

Intelligent Tunable White LED Driver (constant voltage)

- Small size and light weight. The housing is made from V0 flame retardant PC materials from SAMSUNG/COVESTRO.
- 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.
- 2 SELV output channels with common anode.
- Constant power design, adjust different color temperature to keep the same brightness.
- Dimming from 0~100%, down to 0.1%.
- With soft-on and fade in function, visual more comfortable.
- Color temperature adjusting range: 2700-6500K
- Automatic recognition of 0-10V, 1-10V input signal.
- Ultra-low consumption of 0-10V ports: < 0.05mA.
- Innovative thermal management technology, intelligent power life protection.
- Over-heat / Over voltage / Over load / Short circuit protection, recover automatically.
- Fully-protected plastic housing with design of dismountable end cover.
- Compliant with Safety Extra Low Voltage standard.
- Suitable for indoor I / II / III type lamps application.
- Up to 50,000-hour life time.
- 5 years warranty (Rubycon capacitor).

Flicker-Free

IEEE 1789

High frequency exemption level

Dimmable:

0.1%-100%

5 in 1 DIM & CT adjustment

0-10V

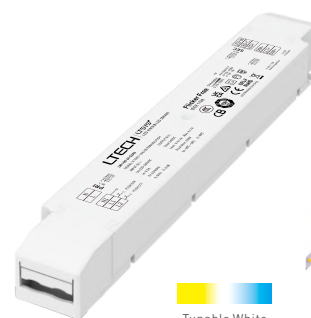
0-10V

10V PWM

RX

Push

Ultra-low consumption of 0-10V ports: < 0.05mA.



Tunable White



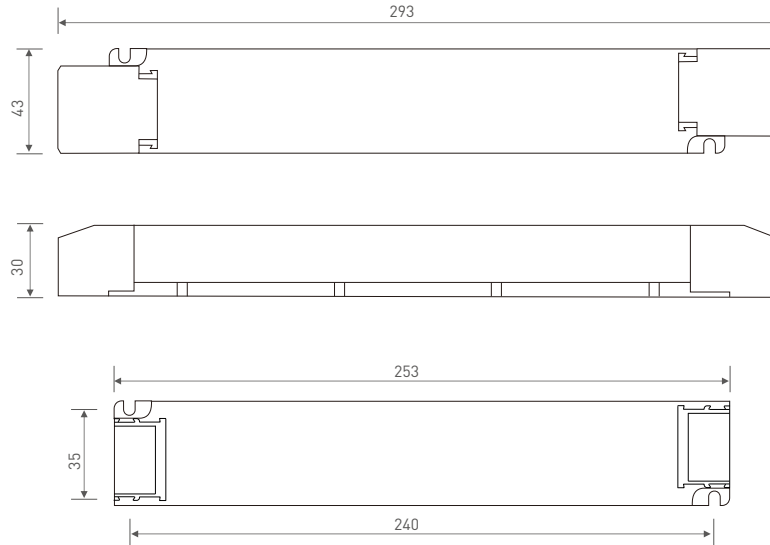
Specification

Model		LM-75-12-G2A2		LM-75-24-G2A2		LM-100-24-G2A2	
OUTPUT	Output Voltage	12Vdc		24Vdc			
	Output Voltage Range	12Vdc ±0.5Vdc		24Vdc ±0.5Vdc			
	Output Current	Max. 6.25A		Max. 3.125A		Max. 4.17A	
	Output Power	Max. 75W				Max. 100W	
	Output Power Range	0~75W				0~100W	
	Strobe Level	High frequency exemption level.					
	Dimming Range	0~100%, dimming depth: Max. 0.1%					
	Overload Power Limitation	≥102%					
	Ripple & Noise	≤200mV		≤300mV			
	PWM Frequency	3600Hz					
INPUT	Dimming Interface	0-10V(1-10V/10V PWM/RX) DIM/CCT, Push DIM/CCT					
	Input Voltage	220-240Vac					
	Frequency	50/60Hz					
	Input Current	Max. 0.4A/230Vac				Max. 0.5A/230Vac	
	Power Factor	PF>0.97/230Vac, at full load				PF>0.98/230Vac, at full load	
	THD	≤14% at 230Vac, at full load				≤12% at 230Vac, at full load	
	Efficiency [typ.]	91%		92%		93%	
	Inrush Current[typ.]	Cold start 30A at 230Vac				Cold start 45A at 230Vac	
	Control surge capability	L-N:2KV					
	Leakage Current	Max. 0.5mA					
ENVIRONMENT	Working Temperature	ta: -20°C ~ 50°C tc: 80°C					
	Working Humidity	20 ~ 95%RH, non-condensing					
	Storage Temp., Humidity	-40°C ~ 80°C, 10~95%RH					
	Temp. Coefficient	±0.03%/°C (0-50°C)					
	Vibration	10-500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes					
PROTECTION	Over-heat Protection	Intelligently adjusting or turning off the output current if the PCB temperature ≥110°C, auto recovers					
	Over Voltage Protection	Shut down the output when non-load voltage ≥13V, re-power on to recover after fault condition is removed		Shut down the output when non-load voltage ≥26V, re-power on to recover after fault condition is removed			
	Over Load Protection	Shut down the output when current load ≥102%, auto recovers.					
	Short Circuit Protection	Shut down automatically if short circuit occurs, auto recovers.					
SAFETY & EMC	Withstand Voltage	I/P-O/P: 3750Vac					
	Isolation Resistance	I/P-O/P: 100MΩ/500VDC/25°C/70%RH					
	Safety Standards	CCC	China	GB19510.1, GB19510.14			
		CB	CB member states	IEC61347-1, IEC61347-2-13			
		RCM	Australia	AS 61347-1, AS 61347-2-13			
		UKCA	Britain	BS EN 61347-2-13:2014+A1:2017, BS EN 61347-1:2015+A1:2021			
		TUV	Germany	EN61347-1, EN61347-2-13, EN62493			
		CE	European Union	EN61347-1, EN61347-2-13, EN62384			
	EMC Emission	CCC	China	GB/T17743, GB17625.1			
		RCM	Australia	EN55015, EN61000-3-2, EN61000-3-3, EN61547			
		UKCA	Britain	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			
		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	Dimension	293×43×30mm(L×W×H)					
	Packing	296×44×33mm(L×W×H)					
	Weight(G.W.)	300g±10g					

*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 (hiccup 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.), then we can prepare the special programs.

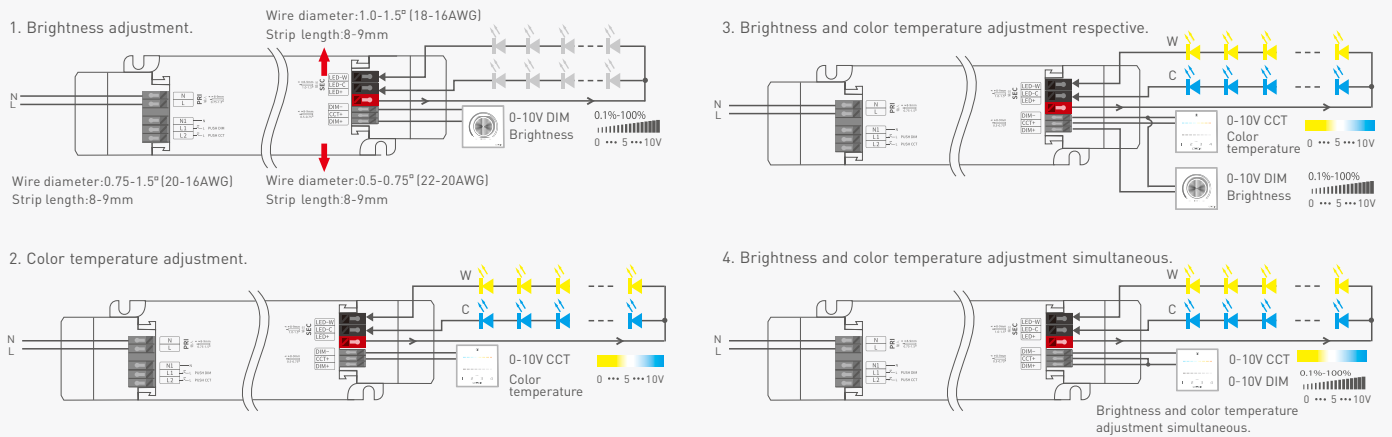
Dimensions

Unit: mm

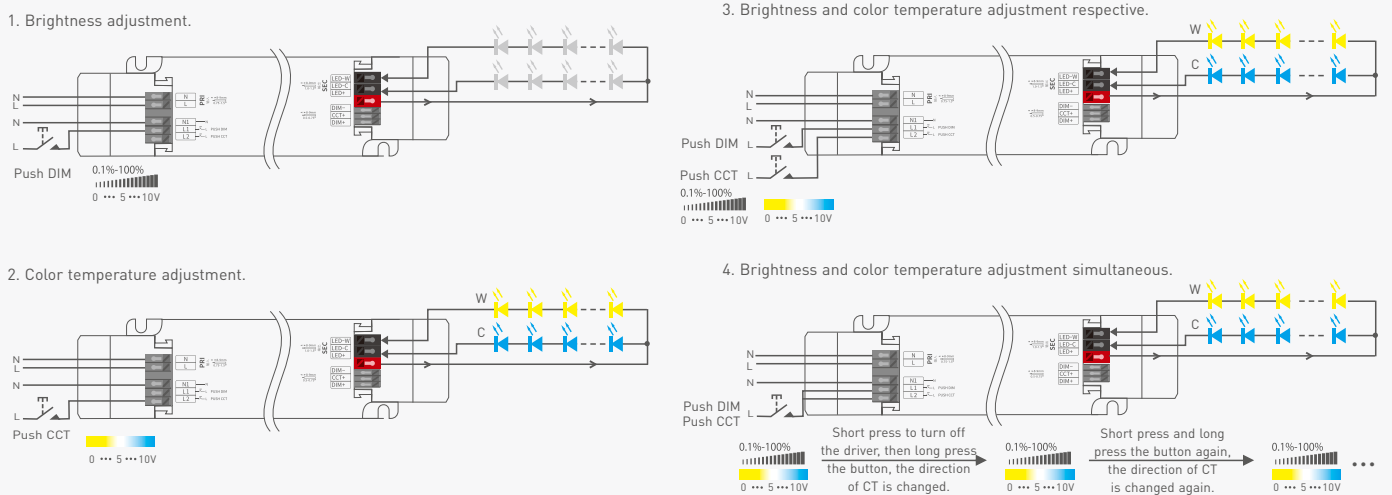


Wiring Diagram

0-10V Connection

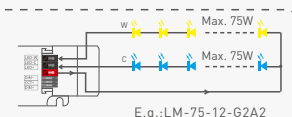


Push DIM/CCT Connection

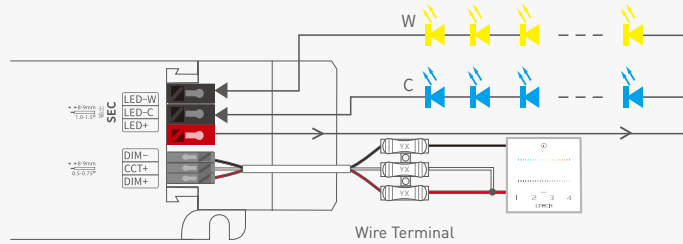


* Dimming interface priority: First 0-10V, next Push DIM/CCT.

* Adopting constant power program design, it keeps the same brightness in color temperature dimming, twice the rated power load can be connected.
75W driver, 75W X 2CH load can be connected, the total power of the 2 channels will be kept in 75W.
100W driver, 100W X 2CH load can be connected, the total power of the 2 channels will be kept in 100W.



Wire Terminal Connection (used in signal port only)



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, the color temperature level goes 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 changing color: Long press.
- With every other long press, the CT goes to the opposite direction.
- Dimming memory: Brightness will be the same as previously adjusted when turning on again.

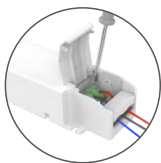
* Applicable to brightness and CT adjustment simultaneous of Push DIM/CCT connection.

Protective Housing Application Diagram

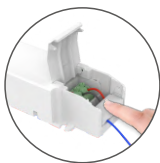
Tension plate



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

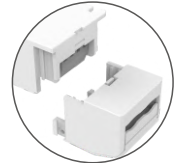


2. Connect to electrical wires with a screwdriver as wiring diagram shows.



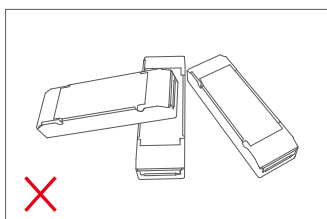
3. Press down the tension plate to fix the electrical wires, then close the protective housing.

Remove the protective housing

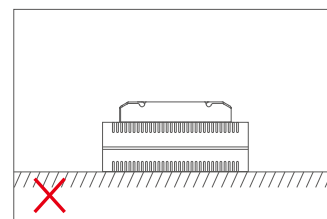
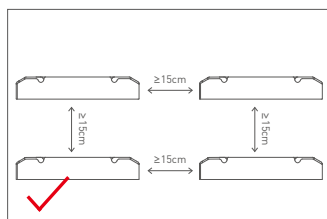


Pull the housing left and right from the bottom to remove it.

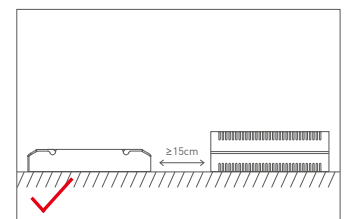
Installation Precautions



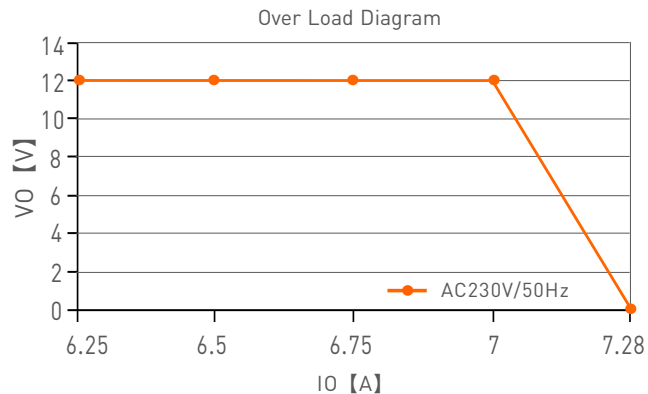
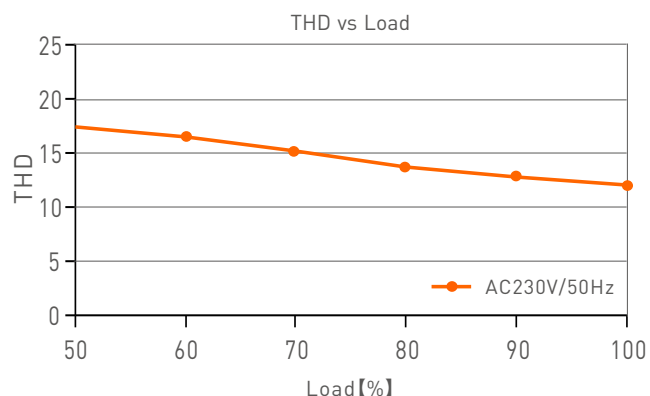
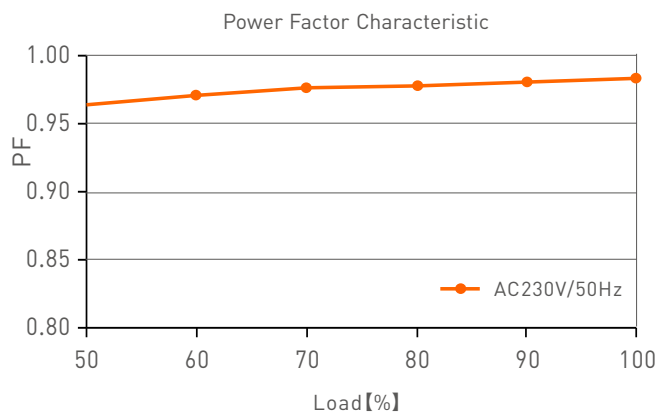
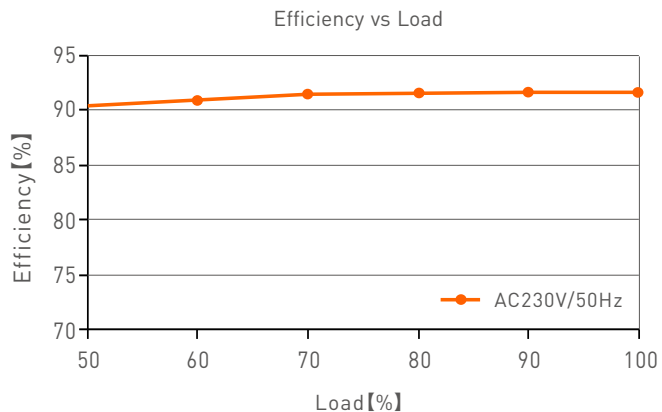
Please do not stack the products. The distance between two products should be $\geq 15\text{cm}$ so as not to affect heat dissipation and the lifespan of the products.



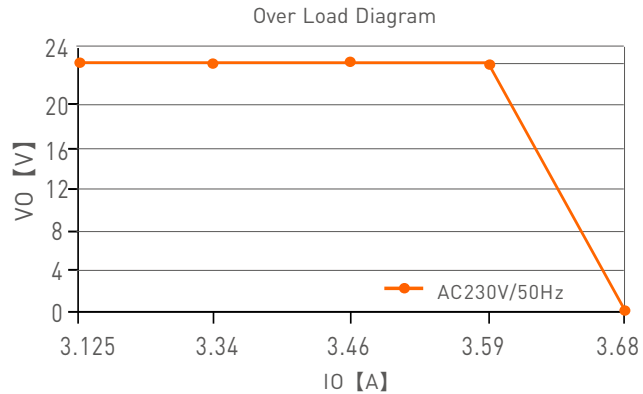
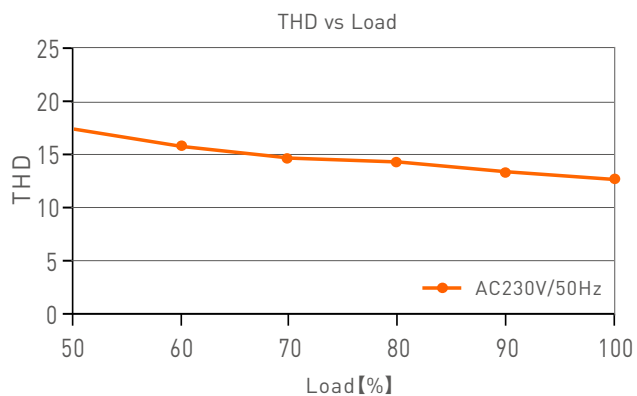
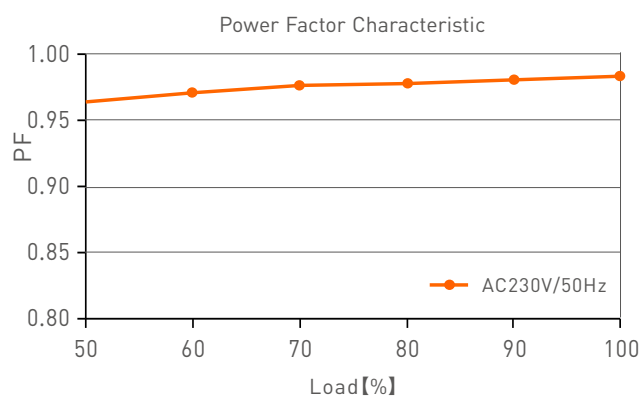
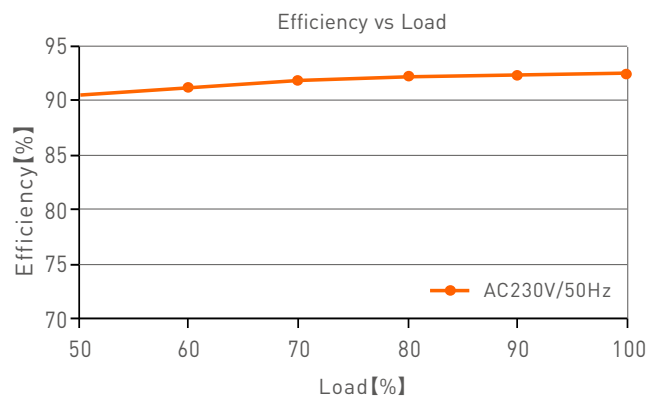
Please not place the products on LED drivers. The distance between the product and the driver should be $\geq 15\text{cm}$ so as not to affect heat dissipation and shorten the lifespan of the products.



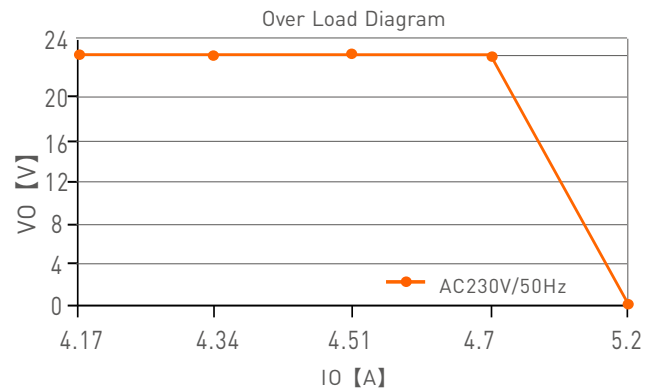
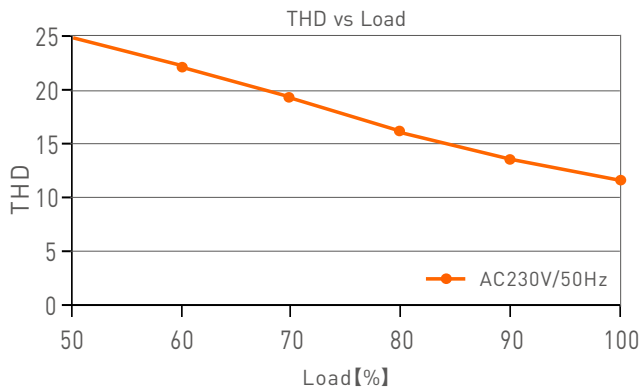
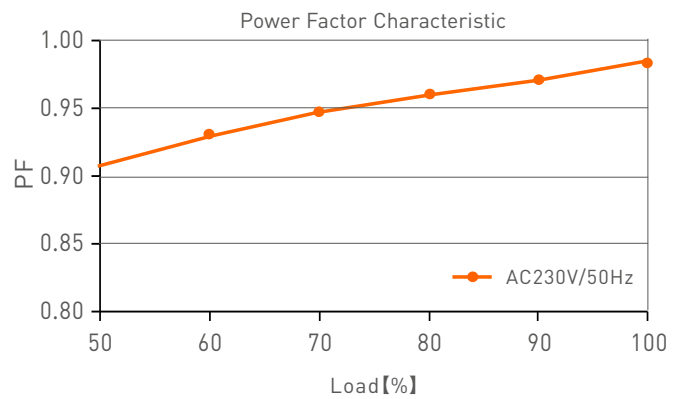
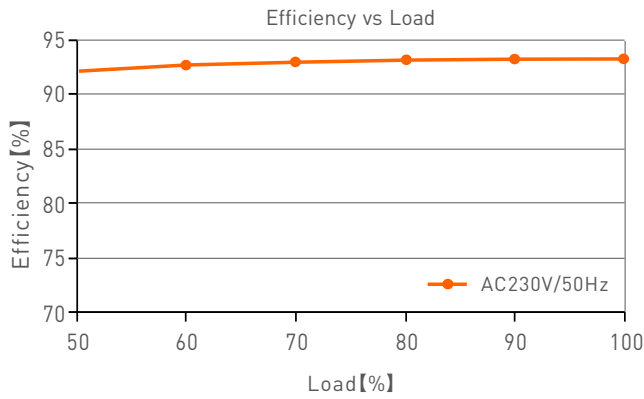
Relationship Diagrams



LM-75-12-G2A2



LM-75-24-G2A2



LM-100-24-G2A2

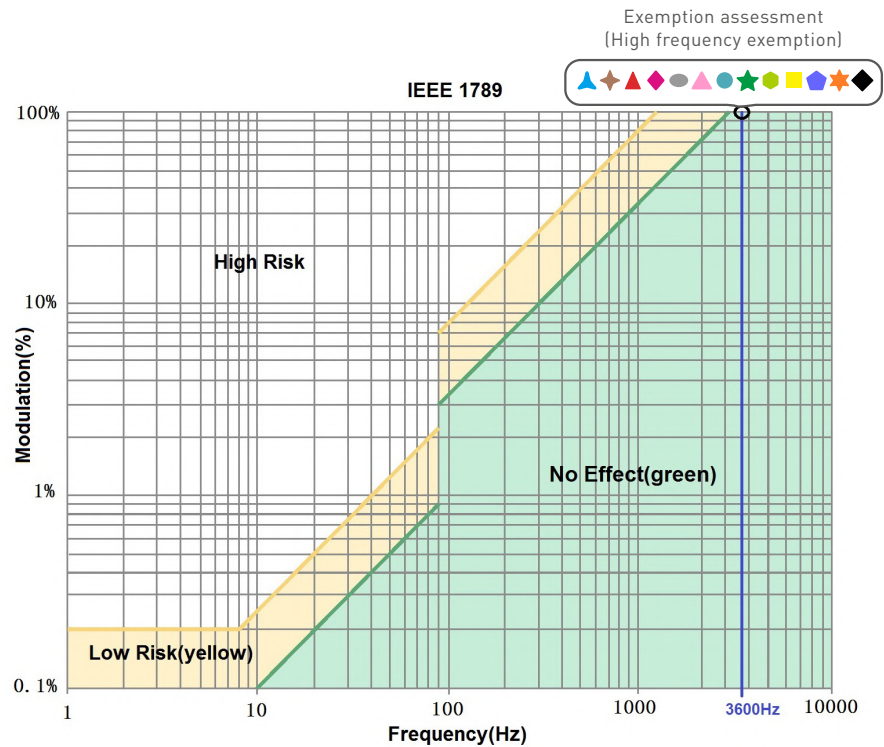
Flicker Test Form

IEEE 1789

Limit of Modulation in low risk area	
Waveform frequency of optical output	limit [%]
$f \leq 8\text{Hz}$	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 of Modulation in no effect area	
Waveform frequency of optical output	limit [%]
$f \leq 10\text{Hz}$	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%



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	2019.06.25	Original version	Huang Yunting
A1	2020.03.05	Update the flicker test form	Huang Yunting
A2	2020.06.08	Update P1 product feature description	Huang Yunting
A3	2021.12.10	The color temperature panel of the wiring diagram is changed to the ECT2 panel	Liu Weili
A4	2022.06.02	The connection diagram of the terminal with wire is added to the wiring diagram	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
- 共阳极二路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, 让人眼视觉更舒服
- 色温调节范围2700-6500K
- 自动识别0-10V、1-10V输入
- 0-10V 端口超低消耗<0.05mA
- 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
- 符合SELV安全特低电压标准
- 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
高频豁免级别

Dimmable:
0.1%-100%



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



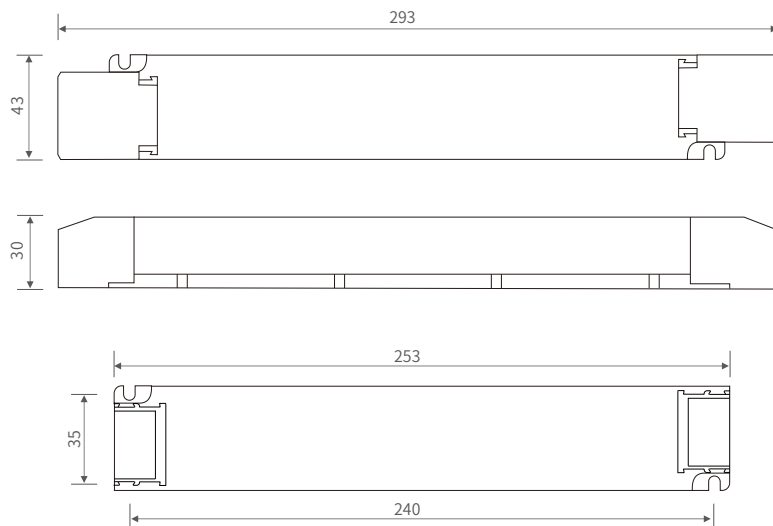
技术参数

型号		LM-75-12-G2A2		LM-75-24-G2A2		LM-100-24-G2A2	
输出	输出电压	12Vdc		24Vdc			
	输出电压范围	12Vdc ± 0.5Vdc		24Vdc ± 0.5Vdc			
	输出电流	Max. 6.25A		Max. 3.125A		Max. 4.17A	
	输出功率	Max. 75W				Max. 100W	
	输出功率范围	0~75W				0~100W	
	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	≤200mV		≤300mV			
	PWM频率	3600Hz					
输入	调光接口	0-10V(1-10V/10V PWM/RX) DIM/CCT, Push DIM/CCT					
	输入电压	220-240Vac					
	频率范围	50/60Hz					
	输入电流	Max. 0.4A/230Vac				Max. 0.5A/230Vac	
	功率因素	PF>0.97/230Vac (满载)				PF>0.98/230Vac (满载)	
	谐波THD	230Vac@THD≤14% (满载)				230Vac@THD≤12%(满载)	
	效率(Typ.)	91%		92%		93%	
	浪涌电流	冷启动30A/230Vac				冷启动45.2A/230Vac	
	抗浪涌	L-N: 2KV					
	漏电流	Max. 0.5mA					
环境	工作温度	ta: -20 ~ 50°C tc: 80°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(0-50°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≥13V, 关闭输出, 异常排除后上电恢复		空载电压≥26V, 关闭输出, 异常排除后上电恢复			
	过载保护	负载电流≥102%, 关闭输出，异常排除自动恢复					
	短路保护	输出线路短路自动关闭，检测正常后自动恢复					
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	CCC	中国	GB19510.1, GB19510.14			
		CB	CB成员国	IEC61347-1, IEC61347-2-13			
		RCM	澳洲	AS 61347-1, AS 61347-2-13			
		UKCA	英国	BS EN 61347-2-13:2014+A1:2017, BS EN 61347-1:2015+A1:2021			
		TUV	德国	EN61347-1, EN61347-2-13, EN62493			
		CE	欧盟	EN61347-1, EN61347-2-13, EN62384			
	电磁兼容发射	CCC	中国	GB/T17743, GB17625.1			
		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			
		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					
	频闪测试标准	IEEE 1789					
其他	产品尺寸	293×43×30mm(L×W×H)					
	包装尺寸	296×44×33mm(L×W×H)					
	产品重量(G.W)	300g±10g					

* 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

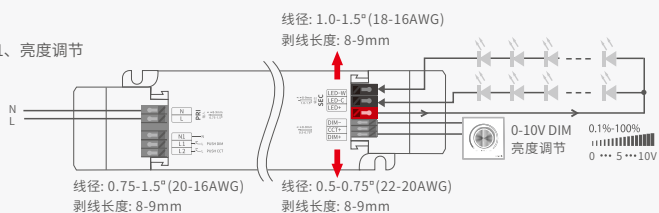
单位: mm



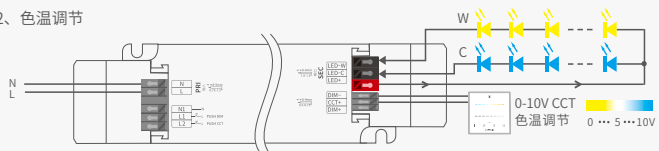
连接应用图

0-10V 连接方式

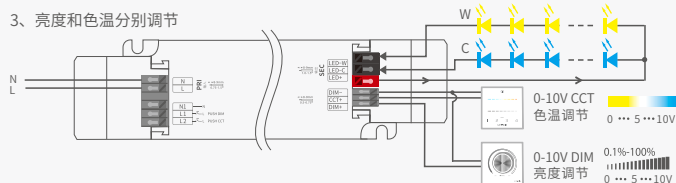
1、亮度调节



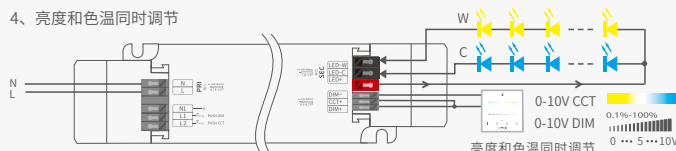
2、色温调节



3、亮度和色温分别调节

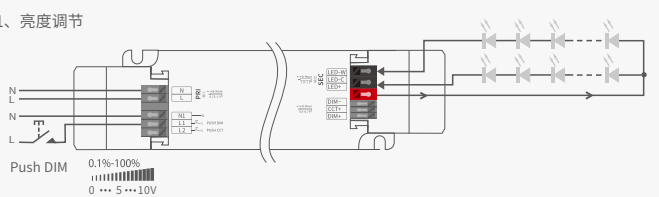


4、亮度和色温同时调节

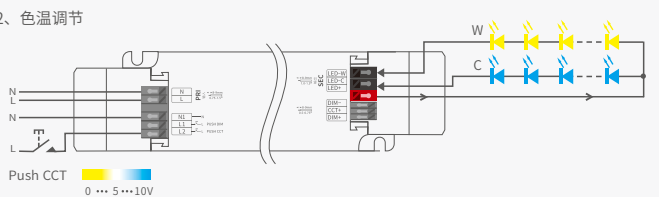


Push DIM/CCT连接方式

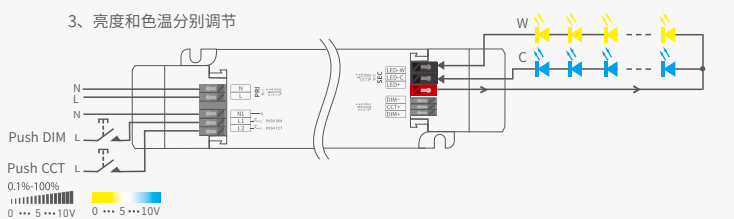
1、亮度调节



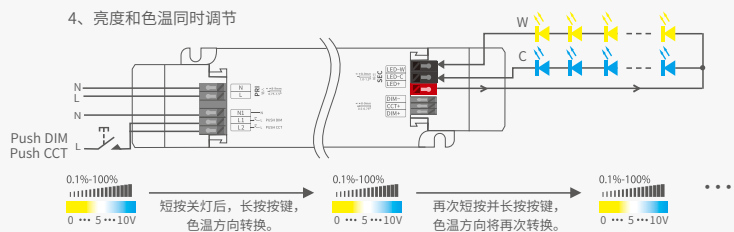
2、色温调节



3、亮度和色温分别调节



4、亮度和色温同时调节

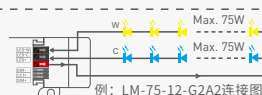


* 调光接口优先级为: 首先0-10V, 然后Push DIM/CCT。

* 采用恒功率程序设计, 色温调节全能保持亮度一致, 电源可连接额定功率二倍的负载。

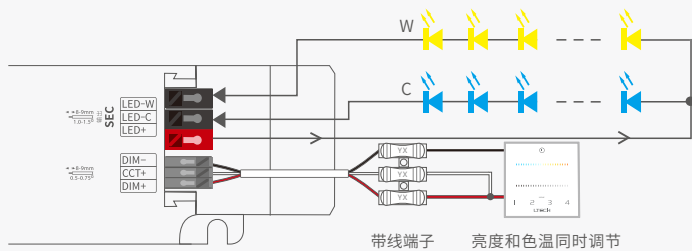
75W电源, 可连接75WX2CH的负载, 两路总功率会保持在75W以内。

100W电源, 可连接100WX2CH的负载, 两路总功率会保持在100W以内。



例: LM-75-12-G2A2连接图

带线端子连接示意图（仅用于信号端）



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.

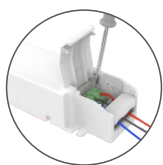
* 适用于Push DIM/CCT连接方式的亮度与色温同时调节

保护盖应用图

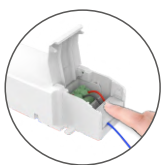
压线板



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。

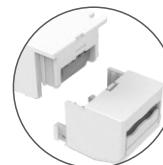


3. 向下按压压线板固定住线路上保护盖即可。

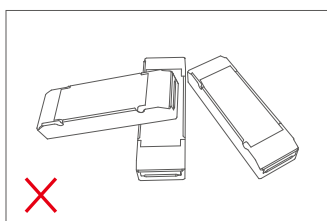
保护盖的拆装



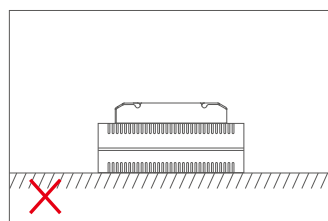
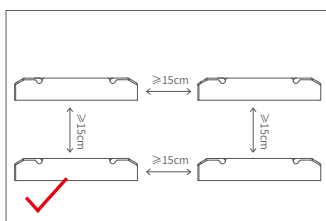
在底部左右掰动, 即可将保护盖拆下。



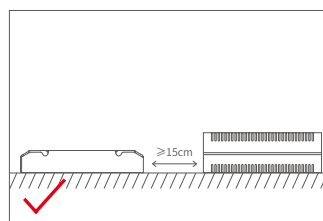
安装注意事项



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

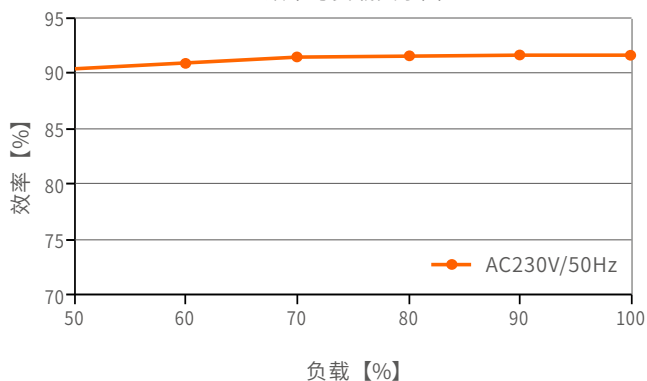


请勿将产品置于电源上方, 与电源间隔距离应 $\geq 15\text{cm}$, 避免影响产品散热而减少使用寿命。

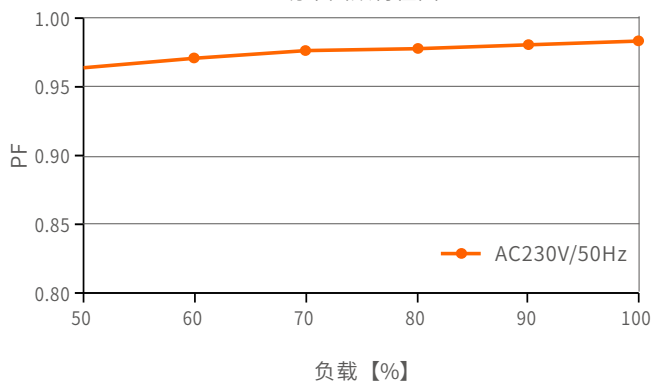


关系图表

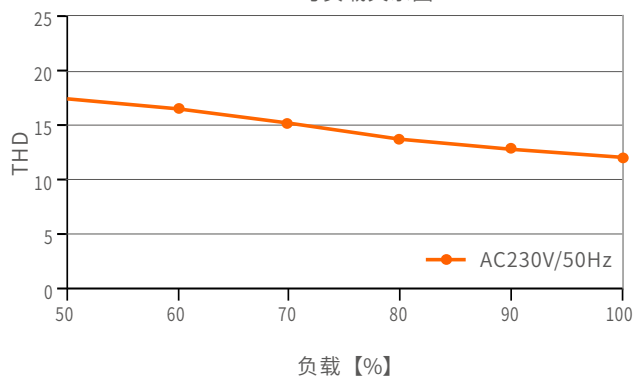
效率与负载关系图



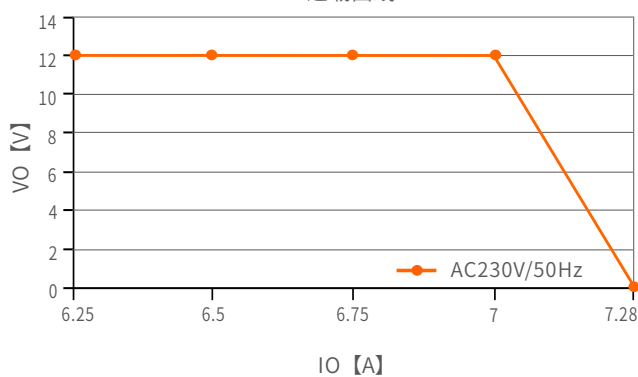
功率因数特征图



THD与负载关系图

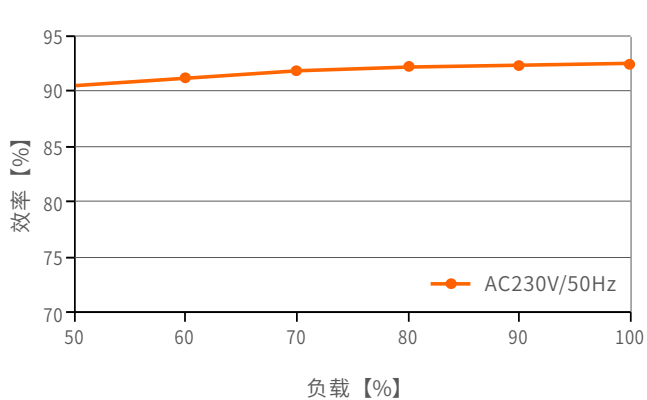


过载曲线

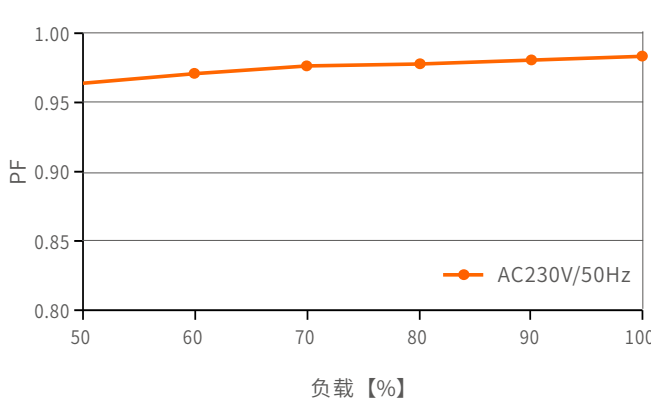


LM-75-12-G2A2

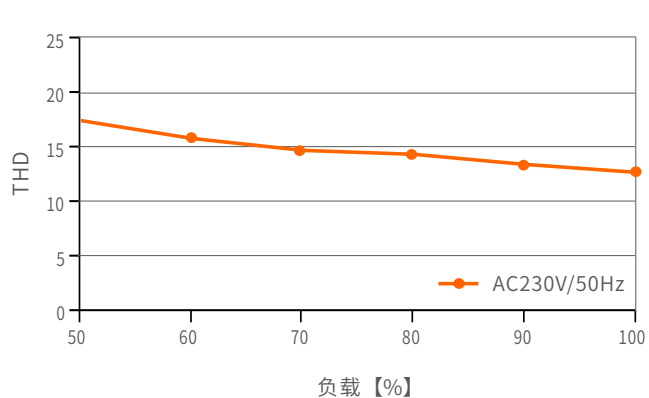
效率与负载关系图



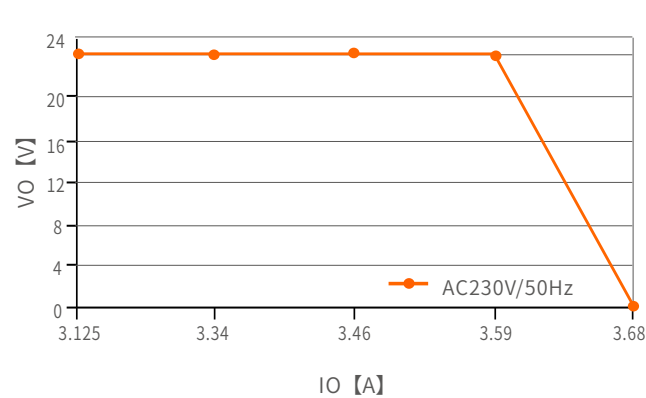
功率因数特征图



THD与负载关系图

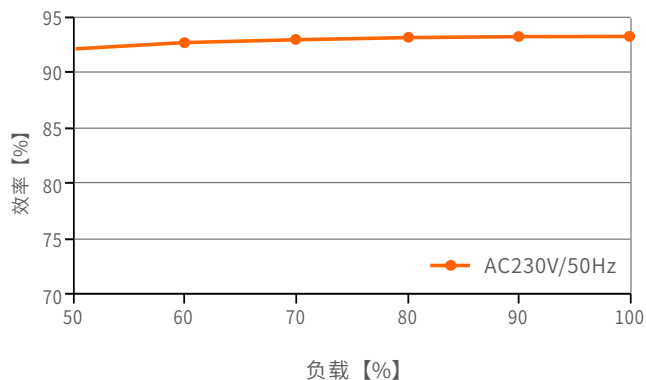


过载曲线

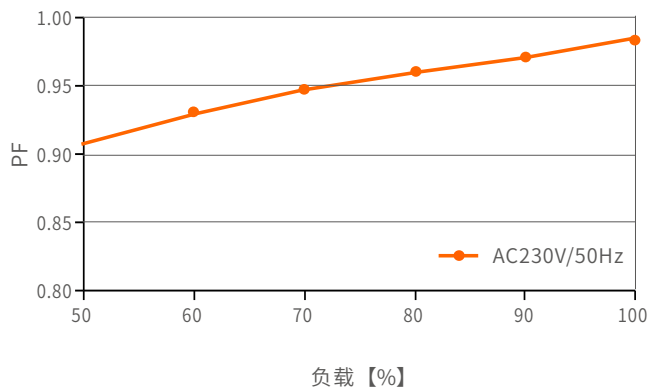


LM-75-24-G2A2

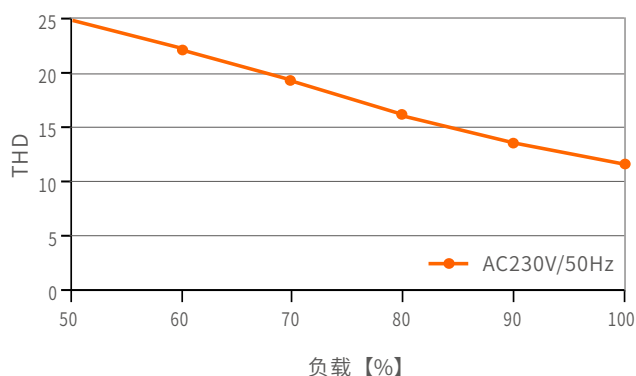
效率与负载关系图



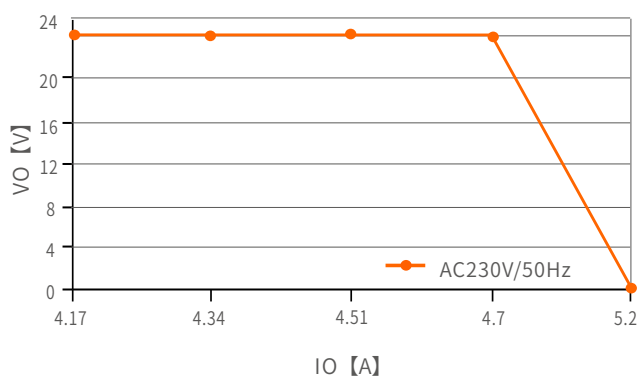
功率因数特征图



THD与负载关系图



过载曲线



LM-100-24-G2A2

频闪测试表

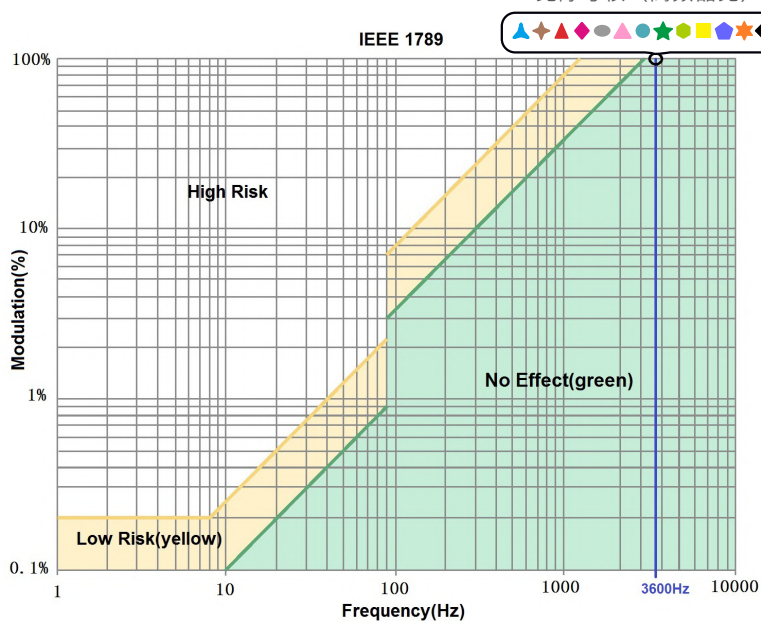
IEEE 1789

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 %

免除考核 (高频豁免)



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	2019.06.25	正稿	黄韵婷
A1	2020.03.05	更新频闪测试表	黄韵婷
A2	2020.06.08	更新P1产品特征描述	黄韵婷
A3	2021.12.10	更新产品丝印；接线图色温面板改为ECT2面板	刘伟丽
A4	2022.06.02	增加带线端子接线示意图	刘伟丽