

# LED Intelligent Driver (constant voltage)

- Small size and light weight. Adopt SAMSUNG/COVESTRO V0 flame resistant polycarbonate protective housings.
- The design of dismountable end cap allows you to adjust the length of housing depending on your needs.
- · Dimming interfaces: DALI-2, Push DIM.
- Dimming range: 0~100%, dimming down to 0.1%
- Flicker-free with high frequency exemption level in 0~100% dimming process.
- High-performance drivers: Effeciency 88%, PF>0.95, THD<8%.
- Comply with the EU's ErP Directive, stand-by power consumption < 0.5W.
- The secure and reliable design for signal isolation.
- Innovative thermal management technology intelligently protects the lifetime the driver.
- Over-heat / Over voltage / Over load / Short circuit protection, recover automatically.
- DALI bus standard IEC62386-101,102,207.
- Suitable for lamp applications of indoor  $\mathbb{I}/\mathbb{I}/\mathbb{I}$  types.
- Up to 50000-hour life time.
- 5 year warranty (Rubycon Capacitor).



Flicker-free IEEE 1789 Achieve high frequency exemption level.

Dimmable: 0.1%-100%





DALI

Push DIM





0.1 %



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## **Technical Specs**

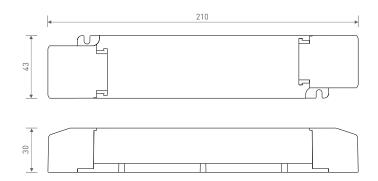
Model		LM-36-	24-G1D2		LM-36-12-G1D2		
	Output Voltage	24Vdc			12Vdc		
OUTPUT	Output Voltage Range	24Vdc ±	0.5Vdc		12Vdc ± 0.5Vdc		
	Output Current	Max. 1.5	A		Max. 3A		
	Output Power	Max. 36\	V				
	Output Power Range	0-36W					
	Strobe Level	High frequency exemption level.					
	PWM Frequency	3600Hz					
	Dimming Range	0-100%, dimming down to 0.1%					
	Overload Power Limitation	>102%					
	Ripple & Noise	Switch ripple < 200mV, noise < 500mV Switch ripple < 200mV, noise < 800mV					
INPUT	Dimming Interface	DALI-2, Push DIM					
	Input Voltage	200-240Vac / 200-280Vdc					
	Frequency	50/60Hz					
	Input Current		6A/230Vac		Max. 0.28A/230Vac		
	Power Factor	PF>0.95/230Vac, at full load					
	THD	<8% at 230Vac, at full load					
	Efficiency (typ.)	88% 87%					
	Standby Power Loss	88% <0.5W					
	Inrush Current(typ.)	Cold start 25A at 230Vac					
	Control Surge Capability						
	Leakage Current	L-N:2KV					
		Max. 0.5mA  ta: -20°C ~ 50°C tc: 90°C					
	Working Temperature						
ENDERONMENT	Working Humidity	20 ~ 95%RH, non-condensing					
ENVIRONMENT	Storage Temperature Humidity						
	Temperature Coefficient	±0.03%/°C [-20-50°C]					
	Vibration	10~500Hz, 2G 12min./1cycle, 72 min for X, Y and Z axes respectively .					
	Over-heat Protection	Intelligently adjust or turn off the output current if the PCB temperature ≥110°C, and recover automatically.					
PROTECTION	Over Voltage Protection	Shut down the output when non-load voltage ≥ 28V, re-power on to recover after fault condition is removed.  Shut down the output when non-load voltage ≥ 16V, re-power on to recover after fault condition is removed.					
FIGURE	Over Load Protection	Shut down the output when current load≥102%, and recover automatically.					
	Short Circuit Protection	Enter hiccup mode if short circuit occurs, and recover automatically.					
	Withstand Voltage	I/P-0/P:3750Vac					
	Insulation Resistance	I/P-0/P:500VdC/25°C/70%RH≥100MΩ					
	Safety Standards	ccc	China	GB19510.1, GB19510.14			
		TUV	Germany	EN61347-1, EN61347-2-13, EN62493			
		CE	European Union	EN61347-1, EN61347-2-13, EN62384			
		KC	Korea	KC61347-1, KC61347-2-13			
		RCM	Australia	AS61347-1, AS61347-2-13			
		ENEC	Europe	EN61347-1, EN61347-2-13, EN62384			
SAFETY &		СВ	CB member states	IEC61347-1, IEC61347-2-13			
EMC		EAC	Russia	IEC61347-1, IEC61347-2-13			
	EMC Emission	ccc	China	GB/T17743, GB17625.1			
		CE	European Union	EN55015, EN61000-3-2, EN61000-3-3, EN61547			
		KC	Korea	KN15, KN61547			
		RCM	Australia	EN55015, EN61000-3-2, EN61000-3-3, EN61547			
		EAC	Russia	IEC62493, IEC61547, EH55015			
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11, EN61547					
	Strobe Test Standard	IEEE 1789					
	Weight(G.W.)	210g±10q					
OTHERS	Dimensions	210x43×30mm(L×W×H)					
		213×44×33mm(L×W×H)					
	Package Size  Carton Size			Inco/ctn 9kg±5%/ctn			
	Carton Size	440×218×235mm(L×W×H) 40pcs/ctn 9kg±5%/ctn  rrent-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					

<sup>\*</sup> 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.), then we



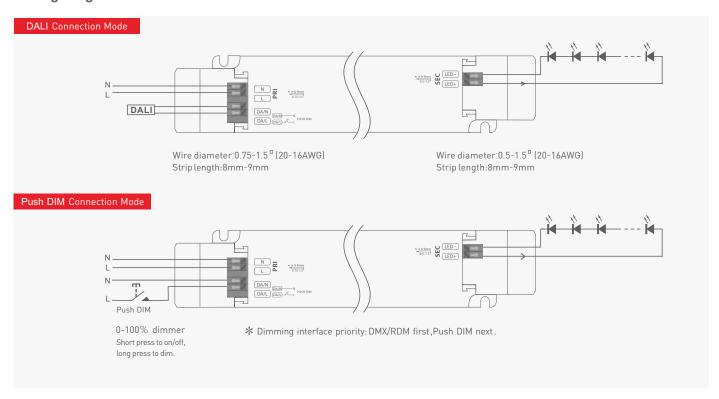
### **Product Size**

Unit: mm





## **Wiring Diagram**



#### **Push DIM**

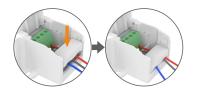


Reset switch

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

## **Protective Housing Application Diagram**

Tension plate



Push the tension plate down to fix the electric wires.



Push the side plate outwards and remove the tension plate by prying it up with a tool at the same time.

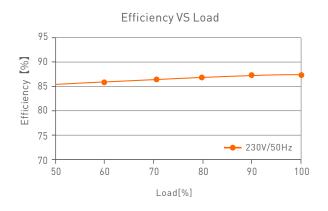
#### Remove the protective housing

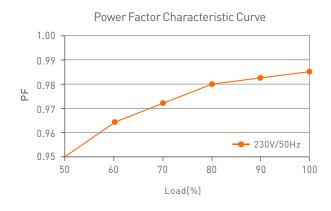


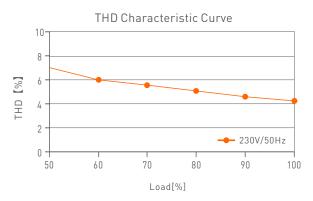
Pull the bottom left and right from the bottom to remove it.

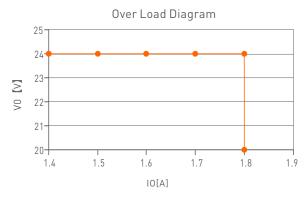


## **Relationship Diagrams**



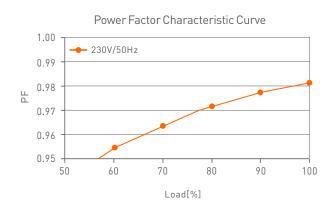


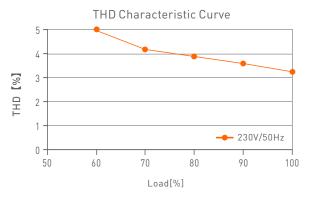


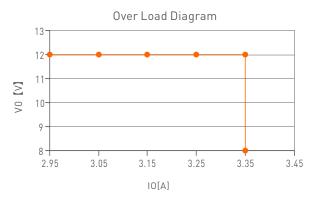


LM-36-24-G1D2









LM-36-12-G1D2



#### Flicker Test Table Modulation Area High Frequency Exemption Area Brightness 100.00% IFFF 1789 ▲ 0 .1% 1% Limit Value of Modulation in Low Risk Are 5% • 10% 20% IEEE 1789 High Risk 30% 10.00% 40% Limit Value of Modulation in No Effect Areas **★** 50% 60% 70% Modulation(%) 80% 90% IEEE 1789 No Effect 100% 1.00%

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.

100 Frequency(Hz) 1000

3125

10000

10

#### **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.

1EEE 1789 Low Risk 0.10%

- 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
Α0	2021.03.22	Original version	Xu Shujun
A1	2022.06.01	Added"Max. 0.28A/230Vac"to P1	Xu Shujun