

# Intelligent Tunable White LED Driver (Constant Voltage)

- 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.
- Change the dimming interface, DALI address and other parameters on the NFC programmer or via the App, and sync the parameters to the driver.
- $\bullet\,\,$  Set the DALI group, scene in the advanced DALI template.
- DALI bus standard IEC62386-101, 102, 207, 209.
- Adopt constant power design that can adjust different color temperature while brightness remains the same.
- With soft-on and fade-in dimming function, enhancing your
- The whole dimming process is flicker-free with high frequency exemption level.
- Dimming from 0-100%, down to 0.01%.
- Comply with the EU's ErP Directive, networked standby<0.5W.</li>
- Overheat, over voltage, overload, short circuit protection and automatic recovery.
- Normal service life can reach 100,000 hours.
- 5-year warranty (Rubycon capacitor).





























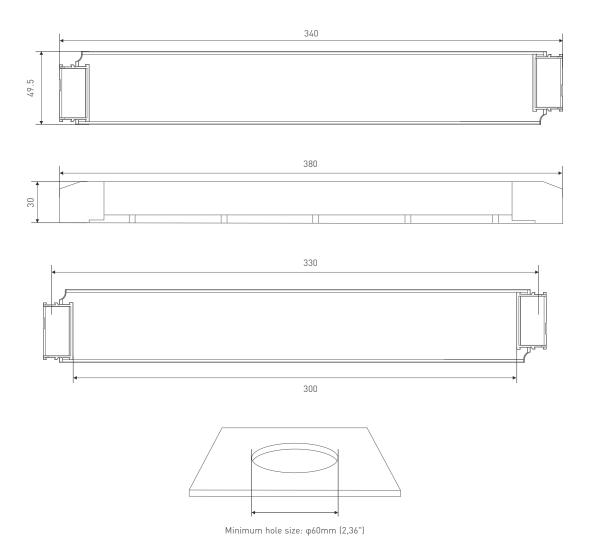
# **Technical Specs**

Model		LM 2/0.2/ C2D2					
wouet	Output Type	LM-240-24-G2D2					
Features	Output Type	Constant voltage					
	Dimming Interface	DALI-2 DT6/DT8, PUSH DIM/CCT					
	Output Feature	Isolation					
	Protection Grade	_	IP20				
	Insulation Grade		Class II (Suitable for class I/ II /III light fixtures)				
OUTPUT	Output Voltage	24Vdc					
	Output Voltage Range	24Vdc±0.5Vdc					
	Output Current	Max. 10A					
	Output Power	Max. 240W					
	Dimming Range	0~100%, down to 0.01%					
	Ripple(maximum)	200mVp-p					
	Voltage Accuracy	±5%					
	PWM Frequency	3600Hz (Default) / (NFC setting range 300-21600Hz)					
	DC Voltage Range	200-280Vdc					
	AC Voltage Range	198-264Vac					
	Input Voltage	220-240Vac					
	Frequency	50/60Hz					
INPUT	Input Current	Max. 1.18A/230Vac					
	Power Factor	PF>0.99/230Vac, at full load					
	THD	THD≤5%/230Vac, at full load					
	Efficiency (Typ.)	94%					
	Inrush Current	Cold start 55A(Test twidth=1200us tested under 50% Ipeak)/230Vac					
	Anti Surge	L-N: 2KV					
	Leakage Current	Max. 0.5mA					
	Working Temperature	ta: -20	~ 45°C tc: 86°C				
	Working Humidity	20 - 95%RH, non-condensing					
ENVIRONMENT	Storage Temperature/Humidity	-40 ~ 8	-40 ~ 80°C/10~95%RH				
	Temperature Coefficient	±0.03%/°C(0-50°C)					
	Vibration	10~500Hz, 2G 12min/1cycle, 72 min for X, Y and Z axes respectively					
	Overload Protection	Shut down the output when rated power \$102-125%, auto recovers					
	Overheat Protection	Intelligently adjust or turn off the output current if the PCB temperature \$110°C, and recover automatically					
PROTECTION	Overvoltage Protection	Shut down the output when voltage \$28V, 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		P: 100MΩ/500VDC/25	°C/70%₽H			
	modation resistance	CCC	China	GB19510.1, GB19510.14			
	Safety Standards	TUV	Germany	EN61347-1, EN61347-2-13, EN62493			
		CB	CB Member States	IEC61347-1, IEC61347-2-13			
		CE	European Union	EN61347-1, EN61347-2-13 EN62384			
		KC					
		EAC	Korea	KC61347-1, KC61347-2-13			
SAFETY			Russia	IEC61347-1, IEC61347-2-13			
& EMC		RCM	Australia	AS 61347-1, AS 61347-2-13			
		ENEC	Europe	EN61347-1, EN61347-2-13, EN62384			
		UKCA	Britain	BS EN 61347-1, BS EN 61347-2-13, BS EN 62493			
		ccc	China	GB/T17743, GB17625.1			
	EMC Emission	CE	European Union	EN55015, EN61000-3-2, EN61000-3-3, EN61547			
		KC	Korea	KSC 9815, KSC 9547			
		EAC	Russia	IEC62493, IEC61547, EH55015			
		RCM	Australia	EN55015, EN61000-3-2, EN61000-3-3, EN61547			
		UKCA	Britain	BS EN IEC 55015, BS EN IEC 61000-3-2, BS EN 61000-3-3, BS EN 61547			
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11, E		N61547			
	Power Consumption	Networked standby		<0.5W (After shutdown by command)			
		No-load power consumption		<0.5W (When the lamp is not connected)			
		IEEE 1789		·			
ErP			'89	Meet IEEE 1789 standard/High frequency exemption level			
ErP	Flicker/Stroboscopic Effect	IEEE 17					
ErP		IEEE 17 CIE SVI	М	Pst LM<1.0, SVM<0.4			
ErP	DF	CIE SVI	M actor				
ErP OTHERS		IEEE 17 CIE SVI Phase to 555g±1	M actor	Pst LM<1.0, SVM<0.4			

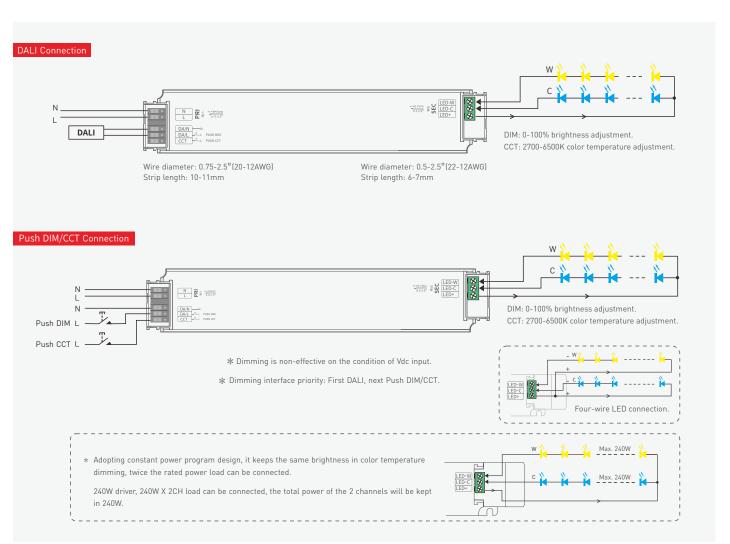


## **Product Size**

Unit: mm



# 连接应用图





# LTECH

## Push DIM/CCT

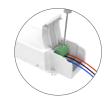


Reset switch

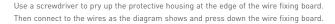
- On/off control: Short press.
- Stepless dimming: Long press.
- $\bullet$  With every other long press, the brightness goes to the opposite direction.
- Dimming memory: Brightness will be the same as previously adjusted when turning on again.

# Protective Housing Application Diagram









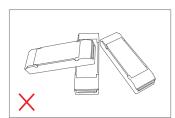


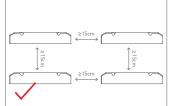




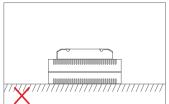
Press down the back side of the protective housing and move it from side to side to remove it

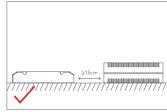
# Installation Precautions











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





# Work with a NFC programmer (LT-NFC)

Change the DALI address on the NFC programmer. After modification, batch parameters can be written to the driver.

\* Before you begin setting the parameters of the driver on the NFC programmer, please make sure the driver is powered off.



#### 1. Read the LED driver

Power the programmer by using the USB cable, then select "NFC Driver Settings" and press "OK" button. Next, keep the programmer's sensing area close to the NFC logo of the driver to read the driver parameters.

#### 2. Change the driver parameters (DALI address)

On the home page of the programmer, press the "OK" button to edit DALI address. Then, press " \* \* \* button to adjust the parameter values and press " \* \* to select the next needed value. After the parameter values are modified, save them by pressing the "OK" button. Note: [1] The DALI address range: 0-63.

#### 3. Write to the driver

On the home page of the programmer, press the "Av" button to select [>>Ready to Write], then press the "OK" button. After the screen displays "Ready to write...", please keep the programmer's sensing area close to the NFC logo of the driver. When the screen displays "Write succeeded", it means the parameters have been successfully changed.









## Use the NFC Lighting APP

Scan the QR code below with your mobile phone and follow the prompts to complete the APP installation (According to performance requirements, you need to use a NFC-capable Android phone, or an iphone 8 and later that are compatible with iOS 13 or higher).



\* Before you begin setting the parameters of the driver on the NFC programmer or via the APP, please make sure the driver is powered off.

# Read/Write the LED driver

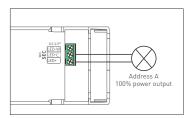
Use your NFC-capable phone to read the driver parameters, then set the DALI address, PWM frequency, other parameters, or set the advanced DALL template depending your needs. Save your settings and hold your phone close to the driver again, so the parameters can be easily written to the driver.

### 1. Read the LED drive

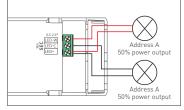
On the APP home page, click [Read/Write LED driver], then keep the programmer's sensing area close to the NFC logo of the driver to read the driver parameters.

### 2. Switch the dimming interface

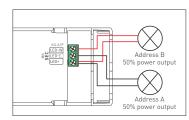
On the page of "Edit parameters", click [Dimming interfaces] to switch to the needed dimming interface: DT8 CT (DT8 1 channel), DT6 CT (DT6 2 channels), DT6 DIM (1 address for 1 channel / 1 address for 2 channels / 2 addresses for 2 channels).



DT6 DIM (1 addresses for 1 channels)



DT6 DIM (1 addresses for 2 channels)



DT6 DIM (2 addresses for 2 channels)





### 3. Edit the parameters

Click 【Parameter settings】 to edit the advanced parameters, like DALI address, PWM frequency, dimming curve, advanced DALI template, etc.

#### 4. Write to the driver

After completing the parameter settings, click [Write] in the upper right corner, and keep the programmer's sensing area close to the NFC logo of the driver, so the parameters can be written to the driver.









### Write/Read on the NFC programmer

Connect the NFC programmer to your phone and read the driver parameters with your phone. After editing the solution in the mobile App, you can sync it to the NFC programmer and write advanced parameters to mass LED drivers.

#### 1. Connect to the NFC programmer

Enable Bluetooth on your phone and power the NFC programmer first. Then press the button on the programmer to switch to "BLE Connection" and press "OK" button to wait for Bluetooth connection.

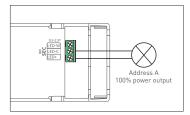
On the APP home page, click [Write/Read on NFC programmer] — [Next] to search for the programmer and connect to it.

#### 2. Read the LED driver

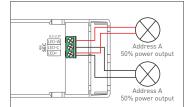
On the "Programmer information" page, choose any solution for editing. Then keep the programmer's sensing area close to the NFC logo of the driver, to read the driver parameters.

### 3. Switch the dimming interface

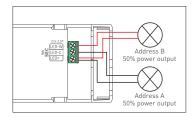
On the page of "Edit parameters", click [Dimming interfaces] to switch to the needed dimming interface: DT8 CT (DT8 1 channel), DT6 CT (DT6 2 channels), DT6 DIM (1 address for 1 channel / 1 address for 2 channels).







DT6 DIM (1 addresses for 2 channels)



DT6 DIM (2 addresses for 2 channels)

### 4. Edit the parameters

Click 【Parameter settings】 to edit the advanced parameters, like DALI address, PWM frequency, dimming curve, advanced DALI template, etc. Then click 【Save】in the top right.

### 5. Write to the LED driver

When the programmer screen shows "Sync ... succeeded", click "BACK" button to return to the home page and switch to the "APP Solutions", then press the "OK" button to access the optional solutions. Select the corresponding solution by pressing the " +>" button, then keep the programmer's sensing area close to the NFC logo of the driver. After this, the advanced solution can be written to a large number of the same model drivers.



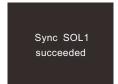


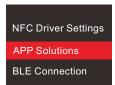
















### **Advanced DALI template**

Integrate the functions of the DALI lighting system, edit the DALI group and lighting effects for scenes, then save them in the advanced template to achieve lighting programming.

Setup page 1 [for Read/Write LED driver]: Go to App home page — 【③】 icon in the top right — 【DALI template on pnone】.

Setup page 2 (for Read/Write on NFC programmer): Go to App home page — [Read/Write on NFC programmer] — [DALI template on programmer] .









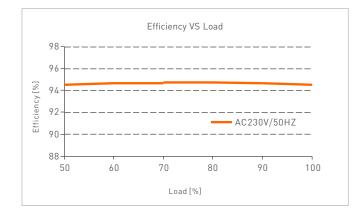
For more advanced solution settings, please scan the QR code below and check out the NFC programmer manual (model: LT-NFC).

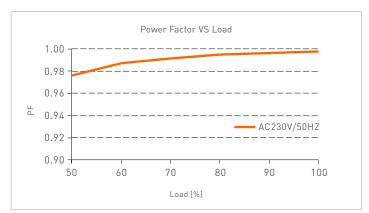


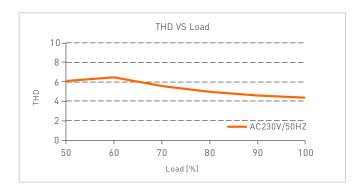


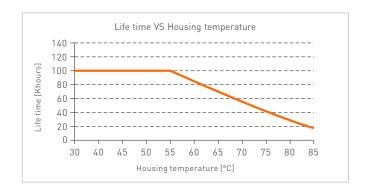
# LTECH

# Relationship Diagrams

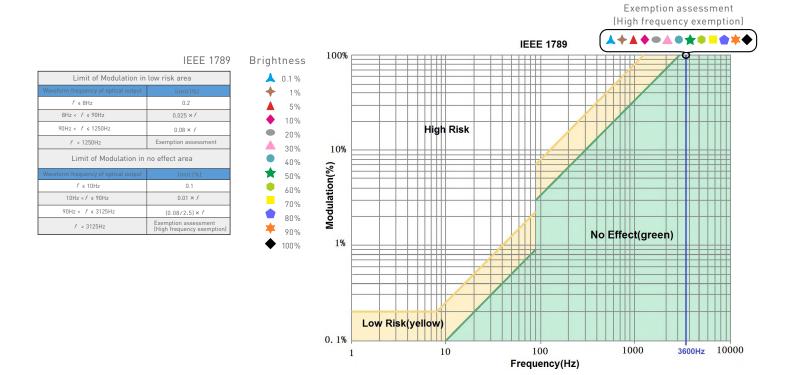








# Flicker Test Form







# Packaging Specifications

Model	LM-240-24-G2D2
Carton Dimensions	400×350×120mm(L×W×H)
Quantity	10 PCS/Layer; 2 Layers/Carton; 20 PCS/Carton
Weight	0.555 kg/PC; 12 kg±5%/Carton

# Packaging Image







Carton Packaging

# Transportation and Storage

### 1. Transportation

Products can be shipped via vehicles, boats and planes.

During transportation, products should be protected from rain and sun. Please avoid severe shock and vibration during the loading and unloading process.

2. Storage

The storage conditions should comply with the Class I Environmental Standards. The products that have been stored for more than six months are recommended to be re-inspected and can be used only after they have been qualified.





### **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.
- $\bullet \quad \mathsf{Good} \ \mathsf{heat} \ \mathsf{dissipation} \ \mathsf{will} \ \mathsf{extend} \ \mathsf{the} \ \mathsf{life} \ \mathsf{the} \ \mathsf{product}. \ \mathsf{Please} \ \mathsf{install} \ \mathsf{the} \ \mathsf{product} \ \mathsf{in} \ \mathsf{a} \ \mathsf{environment} \ \mathsf{with} \ \mathsf{good} \ \mathsf{ventilation}.$
- 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.
- $\bullet \quad \text{Free repair or replacement services for quality problems are provided within warranty periods.}\\$

#### 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.
- $2.\,\mathsf{LTECH}\,\mathsf{has}\,\mathsf{the}\,\mathsf{right}\,\mathsf{to}\,\mathsf{amend}\,\mathsf{or}\,\mathsf{adjust}\,\mathsf{the}\,\mathsf{terms}\,\mathsf{of}\,\mathsf{this}\,\mathsf{warranty},\mathsf{and}\,\mathsf{release}\,\mathsf{in}\,\mathsf{written}\,\mathsf{form}\,\mathsf{shall}\,\mathsf{prevail}.$





# **Update Log**

Version	Updated Time	Update Content	Updated by
Α0	2023.02.15	Original version	Liu Weili