LTSYS

LM-100-24-U1A2

0-10V Push DIM

Intelligent LED Driver (Constant Voltage)

- Small size and light weight. The housing is made from V0 flame retardant PC materials that SAMSUNG/COVESTRO uses.
- The clamshell design and screwless type for strain-relief. The design of dismountable end cap allows you to adjust the length of housing depending on your needs.
- With soft-on and fade-in dimming function, enhancing your visual comfort.
- High frequency exemption level.
- Dimming from 0~100%, down to 0.1%.
- Automatically recognize 0-10V and 1-10V input signals.
- Ultra-low consumption of 0-10V ports < 0.05mA.
- The secure and reliable design for signal isolation.
- Innovative thermal management technology intelligently protects the power life.
- Overheat, over voltage , overload, short circuit protection and automatic recovery.
- Suitable for indoor light applications of I/II/III type.
- Up to 50,000-hour life time.
- 5-year warranty (Rubycon capacitor).

Flicker-Free
IEEE 1789

Dimmable:
1:1000

c UL us
Type TL 84/83.5°C

Use only within an enclosure.

RoHS SELV Class 2

The certification icon represents on-going certification applications only, and final certification qualification is subject to actual products.

0-10V PUSH DIM

Overheat protection

Over voltage protection

Overload protection

Short circuit protection

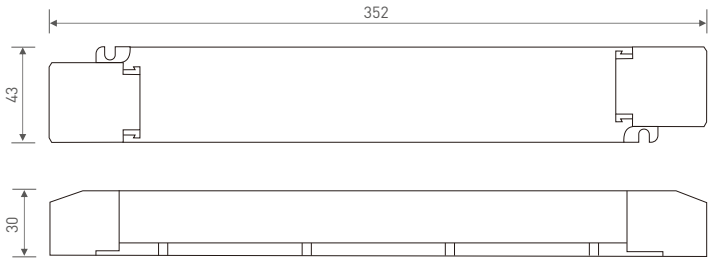
Technical Specs

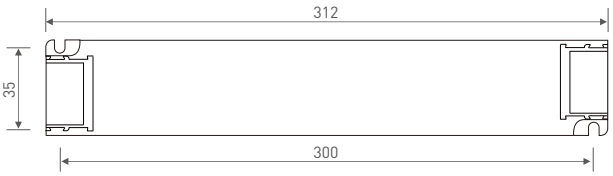
Model		LM-100-24-U1A2		
OUTPUT	Output Voltage	24Vdc		
	Output Voltage Range	24Vdc±0.5Vdc		
	Output Current	Max. 4.13A		
	Output Power	Max. 100W		
	Output Power Range	0-100W		
	Strobe Level	High frequency exemption level		
	PWM Frequency	3600Hz		
	Dimming Range	0~100%, down to 0.1%		
	Overload Power Limitation	≥90%		
	Ripple & Noise	Switch ripple≤150mV, noise≤500mV		
INPUT	Dimming Interface	0-10V(1-10V/10V PWM/RX), Push DIM		
	Input Voltage	120-277Vac		
	Frequency	50/60Hz		
	Input Current	Max. 1.1A/120Vac, 0.55A/230Vac, 0.45A/277Vac		
	Power Factor	PF>0.99/120Vac, PF>0.95/230Vac, PF>0.9/277Vac (at full load)		
	THD	120Vac@THD < 5%, 230Vac@THD < 8%, 277Vac@THD < 11% (at full load)		
	Efficiency (typ.)	93%		
	Standby Power Loss	<0.5W		
	Inrush Current	Cold start 45A/230Vac (Test twidth = 840us under 50% Ipeak)		
	Anti Surge	L-N: 2KV		
	Leakage Current	Max. 0.5mA		
ENVIRONMENT	Working Temperature	ta: -20~50°C tc: 85°C		
	Working Humidity	20-95%RH, non-condensing		
	Storage Temperature,Humidity	-40~80°C, 10-95%RH		
	Temperature Coefficient	±0.03%/°C(-20~50°C)		
	Vibration	10~500Hz, 2G 12min/1cycle, 72 min for X, Y and Z axes respectively		
PROTECTION	Overheat Protection	Intelligently adjust or turn off the output current if the PCB temperature ≥110°C, and recover automatically		
	Overvoltage Protection	Shut down the output when non-load voltage≥28V, and recover automatically		
	Overload Protection	Shut down the output when current load≥99%, and recover automatically		
	Short Circuit Protection	Enter hiccup mode if short circuit occurs, and recover automatically		
SAFETY & EMC	Withstand Voltage	I/P-O/P: 3750Vac		
	Isolation Resistance	I/P-O/P: 100MΩ/500VDC/25°C/70%RH		
	Safety Standards	UL	America	UL8750
		CUL	Canada	CSA C22.2 NO. 250. 13
		CE	European Union	EN61347-1, EN61347-2-13, EN62384
	EMC Emission	UL	America	FCC part 15
		CE	European Union	EN55015, EN61000-3-2, EN61000-3-3, EN61547
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11, EN61547		
	Strobe Test Standard	IEEE 1789		
OTHERS	Gross weight(G.W)	430g		
	Dimensions	352×43×30mm(L×W×H)		
	Package size	355×44×33mm(L×W×H)		
	Carton Size	370×340×93mm(L×W×H) 20pcs/ctn 9.4kg±5%/ctn		

* The driver is suitable for connecting resistor current-limiting LED fixture (e.g. LED strip). The inrush current will be dozens of times increased if connecting built-in constant current IC current-limiting LED fixtures, the driver will activate the overloaded protection (hiccups flickering). When you order, please remark controlling the constant current LED fixture (e.g. MR16 lamp, underground light, LED wall washer, constant current LED strip, etc.), so that we can prepare them with special procedures.

Product Size

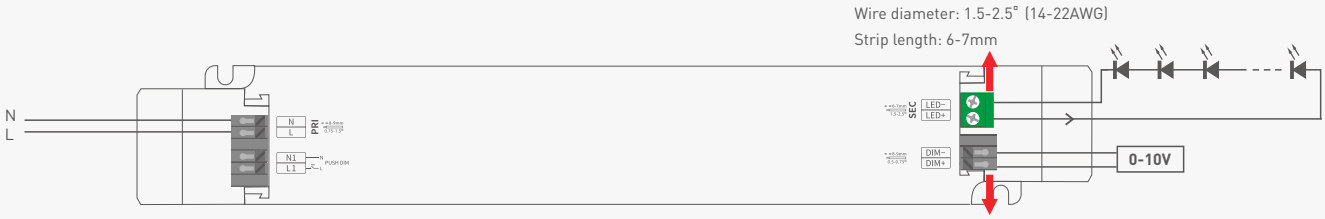
Unit: mm





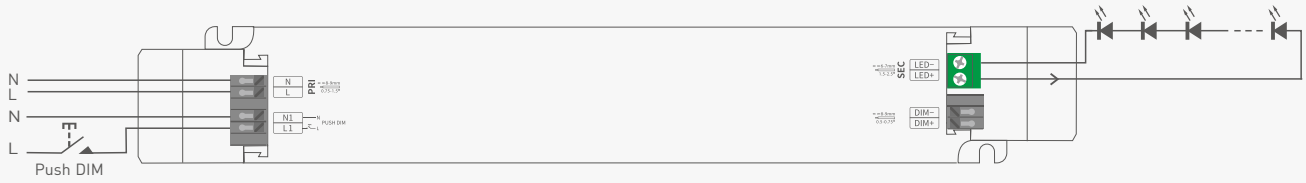
Wiring Diagram

0-10V Connection



0~100% dimming range

Push DIM Connection

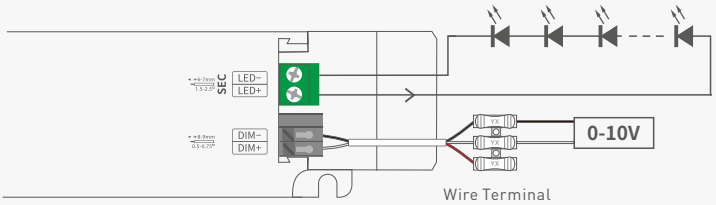


0~100% dimming range
Short press to turn on/off
Long press to dim

＊ Push Dim is invalid under DC voltage input.

＊ Dimming interface priority: 0-10V first , Push DIM next.

Wire Terminal Connection (used in signal port only)



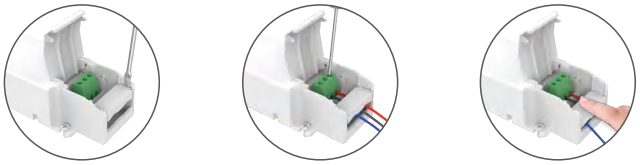
Push DIM

Reset switch

- On/off control: Short press.
- Stepless dimming: Long press.
- With every other long press, the brightness level goes to the opposite direction.
- Dimming memory: Go to the brightness level adjusted previously when lights are turned on.

Protective Housing Application Diagram

Tension plate



1. Pry up the protecting housing in the side plate position with a tool.

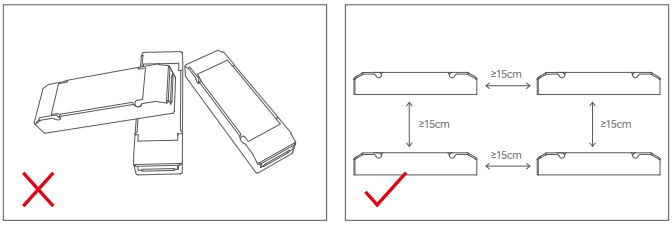
2. Connect to electrical wires with a screwdriver as wiring diagram shows.

3. Press down the tension plate to fix the the electrical wires, then close the protective housing.

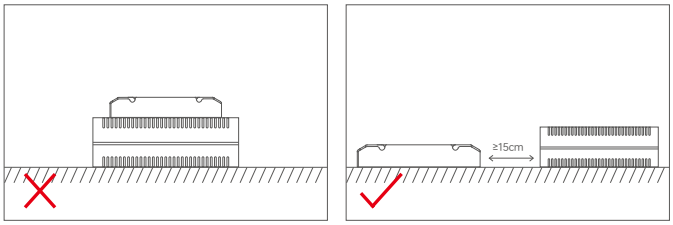
Remove the protective housing

Pull the housing left and right from the bottom to remove it.

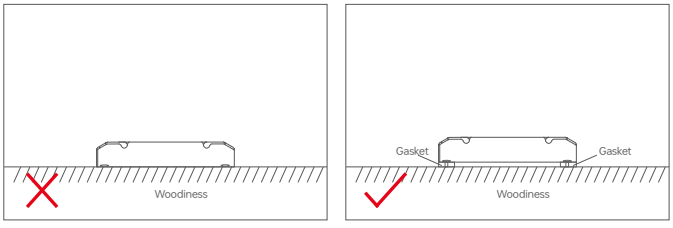
Installation Precautions



Please do not stack the products. The distance between two products should be ≥15cm so as not to affect heat dissipation and the lifespan of the products.



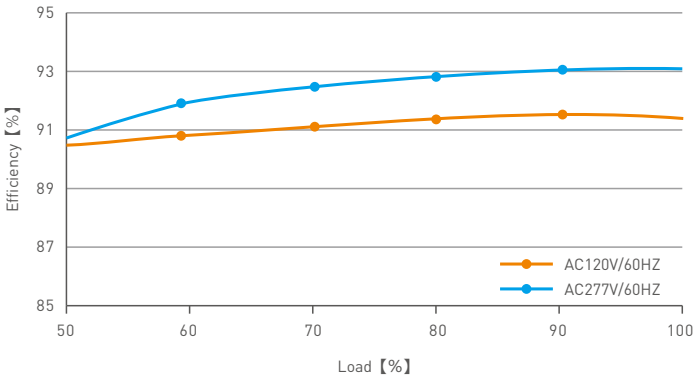
Please do not place the products on the floor. The distance between the product and the floor should be ≥100cm so as to avoid signal interference.



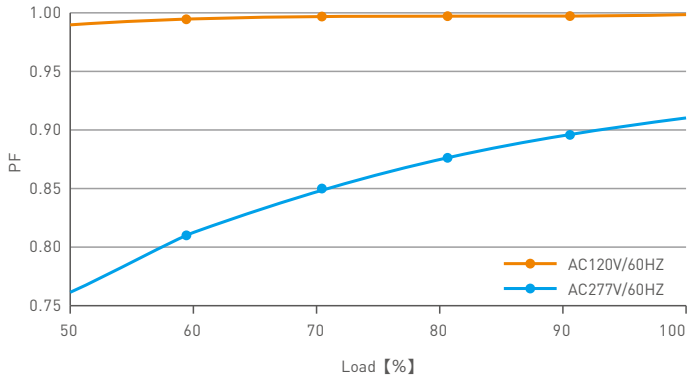
Do not fix the product tightly against the wooden board with screws. Please add a washer ≥7 mm thick under the mounting screws to leave a gap for effective heat dissipation, so as to avoid affecting the heat dissipation and service life of the product.

Relationship Diagrams

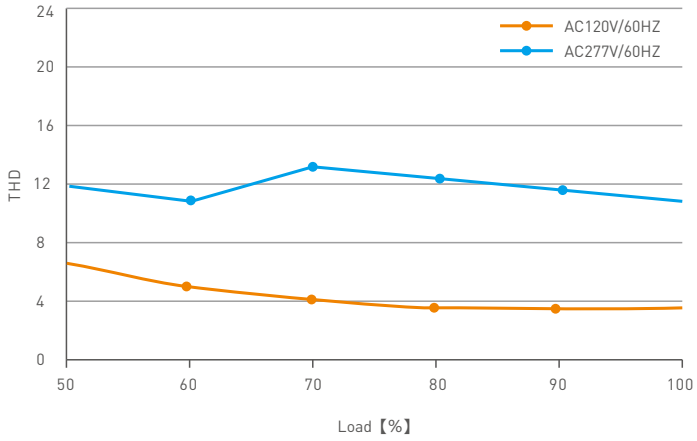
Efficiency vs Load



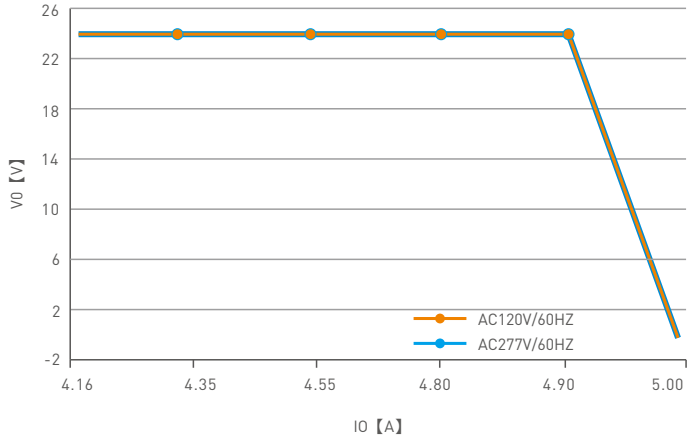
Power Factor Characteristic



THD VS Load



Over Load Diagram



Flicker Test Table

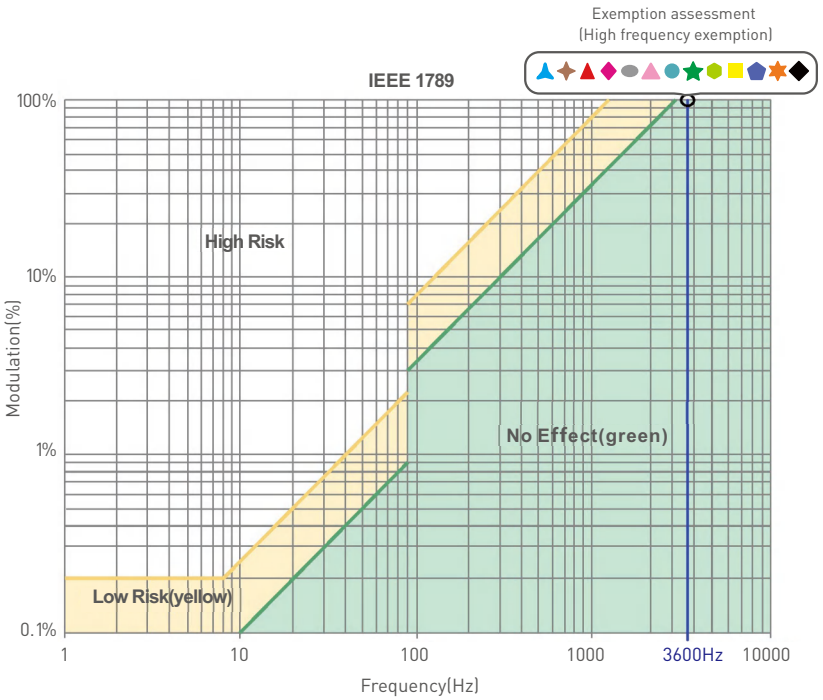
IEEE 1789

Limit Value of Modulation in Low Risk Areas	
Waveform frequency of Optical output (f)	Limit value (%)
f ⩽ 8Hz	0.2
8Hz < f ⩽ 90Hz	0.025 × f
90Hz < f ⩽ 1250Hz	0.08 × f
f > 1250Hz	Exemption assessment
Limit Value of Modulation in No Effect Areas	
Waveform frequency of Optical output (f)	Limit value (%)
f ⩽ 10Hz	0.1
10Hz < f ⩽ 90Hz	0.01 × f
90Hz < f ⩽ 3125Hz	(0.08/2.5) × f
f > 3125Hz	Exemption assessment (High frequency exemption)

Brightness

- 0.1%
- 1%
- 5%
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
- 90%
- 100%

Marks in the right chart are tested results of different current levels. The output frequency is 0Hz in 100% brightness and its corresponding modulation is 0%, which could not be shown in the right chart.



Attentions

- This product must be installed and adjusted by a qualified professional.
- This product is non-waterproof (special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure it is mounted in a water proof enclosure.
- Good heat dissipation will extend the life the product. Please install the product in a environment with good ventilation.
- When you install this product, please avoid being near a large area of metal objects or stacking them to prevent signal interference.
- Please keep the product away from a intense magnetic field, a high pressure area or a place where lightning is easy to occur.
- Please check whether the working voltage used complies with the parameter requirements of the product.
- Before you power on the product, please make sure all the wiring is correct in case of incorrect connection that may cause a short circuit and damage the components, or trigger a accident.
- If a fault occurs, please do not attempt to fix the product by yourself. If you have any question, please contact the supplier.

* This manual is subject to changes without further notice. Product functions depend on the goods. Please feel free to contact our official distributors if you have any question.

Warranty Agreement

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

Warranty exclusions below:

- Beyond warranty periods.
- Any artificial damage caused by high voltage, overload, or improper operations.
- Products with severe physical damage.
- Damage caused by natural disasters and force majeure.
- Warranty labels and barcodes have been damaged.
- No any contract signed by LTECH.

1. Repair or replacement provided is the only remedy for customers. LTECH is not liable for any incidental or consequential damage unless it is within the law.
2. LTECH has the right to amend or adjust the terms of this warranty, and release in written form shall prevail.

Update Log

Version	Updated Time	Update Content	Updated by
A0	2021.05.31	Original version	Liu Weili
A1	2021.12.10	Update product silk screen	Liu Weili
A2	2022.06.08	Add wire terminal connection	Liu Weili
A3	2026.03.28	Update logo and product laser engraving	Haipeng Li

LTSYS

LM-100-24-U1A2

0-10V
Push DIM

LED智能调光驱动器 (恒压型)

- 体积小、重量轻; 外壳采用科思创/三星PC阻燃V0级原料
- 免螺丝压线翻盖设计，可拆卸端盖, 按需调节壳体长度
- 带软启动渐亮功能, 让人眼视觉更舒服
- 高频豁免考核级别
- 调光范围0-100%, LED从0.1%开始调光
- 自动识别0-10V、1-10V输入
- 0-10V端口超低消耗<0.05mA
- 安全可靠的信号隔离设计
- 创新的热管理技术, 智能保护电源寿命
- 过温、过压、过载、短路保护, 可自动恢复
- 适合室内Ⅰ、Ⅱ、Ⅲ类灯具应用
- 高达50,000小时的额定寿命
- 5年保修期 (采用红宝石电容)

无频闪
IEEE 1789

Dimmable:
1:1000

c UL us
Type TL 84/83.5°C
Use only within an enclosure.

RoHS SELV Class 2

认证图标仅代表产品正在进行这一系列的认证申请，认证资质以产品实物为准。

0-10V PUSH DIM | 过温保护 | V 过压保护 | 过载保护 | 短路保护

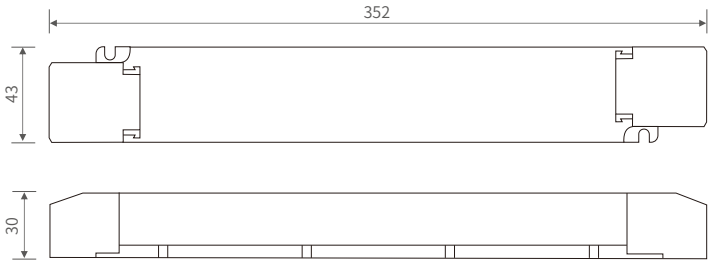
技术参数

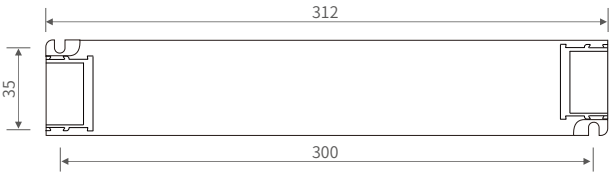
型号		LM-100-24-U1A2		
输出	输出电压	24Vdc		
	输出电压范围	24Vdc±0.5Vdc		
	输出电流	Max. 4.13A		
	输出功率	Max. 100W		
	输出功率范围	0-100W		
	频闪级别	高频豁免考核级别		
	PWM频率	3600Hz		
	调光范围	0~100%, 调光深度: 0.1%		
	过载功率限制	≥90%		
	纹波与噪声	开关纹波≤150mV, 噪声≤500mV		
输入	调光接口	0-10V(1-10V/10V PWM/RX), Push DIM		
	输入电压	120-277Vac		
	频率范围	50/60Hz		
	输入电流	Max. 1.1A/120Vac, 0.55A/230Vac, 0.45A/277Vac		
	功率因数	PF>0.99/120Vac, PF>0.95/230Vac, PF>0.9/277Vac (满载)		
	谐波THD	120Vac@THD＜5%, 230Vac@THD＜8%, 277Vac@THD＜11% (满载)		
	效率(Typ.)	93%		
	待机功耗	<0.5W		
	浪涌电流	冷启动45A/230Vac (在50%Ipeak下测试twidth=840us)		
	抗浪涌	L-N: 2KV		
	漏电流	Max. 0.5mA		
环境	工作温度	ta: -20~50°C tc: 85°C		
	工作湿度	20-95%RH, 无冷凝		
	储存温度/湿度	-40~80°C, 10-95%RH		
	温度系数	±0.03%/°C(-20~50°C)		
	耐振动	10-500HZ, 2G 12分钟/周期, X, Y, Z轴各72分钟		
保护	过温保护	根据PCB温度超标情况(≥110°C), 智能调节电流输出或关闭, 可自动恢复		
	过压保护	空载电压≥28V, 关闭输出, 可自动恢复		
	过载保护	负载电流≥90%, 关闭输出, 可自动恢复		
	短路保护	输出线路短路进入打嗝模式, 可自动恢复		
安规和电磁规格	耐压	输入对输出: 3750Vac		
	绝缘阻抗	输入对输出: 100MΩ/500VDC/25°C/70%RH		
	安全规范	UL	美国	UL8750
		CUL	加拿大	CSA C22.2 NO. 250. 13
		CE	欧盟	EN61347-1，EN61347-2-13，EN62384
	电磁兼容发射	UL	美国	FCC part 15
		CE	欧盟	EN55015，EN61000-3-2，EN61000-3-3，EN61547
	电磁兼容抗扰度	EN61000-4-2,3,4,5,6,8,11, EN61547		
	频闪测试	IEEE 1789		
其他	产品毛重	430g		
	产品尺寸	352×43×30mm(L×W×H)		
	包装尺寸	355×44×33mm(L×W×H)		
	外箱规格	L370×W340×H93mm 20个/箱 9.4kg±5%/箱		

＊本款驱动器适合连接电阻限流的LED灯具 (如LED灯条)。如果连接内置恒流IC限流的灯具,会产生几十倍的瞬间浪涌电流, 导致驱动器会执行过载保护(打嗝频闪)。下单时这类内置恒流IC限流的灯具需要注明 (如MR16灯杯地埋灯、洗墙灯、恒流硬灯条等), 以便烧写特殊程序。

尺寸图

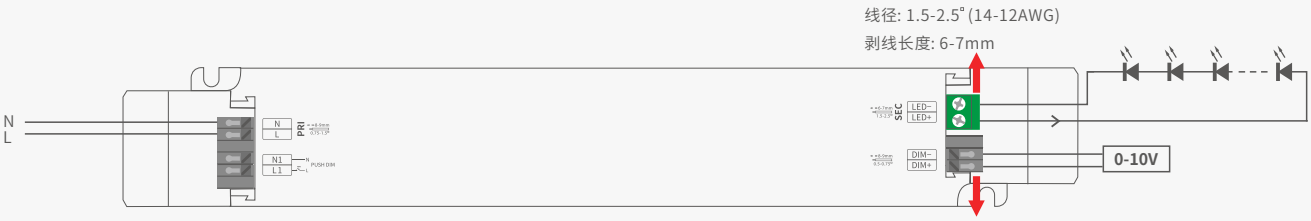
单位: mm





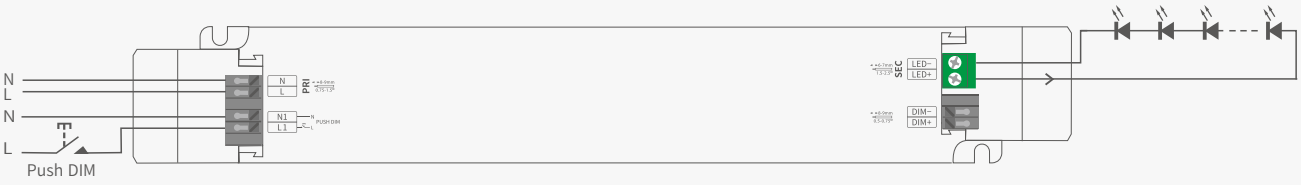
连接应用图

0-10V 连接方式



0~100%调光

Push DIM 连接方式

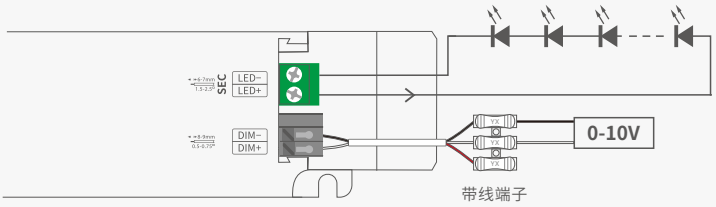


0~100%调光
短按开关, 长按调光

＊ 在直流电压输入的情况下, 按键调光无效

＊ 调光接口优先级为: 首先0-10V, 然后Push DIM

带线端子连接示意图 (仅用于信号端)



Push DIM

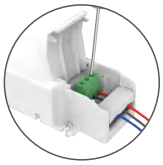
复位开关

- 开关控制: 短按.
- 无级调光: 长按.
- 每隔一次长按, 亮度会向相反方向调整.
- 调光记忆: 当再次开关时, 灯光会回到先前调整的亮度水平.

保护盖应用图

压线板

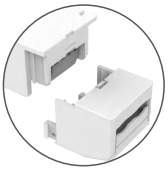
1. 使用工具撬起压线板侧边即可拆下。



2. 使用螺丝批按照接线图接线。

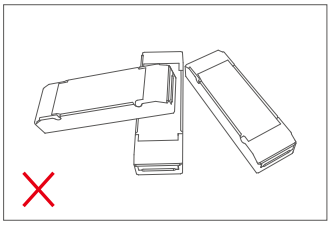
3.向下按压压线板固定住线合上保护盖即可。

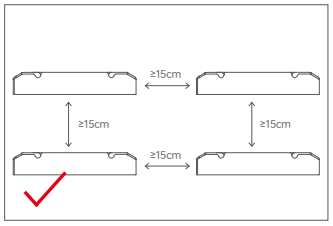
保护盖的拆装



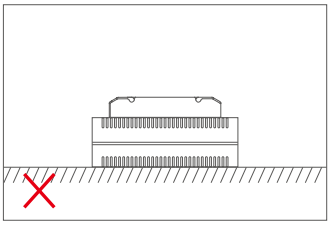
在底部左右掰动，即可将保护盖拆下。

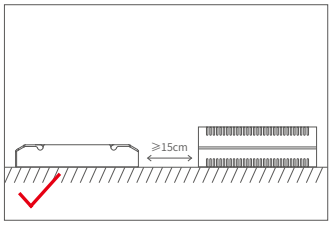
安装注意事项



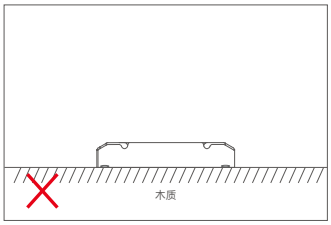


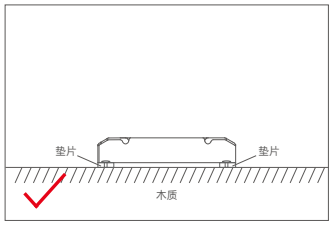
请勿将产品堆叠摆放，产品与产品间隔距离应≥15cm，避免影响产品散热和使用寿命。





请勿将产品置于电源上方，产品与电源间隔距离应≥15cm，避免影响产品散热而减少使用寿命。

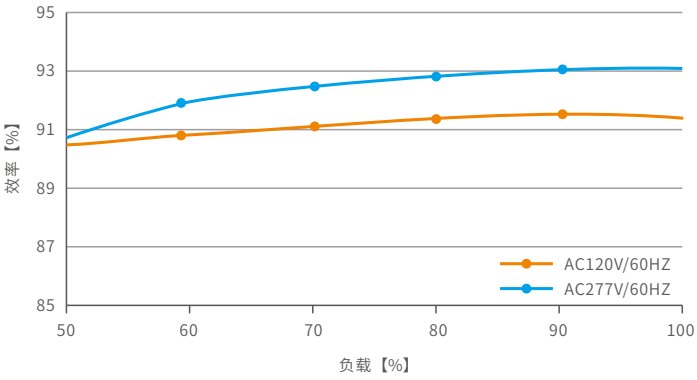




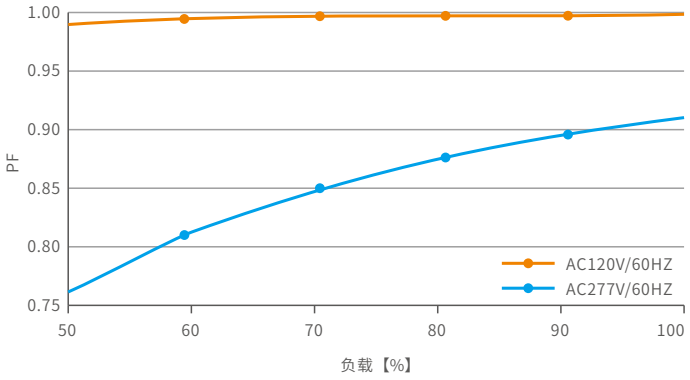
请勿将产品螺丝固定紧贴于木板，应在固定螺丝下增加≥7mm的垫片，留点空隙可以有效散热，避免影响产品散热和使用寿命。

关系图表

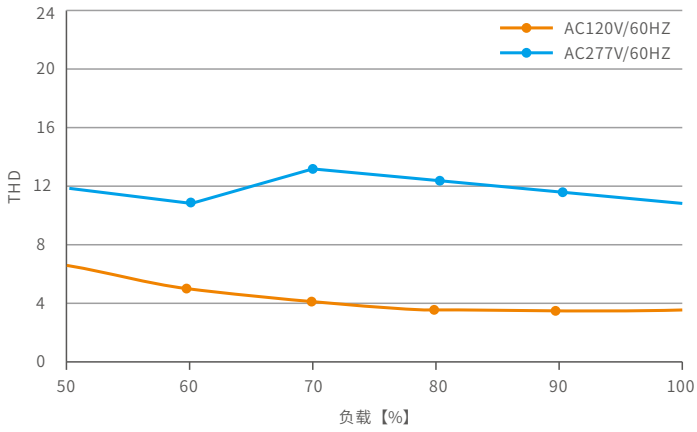
效率与负载关系图



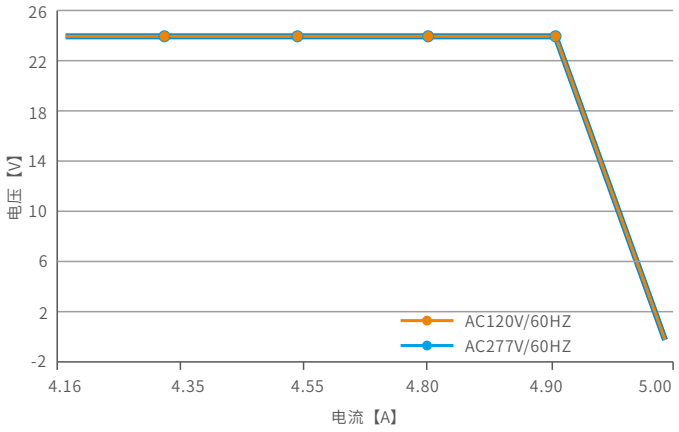
功率因数特征图



THD与负载关系图



过载曲线



频闪测试表

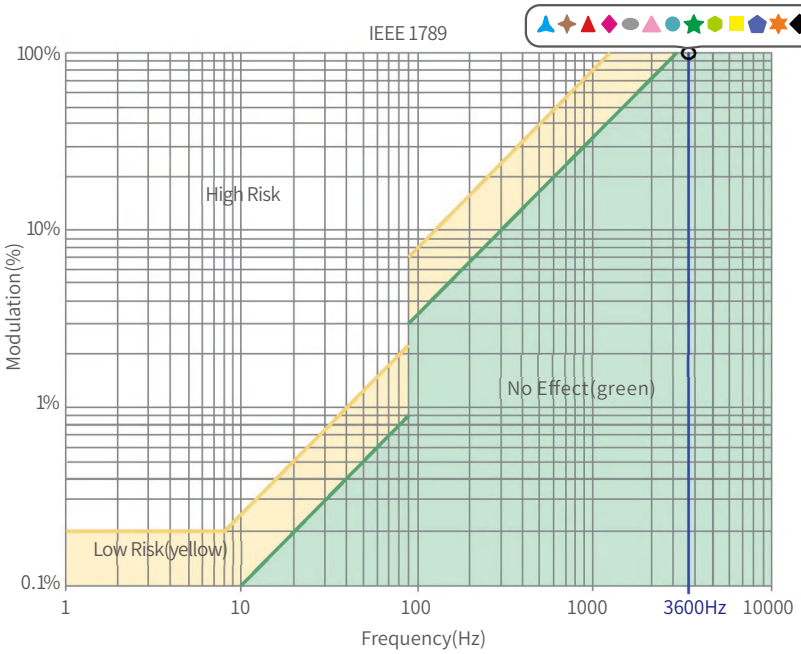
IEEE 1789

低风险区域（Low Risk）的波动深度（Modulation）限值	
光输出波形频率 (f)	限值 (%)
f ⩽ 8Hz	0.2
8Hz < f ⩽ 90Hz	0.025 × f
90Hz < f ⩽ 1250Hz	0.08 × f
f > 1250Hz	免除考核
无风险区域（No Effect）的波动深度（Modulation）限值	
光输出波形频率 (f)	限值 (%)
f ⩽ 10Hz	0.1
10Hz < f ⩽ 90Hz	0.01 × f
90Hz < f ⩽ 3125Hz	(0.08/2.5) × f
f > 3125Hz	免除考核(高频豁免)

亮度

- 0.1%
- 1%
- 5%
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
- 90%
- 100%

免除考核 (高频豁免)



右图标识为不同电流档的测试结果。

100%亮度时输出频率为0Hz, 对应波动深度为0%, 无法在右图中示意。

注意事项

- 本产品请由具有专业资格的人员进行调试安装；
- 本产品(专有型号除外)不能防水，需避免日晒雨淋。如安装在户外，请使用防水箱；
- 良好的散热条件会延长产品的使用寿命，请把产品安装在通风良好的环境；
- 安装时，避免靠近大面积金属物体，或堆叠摆放，以免信号干扰影响使用；
- 避免安装在雷区、强磁场和高压区域；
- 请检查使用的工作电压是否符合产品的参数要求；
- 通电调试前，确保所有接线正确且牢固，以免短路损坏部件，触发事故；
- 如果发生故障，请勿私自维修；如果有疑问，请联系供应商。

* 本说明书的内容如有变更, 恕不另行通知。若内容与您使用的功能有所不同, 则以实物为准。如有疑问, 欢迎向我司授权的经销商咨询。

保修条例

- 自出厂之日起保修服务期为5年。
- 在保修服务期内出现产品质量问题雷特将给予免费修理或更换服务。

非保修条例:

属下列情况不在免费保修或更换服务范围之内:

- 已经超出保修服务期;
- 过高电压、超负载、操作不当等人为造成的损坏;
- 产品外形严重损坏或变形;
- 自然灾害以及人力不可抗拒原因造成的损坏;
- 产品保修标签和产品唯一条形码损坏;
- 无雷特签订的合同或发票凭证。

1. 修理或更换是雷特对客户的唯一补救措施。雷特不承担任何附带引起的损害赔偿责任, 除非在适用法律范围之内。
2. 雷特享有修正或调整本保修条款的权利, 并以书面形式发布为准。

更新日志

版本	更改日期	更改内容	更改人
A0	2021.03.25	正稿	刘伟丽
A1	2021.12.10	更新产品丝印	刘伟丽
A2	2022.06.08	增加带线端子连接示意图	刘伟丽
A3	2026.03.28	更新产品镭雕、LOGO、公司地址	黎海鹏