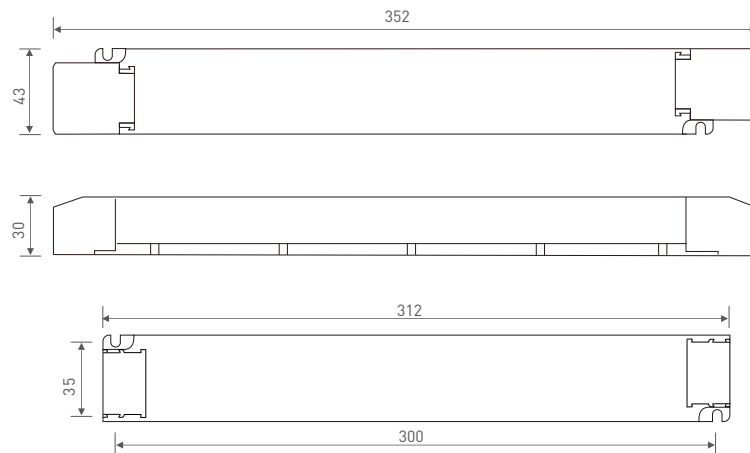


Dimensions

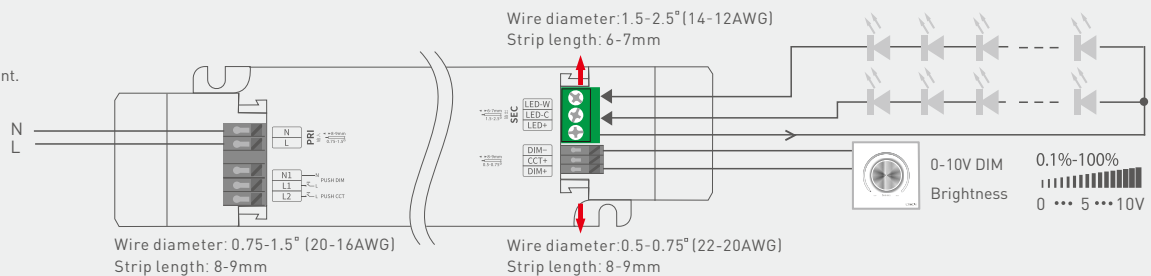
Unit: mm



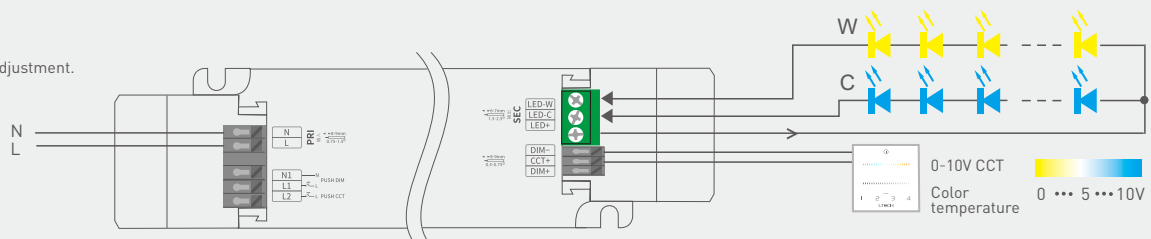
Wiring Diagram

0-10V Connection

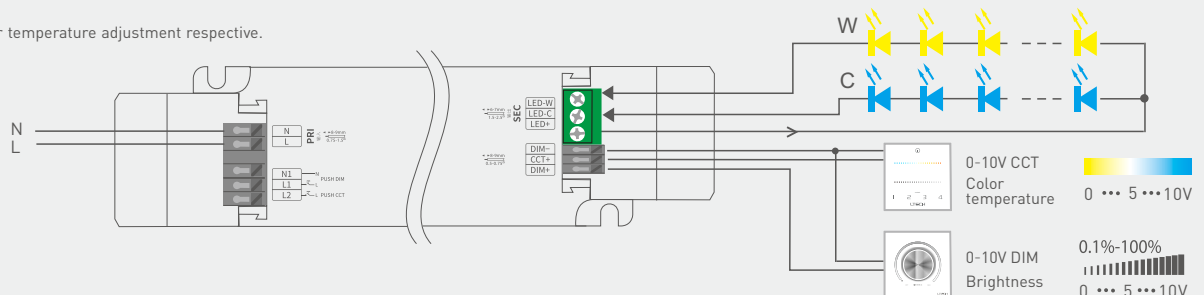
1. Brightness adjustment.



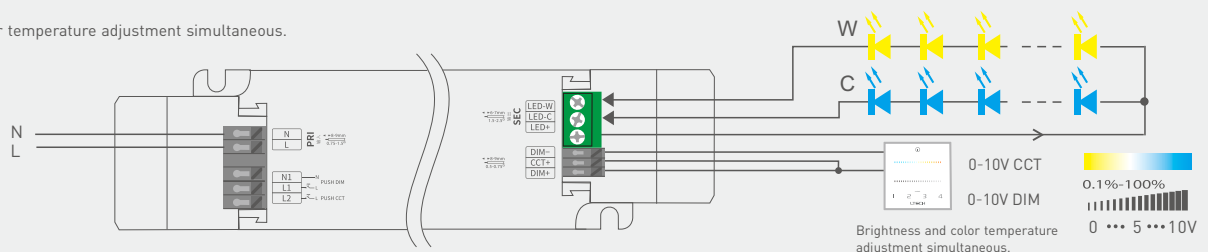
2. Color temperature adjustment.



3. Brightness and color temperature adjustment respective.

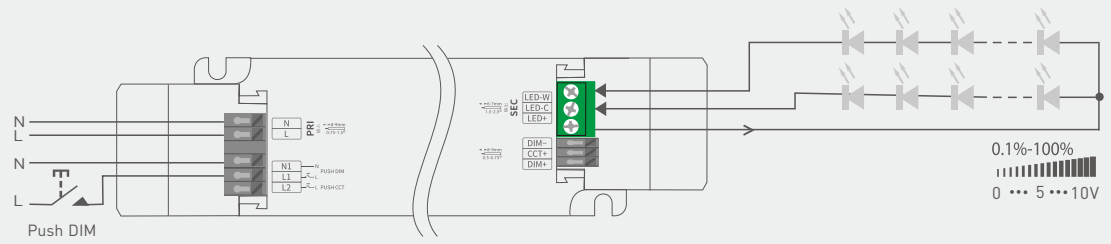


4. Brightness and color temperature adjustment simultaneous.

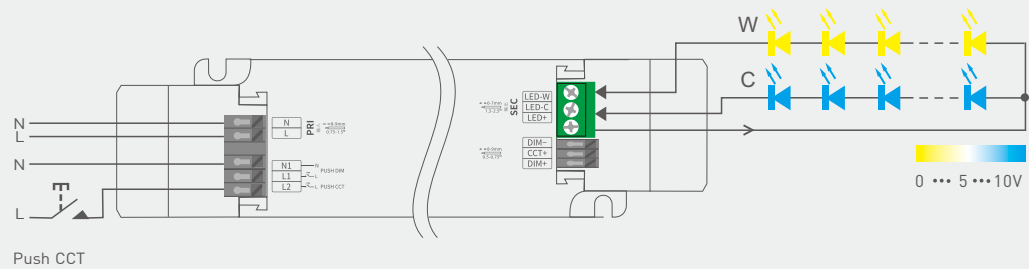


Push DIM/CCT Connection

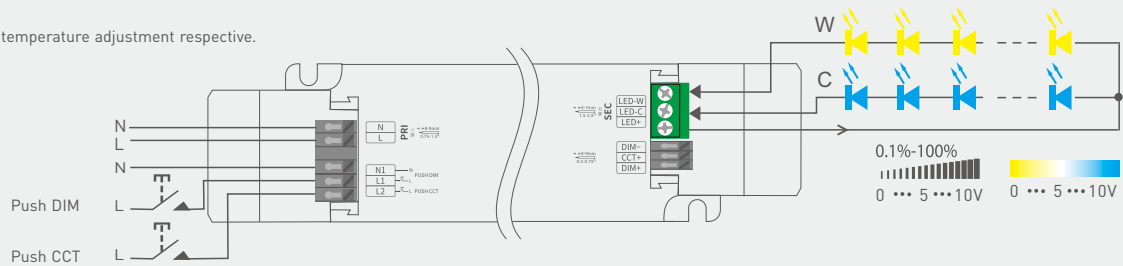
1. Brightness adjustment.



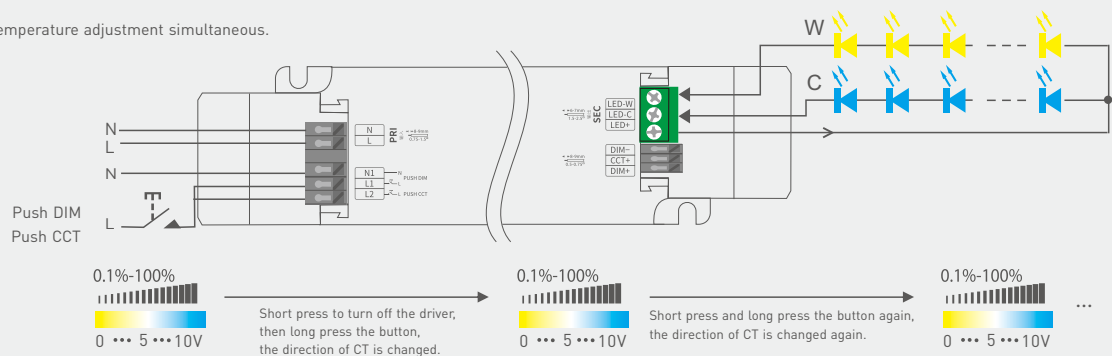
2. Color temperature adjustment.



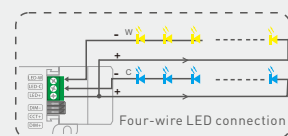
3. Brightness and color temperature adjustment respective.



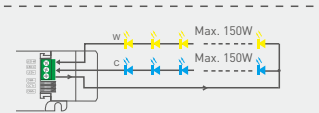
4. Brightness and color temperature adjustment simultaneous.



* Dimming interface priority: First 0-10V, next Push DIM/CCT.



* Adopting constant power program design, it keeps the same brightness in color temperature dimming, twice the rated power load can be connected.
150W driver, 150W X 2CH load can be connected, the total power of the 2 channels will be kept in 150W.



Push DIM/CCT



Reset switch

DIM

- On/off control: Short press.
- Stepless dimming: Long press.
- With every other long press, the brightness goes to the opposite direction.
- Dimming memory: Brightness will be the same as previously adjusted when turning on again.

CCT

- Color temperature adjustment: Long press.
- With every other long press, color temperature go to the opposite direction.
- Color temperature memory: Color temperature will be the same as previously adjusted when turning on again.

* Applicable to brightness adjustment, color temperature adjustment and brightness/CT adjustment respective of Push DIM/CCT connection.



Reset switch

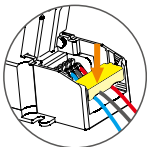
DIM/CCT

- On/off control: Short press.
- Stepless dimming and color adjustment: long press.
- With every other long press, color temperature go to the opposite direction.
- Dimming memory: Brightness will be the same as previously adjusted when turning on again.

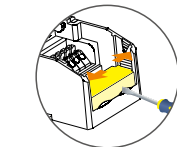
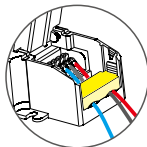
* Applicable to brightness and CT adjustment simultaneous of Push DIM/CCT connection.

Application of Protective Cover

Wire pressing board:

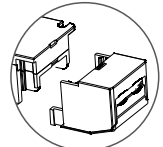
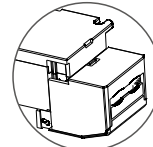
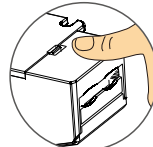


Push the wire pressing board to fix the wires.



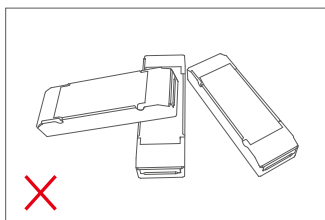
Push outward the side plate, meanwhile use the tool to uninstall the wire pressing board.

Uninstall protective cover:

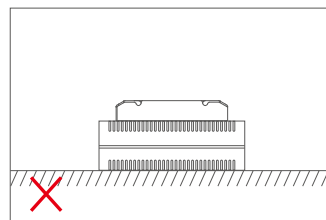
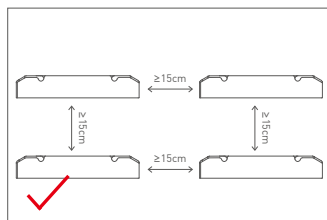


Break off the bottom left and right to remove the protective cover.

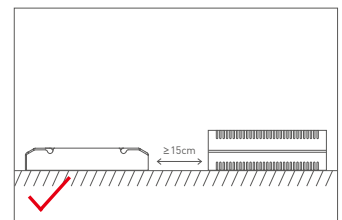
Installation Precautions



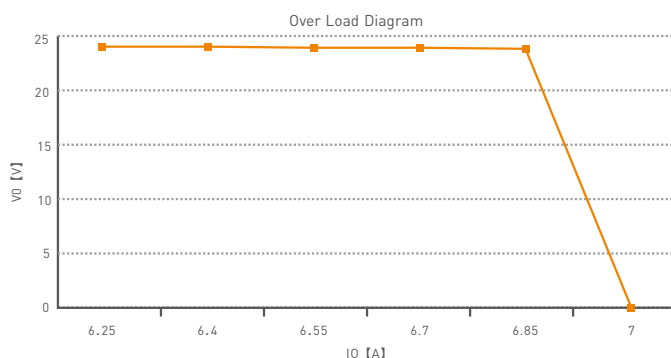
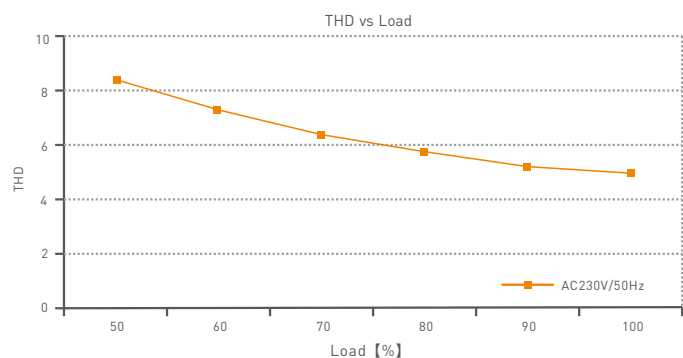
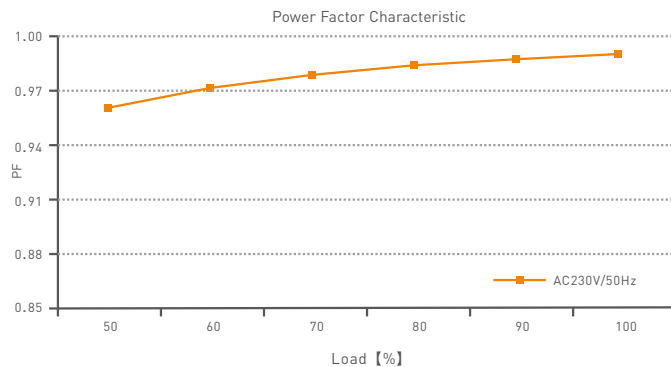
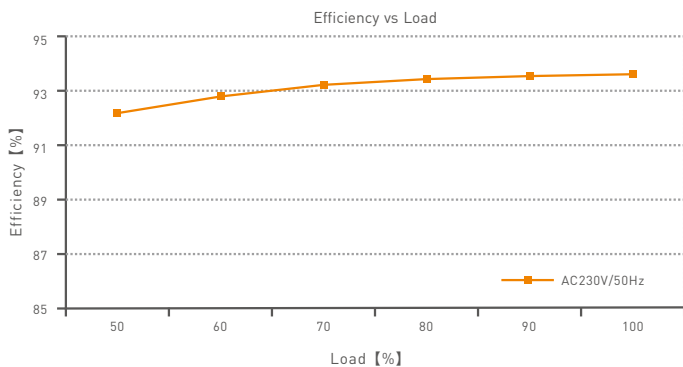
Please do not stack the products. The distance between two products should be $\geq 15\text{cm}$ so as not to affect heat dissipation and the lifespan of the products.



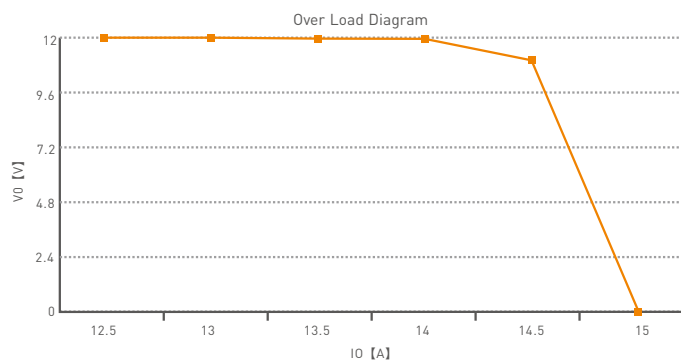
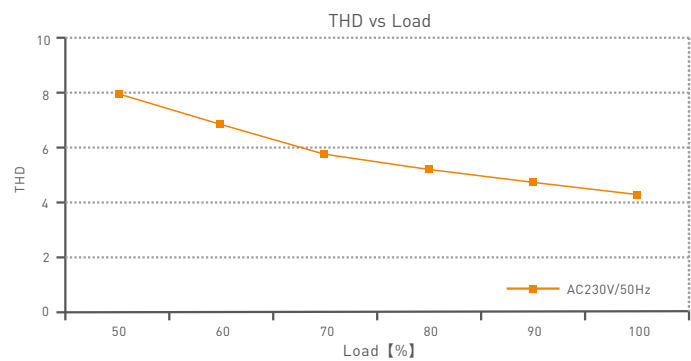
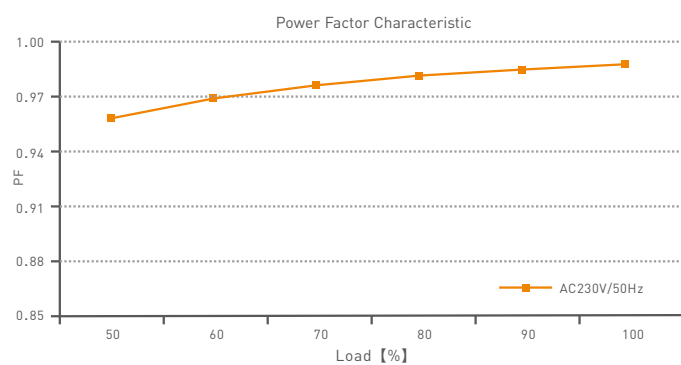
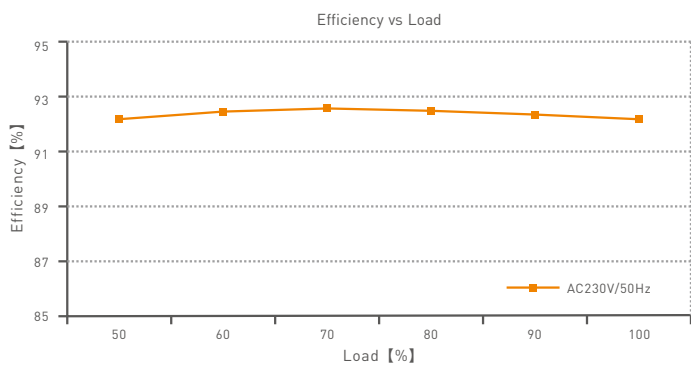
Please not place the products on LED drivers. The distance between the product and the driver should be $\geq 15\text{cm}$ so as not to affect heat dissipation and shorten the lifespan of the products.



Relationship Diagrams



LM-150-24-G2A2



LM-150-12-G1A2

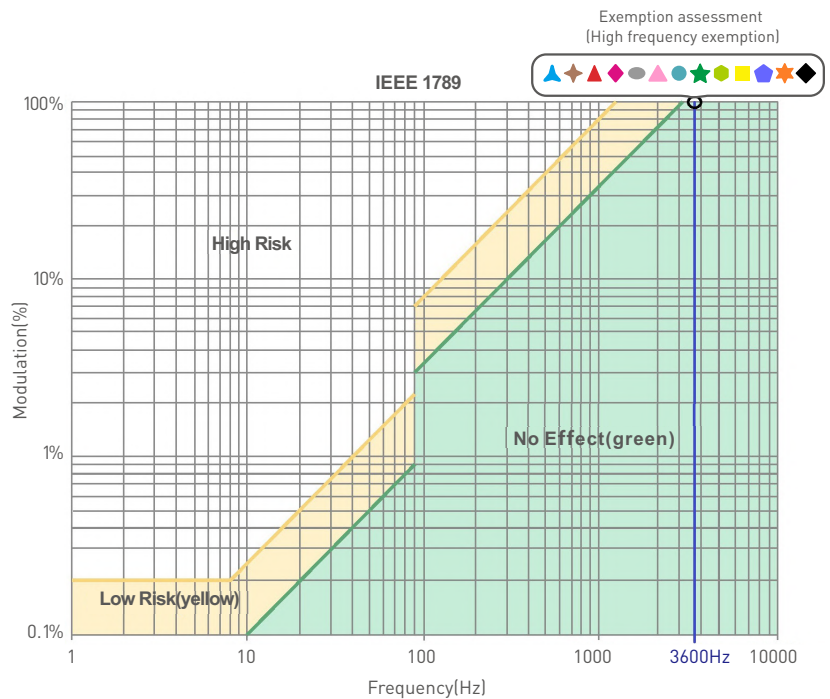
Flicker Test Form

IEEE 1789

Limit Value of Modulation in Low Risk Areas	
Waveform frequency of Optical output (f)	Limit value (%)
$f \leq 8\text{Hz}$	0.2
$8\text{Hz} < f \leq 90\text{Hz}$	$0.025 \times f$
$90\text{Hz} < f \leq 1250\text{Hz}$	$0.08 \times f$
$f > 1250\text{Hz}$	Exemption assessment
Limit Value of Modulation in No Effect Areas	
Waveform frequency of Optical output (f)	Limit value (%)
$f \leq 10\text{Hz}$	0.1
$10\text{Hz} < f \leq 90\text{Hz}$	$0.01 \times f$
$90\text{Hz} < f \leq 3125\text{Hz}$	$(0.08/2.5) \times f$
$f > 3125\text{Hz}$	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 level.
The output frequency is 0Hz in 100% brightness and its corresponding modulation is 0%, which could not be shown in the right chart.

Attentions

- Products shall be installed by qualified professionals.
- LTECH products are 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 working life of products. Please ensure good ventilation.
- Please check if the working voltage used complies with the parameter requirements of products.
- The diameter of wire used must be able to load the light fixtures you connect and ensure the firm wiring.
- Before you power on products, please make sure all the wiring is correct in case of incorrect connection that causes damage to light fixtures.
- If a fault occurs, please do not attempt to fix products by yourself. If you have any question, please contact your suppliers.

* 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	2020.04.22	Original version	Huang Yunting
A1	2020.12.16	Update the relationship diagrams; P1 adds 50000 lifespan description	Huang Yunting
A2	2021.12.10	Update the product; the color temperature panel of the wiring diagram is changed to the ECT2 panel	Liu Weili

LED 智能色温驱动器 (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
- 共阳极两路SELV输出通道
- 恒功率设计, 调节不同色温保持亮度一致
- 调光范围0~100%, LED从0.1%开始调光
- 带软启动渐亮功能, 让人眼视觉更舒适
- 色温调节范围2700-6500K
- 自动识别0-10V、1-10V输入
- 高性能电源: 效率93%、PF>0.98、THD<6%
- 符合欧盟能效ERP指令, 待机功耗<0.5W
- 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
- 全防护塑料外壳电源, 可拆卸端盖设计
- 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)

调光 调色温

无频闪
IEEE 1789
高频豁免考核级别

Dimmable:
.....
0.1%-100%

5合1调光
0-10V
1-10V
10V PWM
RX
Push DIM
0-10V接口消耗电流<0.05mA



技术参数

型号		LM-150-24-G2A2		LM-150-12-G2A2	
输出	输出电压	24Vdc		12Vdc	
	输出电压范围	24Vdc ± 0.5Vdc		12Vdc ± 0.5Vdc	
	输出电流	Max. 6.25A		Max. 12.5A	
	输出功率	Max. 150W			
	输出功率范围	0~150W			
	频闪级别	高频豁免考核级别			
	调光范围	0~100%, 调光深度: 0.1%			
	过功率限制	≥102%			
	纹波与噪声	开关纹波≤200mV, 噪声≤500mV		开关纹波≤200mV, 噪声≤800mV	
输入	PWM调光频率	3600Hz			
	调光接口	0-10V(1-10V/10V PWM/RX) DIM/CCT, Push DIM/CCT			
	输入电压	220-240Vac 200-280Vdc			
	频率范围	50/60Hz			
	输入电流	Max. 0.75A/230Vac			
	功率因数	PF>0.98/230Vac (满载)			
	谐波THD	230Vac@THD<6% (满载)			
	效率(Typ.)	93%		92%	
	待机功耗	0.5W			
环境	浪涌电流	冷启动45A/230Vac			
	抗浪涌	L-N: 2KV			
	漏电流	Max. 0.5mA			
	工作温度	ta: -20 ~ 50°C tc: 85°C			
	工作湿度	20 ~ 95%RH, 无冷凝			
保护	储存温度/湿度	-40 ~ 80°C, 10~95%RH			
	温度系数	±0.03%/°C(0-50°C)			
	耐振动	10-500HZ, 2G 12分钟/周期, X, Y, Z轴各72分钟			
	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			
	过载保护	负载电流≥102%, 关闭输出, 可自动恢复			
安规和电磁规格	短路保护	输出线路短路进入打嗝模式, 可自动恢复			
	过压保护	空载电压≥28V, 关闭输出, 可自动恢复		空载电压≥16V, 关闭输出, 可自动恢复	
	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	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	
		KC	韩国	KC61347-1, KC61347-2-13	
		EAC	俄罗斯	IEC61347-1, IEC61347-2-13	
		RCM	澳洲	AS 61347-1, AS 61347-2-13	
		ENEC	欧洲	EN61347-1, EN61347-2-13, EN62384	
	电磁兼容发射	UKCA	英国	BS EN 61347-2-13:2014+A1:2017, BS EN 61347-1:2015+A1:2021	
		CCC	中国	GB/T17743, GB17625.1	
		CE	欧盟	EN55015, EN61000-3-2, EN61000-3-3, EN61547	
		KC	韩国	KN15, KN61547	
		EAC	俄罗斯	IEC62493, IEC61547, EH55015	
	电磁兼容抗扰度	RCM	澳洲	EN55015, EN61000-3-2, EN61000-3-3, EN61547	
		UKCA	英国	BS EN IEC 55015:2019/A11:2020, BS EN 61547:2009, BS EN IEC 61000-3-2:2019, BS EN 61000-3-3:2013/A1:2019	
		EN61000-4-2,3,4,5,6,8,11, EN61547			
	频闪测试标准	IEEE 1789			
其他	产品重量	430g±10g			
	产品尺寸	352×43×30mm(L×W×H)			
	包装尺寸	355×44×33mm(L×W×H)			
	外箱规格	370×340×93mm(L×W×H) 20个/箱 9.4kg±5%/箱			

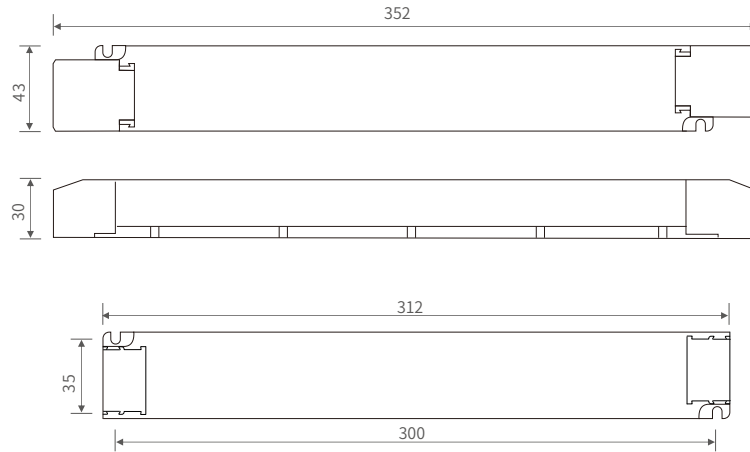
本款驱动器适合连接电阻限流的LED灯具(如LED灯条)。如果连接内置恒流IC限流的灯具, 会产生几十倍的瞬间浪涌电流, 导致驱动器会执行过载保护(打嗝频闪)。下单时这类内置恒流IC限流的灯具需要注明(如MR16灯杯、地理灯、洗墙灯、恒流硬灯条等), 以便烧写特殊程序。

1

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尺寸图

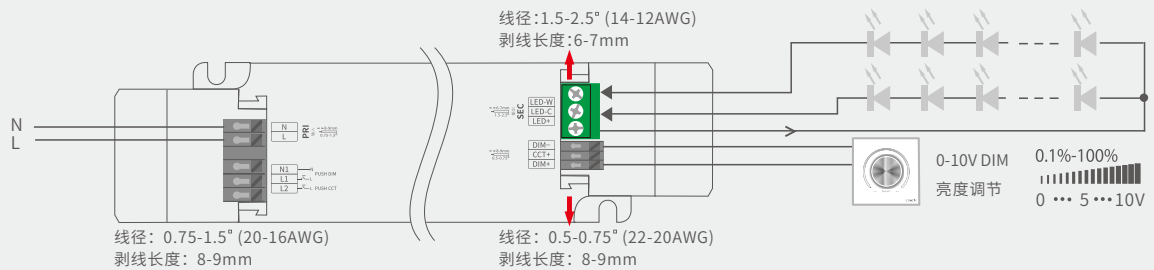
单位: mm



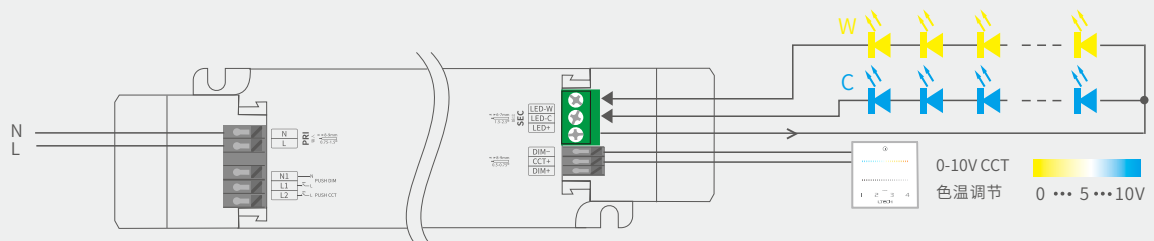
连接应用图

0-10V 连接方式

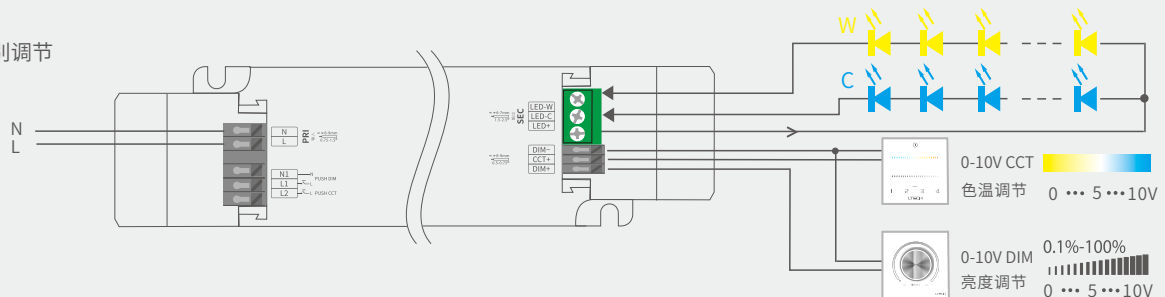
1、亮度调节



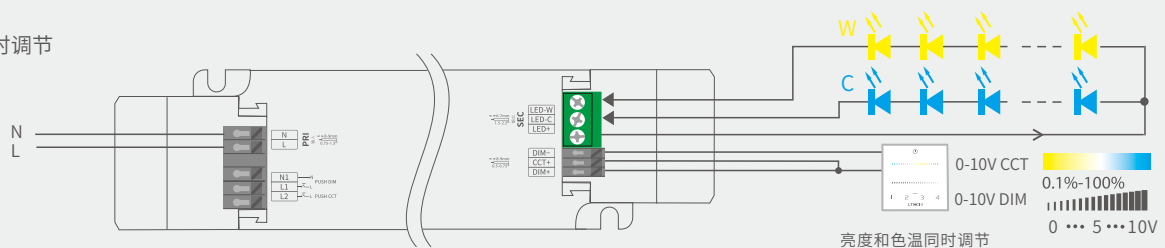
2、色温调节



3、亮度和色温分别调节

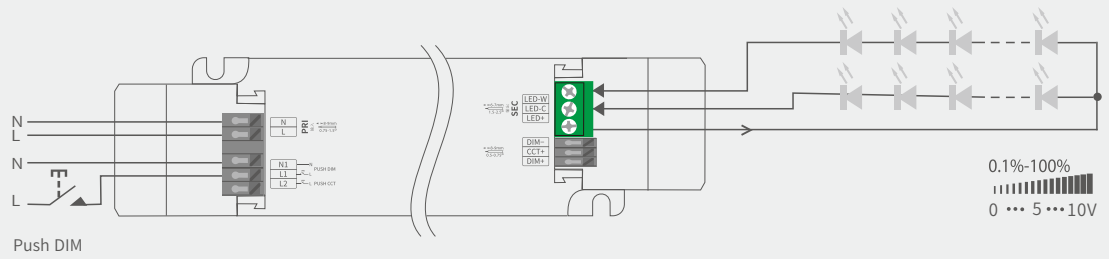


4、亮度和色温同时调节

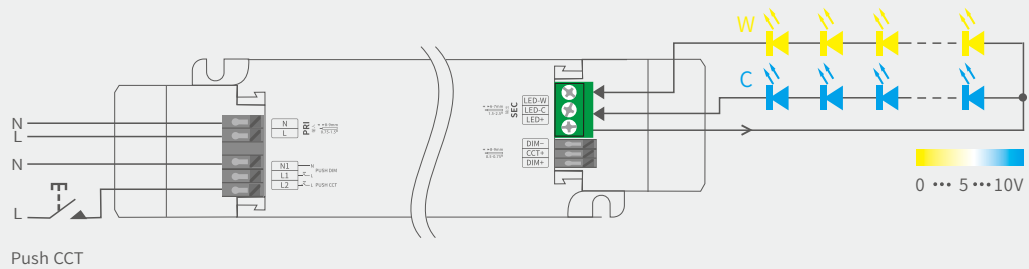


Push DIM/CCT连接方式

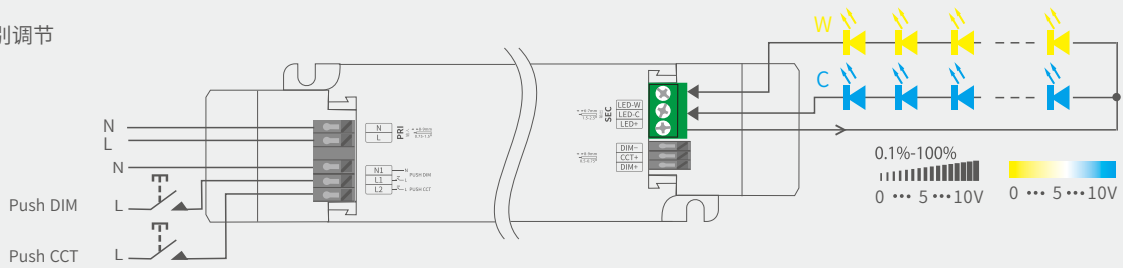
1、亮度调节



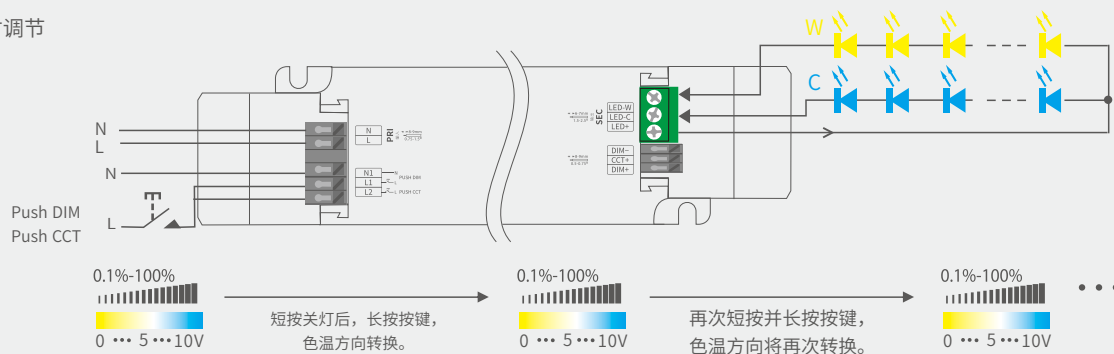
2、色温调节



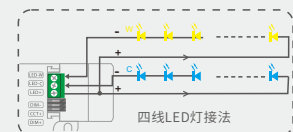
3、亮度和色温分别调节



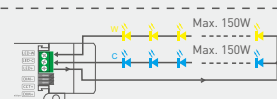
4、亮度和色温同时调节



* 调光接口优先级为：首先0-10V，然后Push DIM/CCT。



* 采用恒功率程序设计，色温调节全程能保持亮度一致，电源可连接额定功率两倍的负载。
150W电源，可连接150W×2CH的负载，恒功率设计，两路总功率会保持在150W以内。



Push DIM/CCT



复位开关

DIM

- 开关控制: 短按.
- 无级调光: 长按.
- 每隔一次长按, 明暗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.

CCT

- 色温调节: 长按.
- 每隔一次长按, 色温会向相反方向调整.
- 色温记忆: 当再次开关时, 灯光会回到先前调整的色温水平.

* 适用于Push DIM/CCT连接方式的亮度调节、色温调节及亮度与色温单独调节。



复位开关

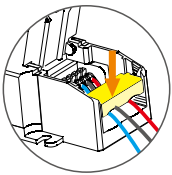
DIM/CCT

- 开关控制: 短按.
- 无级调光调色: 长按.
- 短按关灯后, 长按按键, 色温向相反方向调整.
- 调光记忆: 当再次开关时, 灯光会回到先前调整的亮度水平.

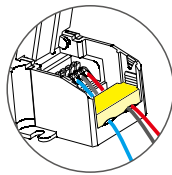
* 适用于Push DIM/CCT连接方式的亮度与色温同时调节

保护盖应用图

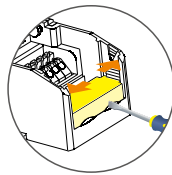
压线板



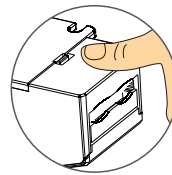
向下推压线板, 可固定住线。



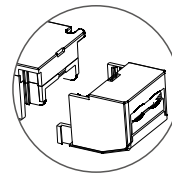
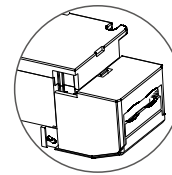
向外推侧板的同时, 用工具撬即可拆下压线板。



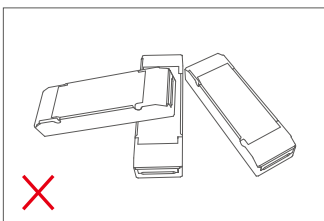
保护盖的拆装



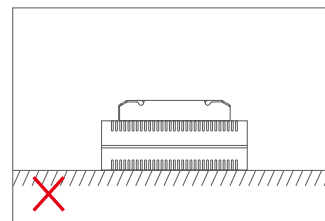
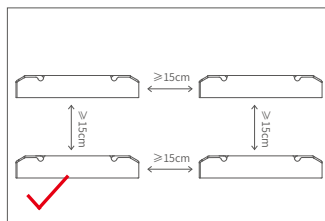
在底部左右掰动, 即可将保护盖拆下。



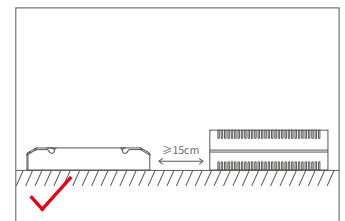
安装注意事项



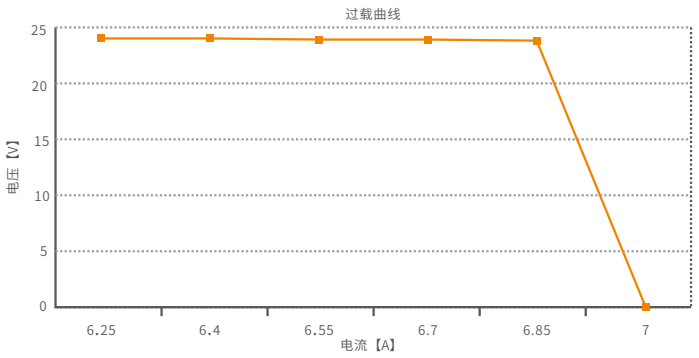
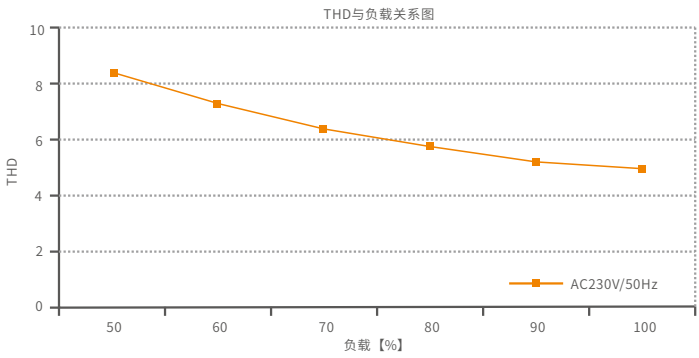
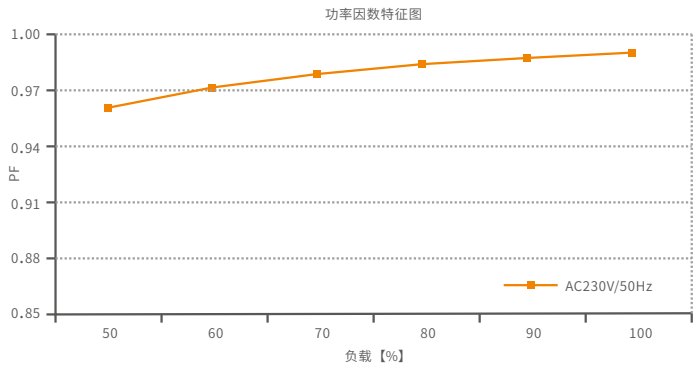
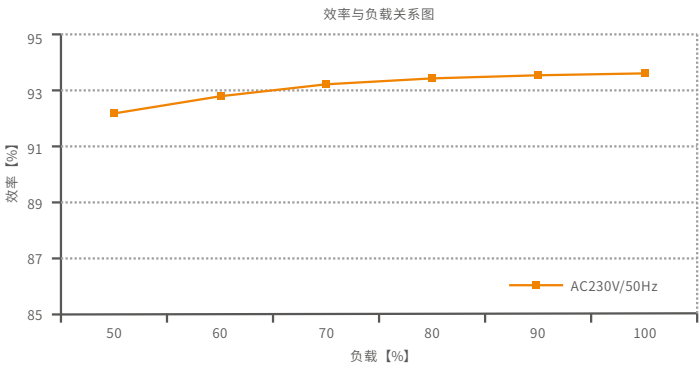
请勿将产品堆叠摆放, 产品与产品间隔距离应 $\geq 15\text{cm}$, 避免影响产品散热和使用寿命。



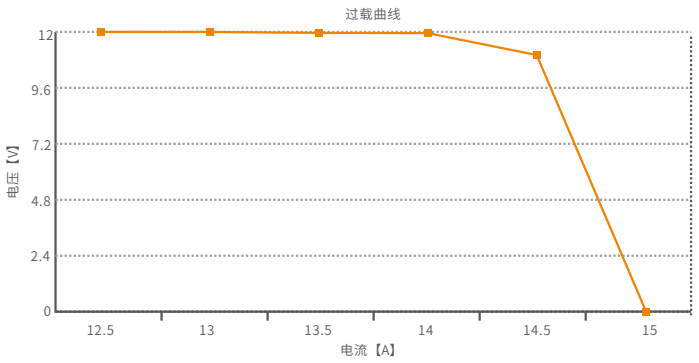
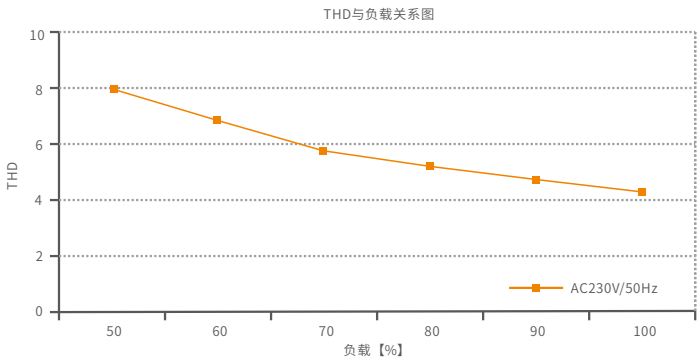
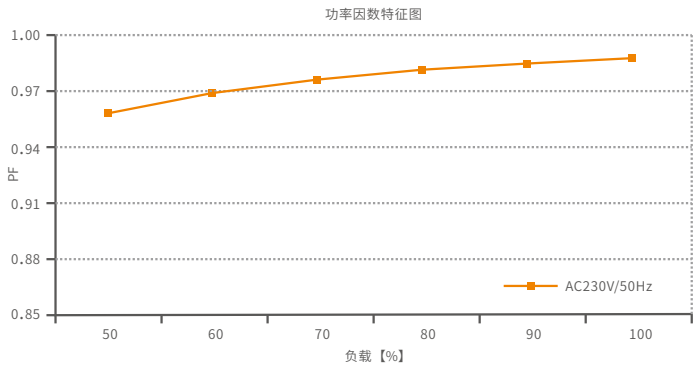
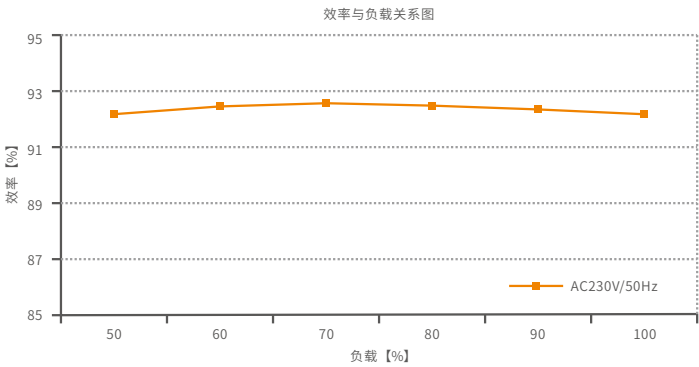
请勿将产品置于电源上方, 与电源间隔距离应 $\geq 15\text{cm}$, 避免影响产品散热而减少使用寿命。



关系图表



LM-150-24-G2A2



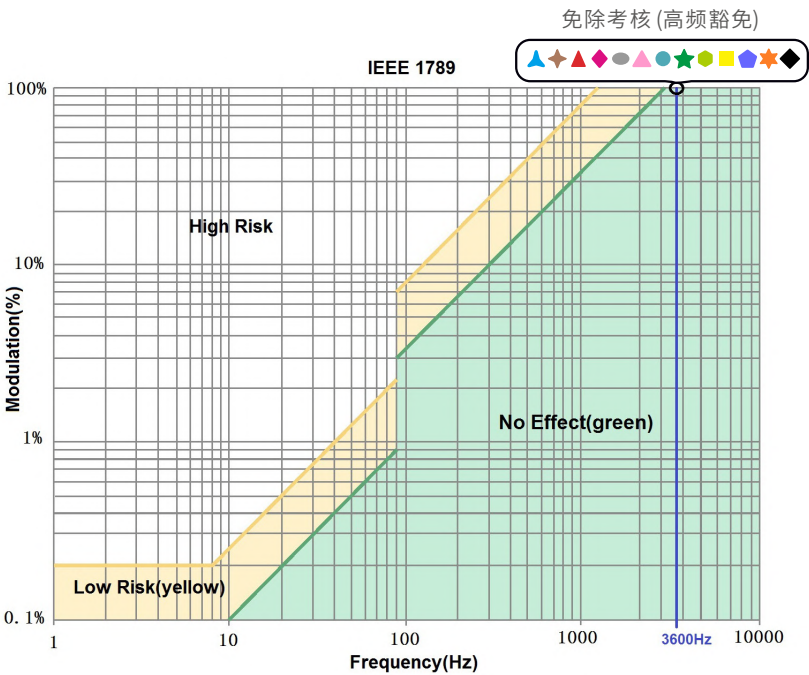
LM-150-12-G2A2

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 (%)
$f \leq 8\text{Hz}$	0.2
$8\text{Hz} < f \leq 90\text{Hz}$	$0.025 \times f$
$90\text{Hz} < f \leq 1250\text{Hz}$	$0.08 \times f$
$f > 1250\text{Hz}$	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 (%)
$f \leq 10\text{Hz}$	0.1
$10\text{Hz} < f \leq 90\text{Hz}$	$0.01 \times f$
$90\text{Hz} < f \leq 3125\text{Hz}$	$(0.08/2.5) \times f$
$f > 3125\text{Hz}$	免除考核 (高频豁免)

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



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

- 请由具有专业资格的人员进行调试安装;
 - 雷特产品 (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;
 - 请检查使用的工作电压是否符合产品的参数要求;
 - 使用的电线直径大小必须能够负载连接的LED灯具, 并确保接线牢固;
 - 通电调试前, 应确保所有接线正确, 以避免因接线错误而导致灯具损坏;
 - 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, 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	2020.04.22	正稿	黄韵婷
A1	2020.12.16	更新关系图表；P1增加50000寿命描述	黄韵婷
A2	2021.12.10	更新产品丝印;接线图色温面板改为ECT2面板	刘伟丽