																																				
	THD	<10%@230VAC, full load																																																				
	Standby power	<0.5W																																																				
	No load power	<0.5W																																																				
	Inrush Current	Cold start, 2.7A@240VAC 16us																																																				
Output	Current/Voltage/power	150mA/10-42VDC/6.3W 350mA/10-42VDC/14.7W	200mA/10-42VDC/8.4W 400mA/10-42VDC/16.8W	250mA/10-42VDC/10.5W 450mA/10-42VDC/18.9W	300mA/10-42VDC/12.6W 500mA/10-42VDC/21W																																																	
	Output current accuracy	±5%			Current Selection Table <table><tr><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>ON</td><td>OFF</td><td>150mA</td><td>200mA</td><td>250mA</td><td>300mA</td><td>350mA</td><td>400mA</td><td>450mA</td><td>500mA</td><td colspan="6"></td></tr><tr><td></td><td></td><td>10-42V</td><td>10-42V</td><td>10-42V</td><td>10-42V</td><td>10-42V</td><td>10-42V</td><td>10-42V</td><td>10-42V</td><td colspan="6"></td></tr></table> Note: The factory default setting current is 150mA(1,2,3 are in the OFF state).	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	ON	OFF	150mA	200mA	250mA	300mA	350mA	400mA	450mA	500mA									10-42V	10-42V	10-42V	10-42V	10-42V	10-42V	10-42V	10-42V						
	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐																																				
	ON	OFF	150mA	200mA		250mA	300mA	350mA	400mA	450mA	500mA																																											
			10-42V	10-42V		10-42V	10-42V	10-42V	10-42V	10-42V	10-42V																																											
	PstLM	≤1																																																				
	SVM	≤0.4																																																				
	Line Regulation	±1% @ full load																																																				
	Load Regulation	±5% @ full load																																																				
Output Voltage Ripple	High frequency >1K HZ: ±5%		Low frequency <120 HZ: ±5%																																																			
Open Circuit Voltage	59V Max.																																																					
Turn on delay Time	≤0.8s, at230Vac(When the light begins to shine)																																																					
Function	Dimming Type	0-10V (Turn-on Voltage: 1-1.1V, Turn-off Voltage: 1-1.1V)																																																				
	Dimming Range	1%-100%																																																				
	Dimming curve	Linearity																																																				
	Flicker	Flicker free																																																				
	Auxiliary Power Supply	12V/100mA/1.2W																																																				
Protection	Short circuit Protection	Hiccup protection, Auto-resume after Dault Cleared.																																																				
	Overcurrent protection	Hiccup protection, Auto-resume after Dault Cleared.																																																				
	Overload Protection	Load power ≥ 120% protection; hiccup protection, troubleshooting and normal output																																																				
Safety& EMC	Surge	L-N:1KV																																																				
	Withstand Voltage	I/P-O/P: 3750VAC/1min/5mA																																																				
	Safety Standards	CCC [China]	GB19510.1, GB19510.14		TUV [Germany]	EN61347-1, EN61347-2-13, EN62493																																																
		CB [CBmember states]	IEC61347-1, IEC61347-2-13		CE [European Union]	EN61347-1, EN61347-2-13, EN62384																																																
		RCM [Australia]	AS 61347-1, AS 61347-2-13		ENEC [Europe]	EN61347-1, EN61347-2-13, EN62384																																																
	EMC Emission	CCC [China] GB/T17743, GB17625.1																																																				
	EMC Immunity	/																																																				
Environment	Working Temp	-20℃~70℃																																																				
	Storage Temp	-25℃~90℃																																																				
	Storage Humidity	20-90%RH (No condensation)																																																				



Application

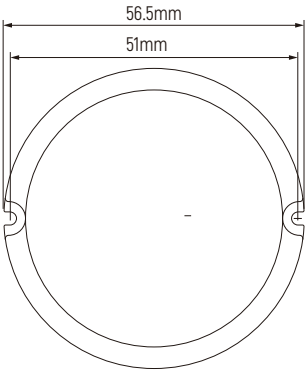


Down Light

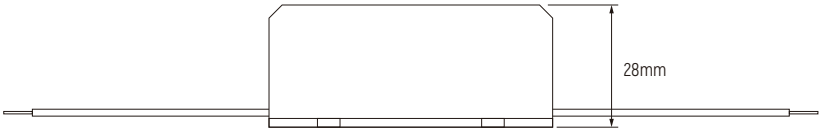


Others	RoHS	Comply with 2011/65/EU
	tc	90 C for safety & life
	Material	PC
	IP Rating	IP20
	Lifetime	50,000h@tc:90 C
	Warranty Condition	5years
	Switch Cycle	25,000times
	Body size	56.5*56.5*28mm(L*W*H)
	Packing(weight)	Net weight: 106g±5%/PCS; 280PCS/Carton; 10.5kg±5%/Carton; Carton Size: 398*276*189mm(L*W*H)
	Noise	In a quiet environment , No noise outside 30-50cm
Remark	All parameters were measured at an input voltage of 230VAC/50Hz and an ambient temperature of 25 C without any special instructions.	

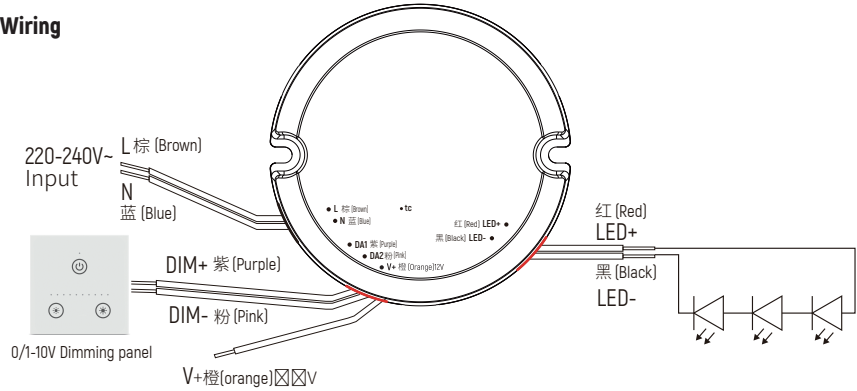
Dimension(mm)



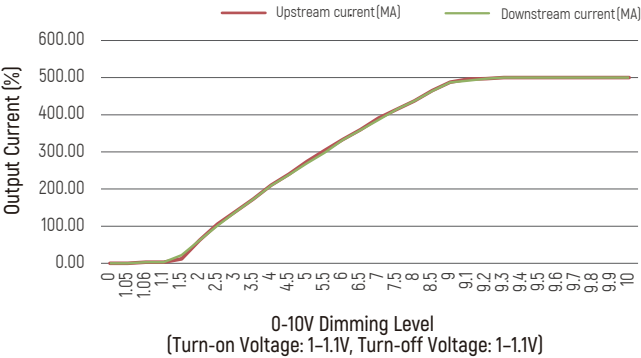
Input wire and output wire length: 241mm; 12V auxiliary wire and DIM wire length: 195mm.



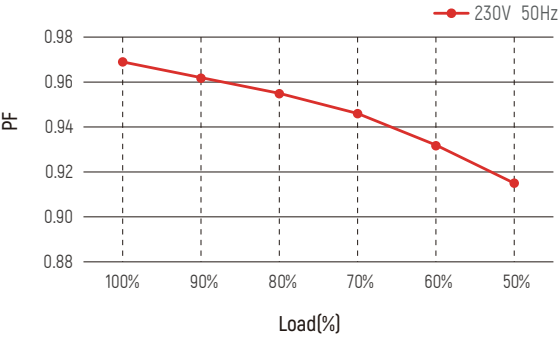
Wiring



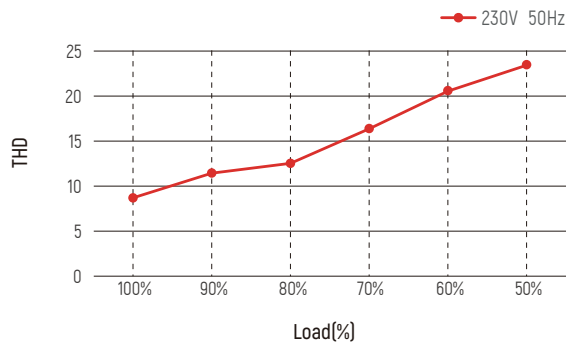
Dimming Curve



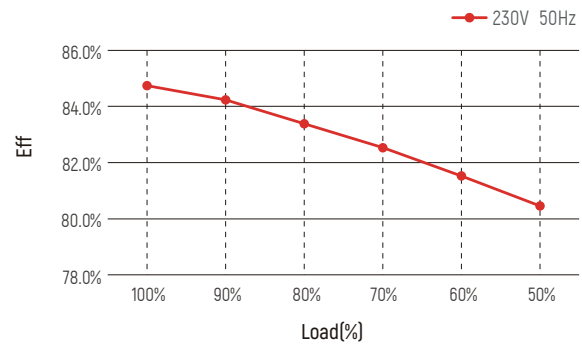
PF vs Load



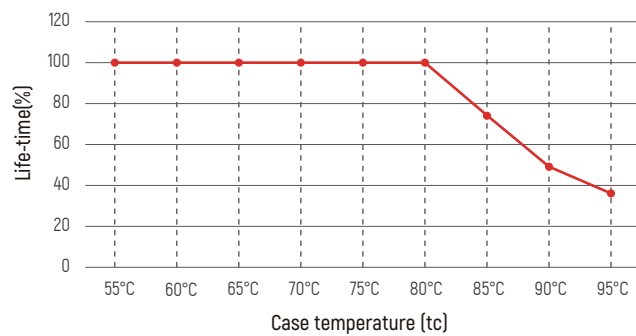
THD vs Load



Eff. vs Load



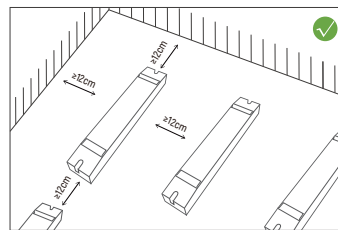
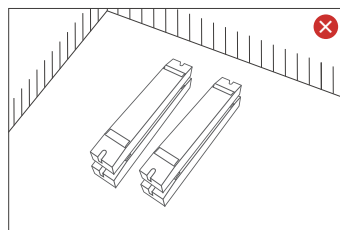
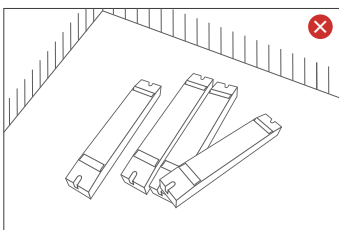
Life-time vs. case temperature



The life-time of the led driver is shown in the figure above
(calculated based on the 90% survival rate).

The relation of t_c to t_a temperature depends also on the luminaire design.

Installation Precautions



Please do not stack the products. The distance between two products should be $>12\text{cm}$ so as not to affect heat dissipation and the lifespan of the products.

Max. quantity of drivers per miniature circuit breaker

Specification item	Value	Condition
Inrush current I_{peak}	2.7A	Input Voltage 230V
Inrush current T_{width}	16 μs	Input Voltage 230V measured at 50% I_{peak}

MCB	Input Voltage 230V Drivers	MCB	Input Voltage 230V Drivers
B10	76pcs	C10	76pcs
B13	100pcs	C13	100pcs
B16	123pcs	C16	123pcs
B20	153pcs	C20	153pcs
		D16	123pcs

Cautions

This product must be installed and adjusted by a qualified professional.		
1	Confirmation of installation conditions	· Waterproof and Protection: Install in a suitable location according to the waterproof and protection requirements of the power supply. Products without waterproof function should be protected from direct sunlight and rain. When installing outdoors, please use a waterproof box for protection. · Heat dissipation requirements: The drive power supply should avoid exposure to high temperature environments. Please ensure that the working environment temperature is within the recommended range. To ensure proper heat dissipation of the drive power supply, a well ventilated area should be selected for installation. Good heat dissipation conditions can help extend product lifespan.
2	Power check	· Before use, check the product parameters and confirm that the output voltage and current of the LED power supply meet the requirements
3	Safe wiring	· Use cables that meet the specifications to ensure that the cross-section of the wire matches the requirements of the driving power supply. Typically, the input wire diameter ranges from 0.75 to 1.5mm², Output wire diameter: solid cables ranging from 0.5 to 1.5mm². (Please refer to the silk screen printing or wiring diagram in the instruction manual for specific wire diameter requirements). · If the power supply (metal casing) is installed on a grounded lighting component or equipment, the power supply needs to be grounded.
4	Wiring confirmation	· Before power on debugging, ensure that the wiring is secure and avoid poor contact to prevent unstable current or equipment damage.
5	Repair suggestions	· If the product malfunctions, please do not repair it without authorization. If you have any questions, please contact the supplier or sales team for assistance.

※ The contents of this manual are updated without prior notice. If the function of the product you are using is inconsistent with the instructions, the function of the product shall prevail. Please contact us if you have any questions .

Warranty Agreement

1. Warranty periods from the date of delivery : 5 years.
2. Free repair or replacement services for quality problems are provided within warranty periods.

Warranty exclusions below:

The following situations are not covered by the free warranty or replacement service:

1. Exceeding the warranty period.
2. Damage caused by human factors such as high voltage, overload, and improper operation.
3. The appearance of the product is severely damaged or deformed.
4. Normal wear and tear or aging during regular product use.
5. Damage caused by natural disasters or force majeure factors.
6. The quality inspection label of the product is damaged (QC PASS).
7. No contract or valid invoice proof signed with EUCHIPS has been provided.

※ Remedies: Repair or replacement is the only remedy provided by EUCHIPS to the customer, and EUCHIPS shall not be liable for incidental damages arising from repair or replacement, unless within the scope of applicable law.

※ Adjustment of Warranty Terms: EUCHIPS reserves the right to modify or adjust the warranty terms, which shall be published in writing.

RWP21AS-1HMC

概述

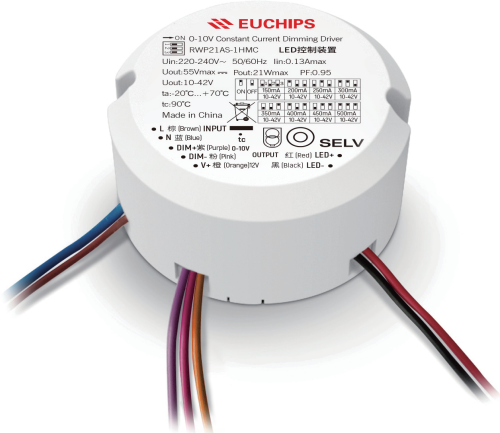
RWP21AS-1HMC是一款21W 0-10V调光恒流LED驱动器并带有辅助电源，八档电流拨码，10-42V超宽输出电压，小巧机身设计，圆形外壳，广泛应用于筒射灯。

产品特点

- 单通道恒流输出
- 支持12V 100mA辅助源，可定制5V 100mA
- 输入电压： 198VAC - 264VAC
- 双级无频闪隔离电源
- THD <10%
- TA: -20-70℃
- 调光深度: 1%
- 寿命50000小时，五年质保
- 小巧机身设计
- 短路保护，过载保护，过流保护

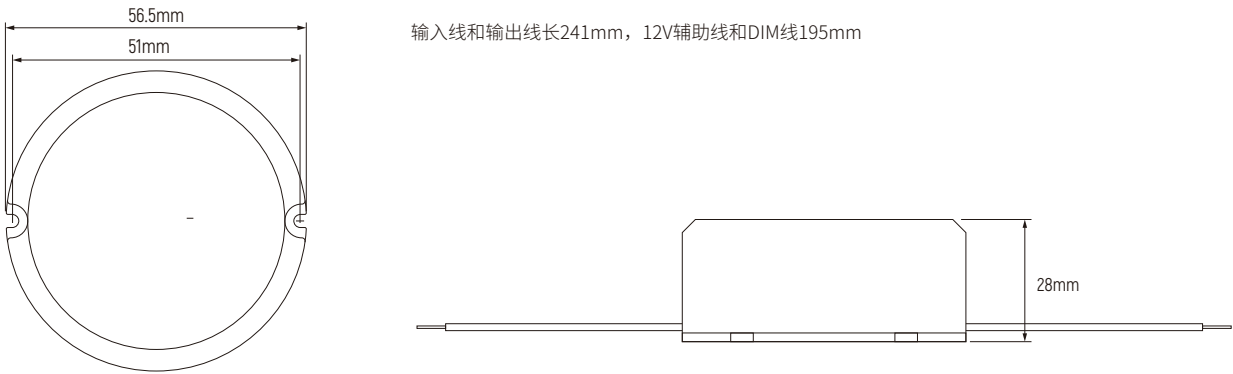
技术参数

产品型号	RWP21AS-1HMC					
输入	额定输入电压范围	220VAC-240VAC				
	最大输入电压范围	198VAC-264VAC				
	频率范围	50/60Hz				
	输入电流	0.13Amax@230VAC				
	功率因数	0.95@230VAC, 满载				
	效率	86%@230VAC, 满载				
	谐波THD	<10%@230VAC, 满载				
	待机功耗	<0.5W				
	空载功耗	<0.5W				
	浪涌电流	冷启动, 2.7A@230VAC 16us				
输出	输出电流/电压/功率	150mA/10-42VDC/6.3W 350mA/10-42VDC/14.7W	200mA/10-42VDC/8.4W 400mA/10-42VDC/16.8W	250mA/10-42VDC/10.5W 450mA/10-42VDC/18.9W	300mA/10-42VDC/12.6W 500mA/10-42VDC/21W	
	输出电流精度	±5%				
	PstLM	≤1				
	SVM	≤0.4				
	线性调整率	±1% @满载				
	负载调整率	±5% @满载				
	输出纹波	高频 >1K HZ: ±5% 低频 <120 HZ: +5%				
	空载电压	59V Max.				
功能	启动延时	≤0.8s, at230Vac(当灯光开始亮起)				
	调光方式	0-10V[开启电压: 1-1.1V, 关闭电压: 1-1.1V]				
	调光范围	1%-100%				
	调光曲线	线性				
	频闪	无频闪				
	辅助电源	12V/100mA/1.2W				
保护	短路保护	打嗝, 排除故障后自恢复				
	过流保护	打嗝, 排除故障后自恢复				
	过载保护	负载功率≥120%保护; 打嗝保护, 排除故障输出正常				
安规与 电磁兼容	雷击浪涌	L-N:1KV				
	耐压标准	I/P-O/P: 3750VAC/1min/5mA				
	安全规范	CCC [中国]	GB19510.1, GB19510.14		TUV [德国]	EN61347-1, EN61347-2-13, EN62493
		CB [CB成员国]	IEC61347-1, IEC61347-2-13		CE [欧盟]	EN61347-1, EN61347-2-13, EN62384
		RCM [澳洲]	AS 61347-1, AS 61347-2-13		ENEC [欧洲]	EN61347-1, EN61347-2-13, EN62384
	电磁兼容	CCC [中国]	GB/T17743, GB17625.1			
	EMC抗扰度	/				
环境	工作温度	-20°C-70°C				
	储存温度	-25°C-90°C				
	储存湿度	20-90%RH [无凝露]				

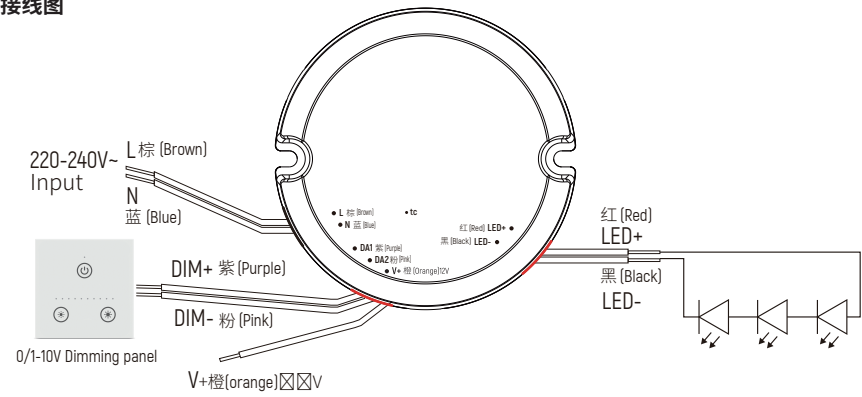


其他	RoHS	遵守 2011/65/EU
	tc	90°C 安规 & 寿命
	材质	PC
	防水等级	IP20
	寿命	50,000小时@tc:90°C
	质保	5年
	开关周期	25,000次
	裸机尺寸	56.5*56.5*28mm[长*宽*高]
	包装尺寸(重量)	净重: 106g±5%/PCS; 280PCS/Carton; 10.5kg±5%/箱; 外箱尺寸: 398*276*189mm[长*宽*高]
	噪音	安静环境下, 30-50cm以外无噪音
备注	全部参数无特别说明, 均在输入电压230VAC/50Hz和25°C的环境温度下测得。	

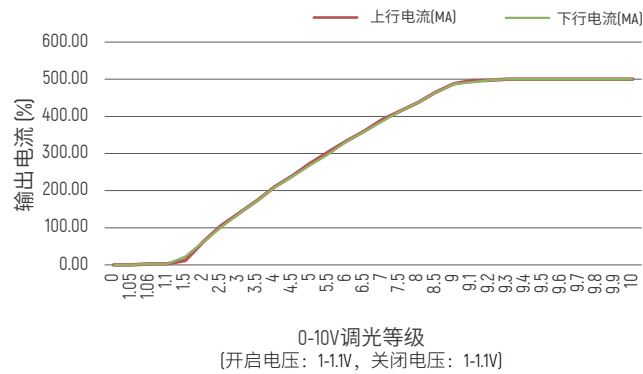
尺寸(mm)



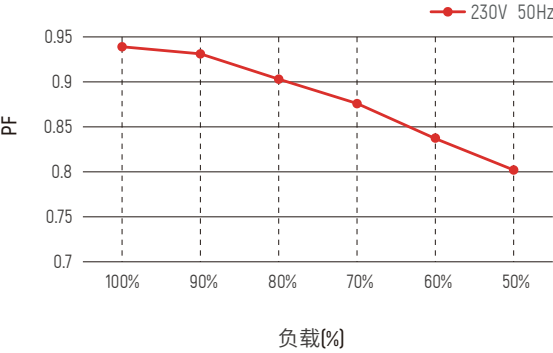
接线图



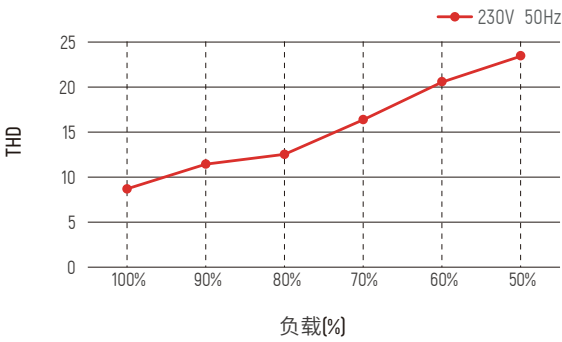
调光曲线



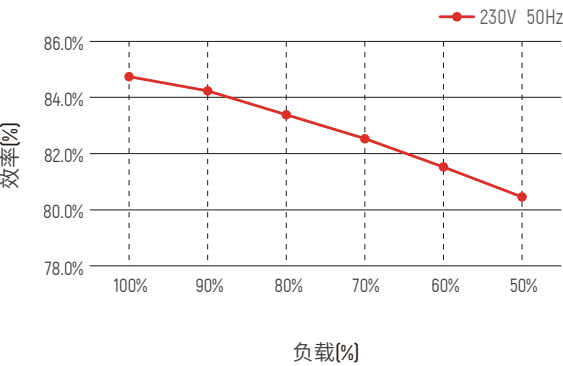
PF vs 负载



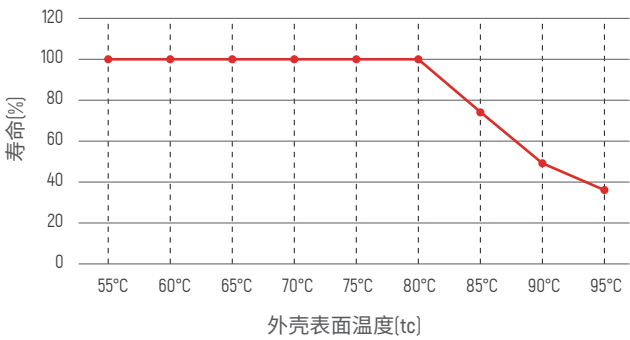
THD vs 负载



Eff. vs 负载

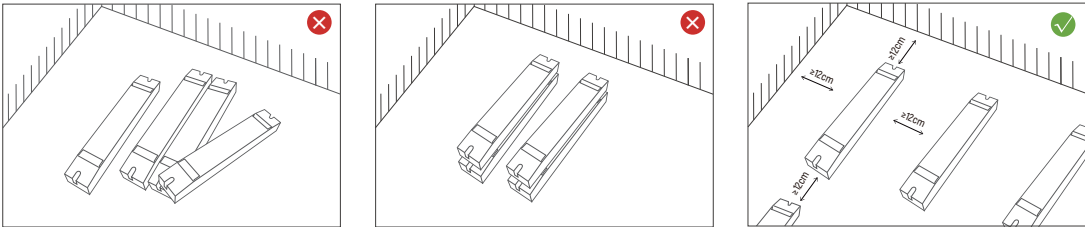


寿命 vs tc温度



LED驱动器的使用寿命如上图所示（根据80%的带载率计算）。
tc-ta温度的关系也取决于灯具的设计。

安装规范要求



请勿将产品堆叠摆放，产品与产品间隔距离应≥10cm，避免影响产品散热和使用寿命。

断路器带载说明

规范项	值	备注
浪涌电流 I _{peak}	2.7A (230V)	输入电压230V
浪涌电流 T _{width}	16us (23V)	输入电压230V, 在50%I _{peak} 下测试

MCB	输入电压230V 驱动器数量	MCB	输入电压230V 驱动器数量
B10	76pcs	C10	76pcs
B13	100pcs	C13	100pcs
B16	123pcs	C16	123pcs
B20	153pcs	C20	153pcs
		D16	123pcs

注意事项

本产品应由具备专业资格的人员进行调试与安装		
☒	安装条件确认	·防水与防护: 根据电源的防水和防护要求, 选择合适的位置安装。无防水功能的产品应避免日晒雨淋, 户外安装时请使用防水箱保护。 ·散热要求: 驱动电源应避免暴露在高温环境中。请确保工作环境温度在推荐范围内。为确保驱动电源正常散热, 安装时应选择通风良好的地方。良好的散热条件有助于延长产品寿命。
☒	电源检查	·使用前, 检查产品参数, 确认LED电源的输出电压、电流符合要求
☒	安全接线	·需使用符合规格的线缆, 确保导线的截面与驱动电源要求匹配。通常为输入线径:$\varnothing.8\text{mm}$, 输出线径:$\varnothing.8\text{mm}$的实心线缆, (具体线径要求请参阅丝印或说明书接线图)。 ·若电源(金属外壳)安装在已接地的灯具部件或设备上, 需要对电源进行接地处理。 ·避免热插拔, 连接 LED 负载前应断电并重启驱动。
☒	接线确认	·通电调试前, 确保接线牢固, 避免接触不良, 以防电流不稳或设备损坏。
☒	维修建议	·如产品发生故障, 请勿私自维修。如有疑问, 请联系供应商或销售处理。

※本说明书如有更新, 恕不另行通知。如产品功能与说明书不符, 以实际产品为准。

保修条例

- ☒ **保修期:** 自产品出厂之日起, 享有 **5年保修期**。
- ☒ **保修服务:** 在保修期内, 如因产品质量问题, 欧切斯将提供**免费修理或更换**服务。

非保修条例

以下情况不在免费保修或更换服务范围内:

- ☒ 超出保修期。
- ☒ 由于过高电压、超负载、操作不当等人为原因造成的损坏。
- ☒ 产品外观严重损坏或变形。
- ☒ 产品正常使用过程中产生的磨损或老化。
- ☒ 自然灾害或不可抗力因素造成的损坏。
- ☒ 产品的质量检验标签损坏 (QC PASS)。
- ☒ 未提供与欧切斯签订的合同或有效发票凭证。

※补救措施: 修理或更换是欧切斯对客户的最唯一补救方式, 且欧切斯不承担因修理或更换产生的附带损害赔偿, 除非在适用法律范围内。

※保修条款的调整: 欧切斯保留修改或调整保修条款的权利, 并以书面形式发布为准。