Intelligent LED Driver (Constant Current)

- Housing made from SAMSUNG/COVESTRO's V0 flame retardant PC materials.
- Ultra small, thin and lightweight, screwless end cap.
- Using the mobile phone APP, parameters such as output current and DALI address can be changed via NFC. Moreover, advanced templates like groups and scenes can be set up to achieve the data interaction function of the driver.
- Adjustable output current with 1mA step.
- Soft-on and fade-in dimming function enhances your visual comfort.
- T-PWM™ super deep dimming technology, 0.01% dimming depth.
- The whole dimming process is flicker-free with high frequency exemption level.
- Comply with the EU's ErP Directive, networked standby<0.5W.
- When there is no load, the output will be 0V to prevent damage to LEDs due to poor contact.
- Overheat, over voltage, overload, short circuit protection and automatic recovery.
- Suitable for Class Ⅰ / Ⅱ /Ⅲ indoor light fixtures.
- Normal service life can reach 100,000 hours.
- 5-year warranty (Rubycon capacitor).

DALI 2

DIM

T-PWM™
Dimming Technology

Flicker Free
IEEE 1789

Dimmable:
10000 : 1

The certification icon represents undergoing certification applications only, and final certification qualification subject to actual product.

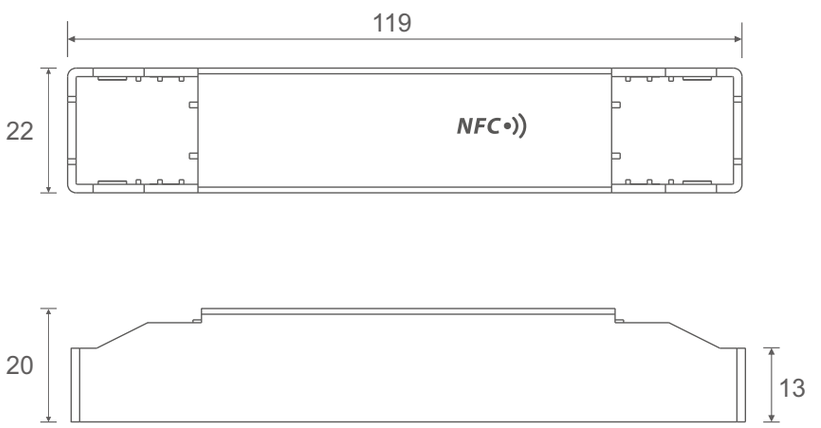
Multi current setting | Constant power setting | Overheat Protection | Over voltage protection | Over Load protection | Short circuit protection

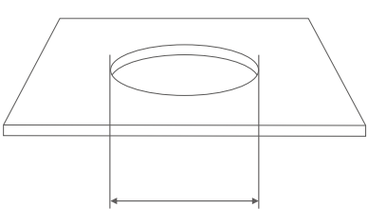
Technical Specs

Model		SE-6-100-450-G1D		SE-6-350-700-G1D
Features	Output Type	Constant current		
	Dimming Interface	DALI-2 DT6		
	Output Feature	Isolation		
	Protection Grade	IP20		
	Insulation Grade	Class II (Suitable for class I/ II /III light fixtures)		
OUTPUT	Output Voltage	9-42Vdc		2-18Vdc
	Maximum output voltage	≤50Vdc		≤30Vdc
	Output Current Range	100-450mA		350-700mA
	Output Power Range	0.9W~6.3W		0.7W~6.3W
	Dimming Range	0~100%，down to 0.01%		
	LF Current Ripple	<3%(Maximum current for non dimming state)		
	Current Accuracy	±5%		
	PWM Frequency	≤3600Hz		
INPUT	DC Voltage Range	220-240Vdc		
	AC Voltage Range	220-240Vac		
	Input Voltage	230Vac		
	Frequency	50/60Hz		
	Input Current	≤0.1A/230Vac		
	Power Factor	PF>0.5/230Vac (at full load)		
	Efficiency (Typ.)	75%		
	Inrush Current	Cold start 15A(Test twidth=300us tested under 50% Ipeak)/230Vac		
	Anti Surge	L-N:1KV		
	Leakage Current	Max.0.5mA		
ENVIRONMENT	Working Temperature	ta:-20~45°C tc:90°C		
	Working Humidity	20 ~ 95%RH, non-condensing		
	Storage Temperature/Humidity	-40~80°C/10~95%RH		
	Temperature Coefficient	±0.03%/°C(-20°C~45°C)		
	Vibration	10~500Hz, 2G 12min/1cycle, 72 min for X, Y and Z axes respectively		
PROTECTION	Overload Protection	Automatically protect the device when the load exceeds 102% of the rated power. Automatically recover once load is reduced		
	Overheat Protection	Intelligently adjust or turn off the current output if the PCB temperature ≥110°C. When the PCB temperature <90°C, automatically recover normal output		
	Overvoltage Protection	Automatically protect the device when voltage exceeds the no-load voltage. It can be recovered automatically		
	Short Circuit Protection	Enter hiccup mode if short circuit occurs, and recover automatically		
SAFETY & EMC	Withstand Voltage	I/P-O/P: 3750Vac		
	Insulation Resistance	I/P-O/P: 100MΩ/500VDC/25°C/70%RH		
	Safety Standards	CCC	China	GB19510.1, GB19510.14
		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	Korea	KC61347-1, KC61347-2-13
		EAC	Russia	IEC61347-1, IEC61347-2-13
		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
		BIS	India	IS 15885 (PART 2/SEC 13)
	EMC Emission	CCC	China	GB/T17743, GB17625.1
		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, EN61547		
ErP	Power Consumption	Networked standby		＜0.5W (After shutdown by command)
		No-load power consumption		＜0.5W (When the lamp is not connected)
	Flicker/Stroboscopic Effect	IEEE 1789		Meet IEEE 1789 standard/High frequency exemption level
		CIE SVM		Pst LM≤1.0，SVM≤0.4
OTHERS	Weight(N.W.)	50g±5g		
	Dimensions	119×22×20mm(L×W×H)		

Product Size

Unit：mm





Minimum hole size: φ30mm (1,2")

Wiring Diagram

DALI Connection

Dimming: 0~100%

Wire diameter: 0.75-1.5²(20-16AWG)
Strip length: 5-6mm

Wire diameter: 0.3-1.5²(22-16AWG)
Strip length: 5-6mm

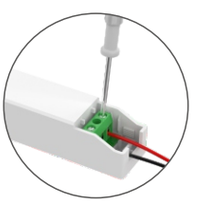
Current and Parameters Sheet

The typical 8 current data sets below are for reference when selecting LED fixture models. More current levels can be set by NFC using mobile APP with 100-450mA adjustable in 1mA step									
SE-6-100-450-G1D	Output Current	100mA	150mA	200mA	250mA	300mA	350mA	400mA	450mA
	Output Voltage	9-42Vdc	9-42Vdc	9-31Vdc	9-25Vdc	9-21Vdc	9-18Vdc	9-15Vdc	9-14Vdc
	Output Power	0.9-4.2W	1.35-6.3W	1.8-6.2W	2.25-6.25W	2.7-6.3W	3.15-6.3W	3.6-6W	4.05-6.3W

The typical 8 current data sets below are for reference when selecting LED fixture models. More current levels can be set by NFC using mobile APP with 350-700mA adjustable in 1mA step									
SE-6-350-700-G1D	Output Current	350mA	400mA	450mA	500mA	550mA	600mA	650mA	700mA
	Output Voltage	2-18Vdc	2-15Vdc	2-14Vdc	2-12Vdc	2-11Vdc	2-10Vdc	2-9Vdc	2-9Vdc
	Output Power	0.7-6.3W	0.8-6W	0.9-6.3W	1-6W	1.1-6.05W	1.2-6W	1.3-5.85W	1.4-6.3W

Protective Housing Application Diagram

1. Use a tool to pry up the protective housing on the side panel.

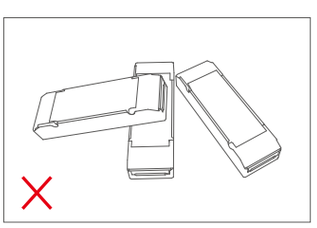


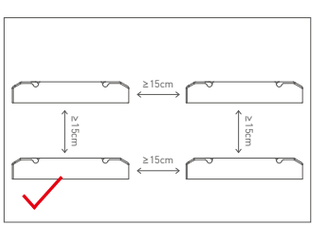
2.Use a screwdriver to wire according to the wiring diagram.

4. Press down the tension plate to fix the the electrical wires.

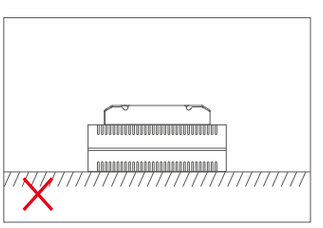
5. Close the protective housing.

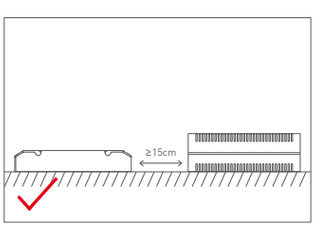
Installation Precautions





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

Note: The temperature within the installation area should be within the working temperature range of the products. Please do not install products inside LED fixtures to avoid temperature exceeding the working temperature that may affect the product lifetime.

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, please make sure the driver is powered off.

Read/Write the LED driver

Use your NFC-capable phone to read LED driver data, then edit the parameters and they can be directly written to the driver.

1. Read the LED driver

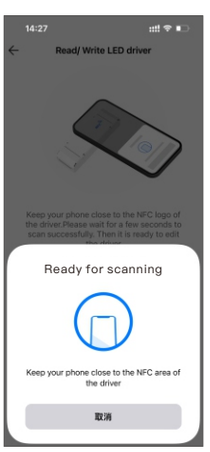
On the APP home page, click【Read/Write LED driver】, then keep the programmer's sensing area close to the NFC logo of the driver to read the driver parameters.

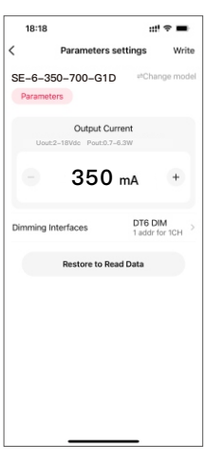
2. Edit the parameters

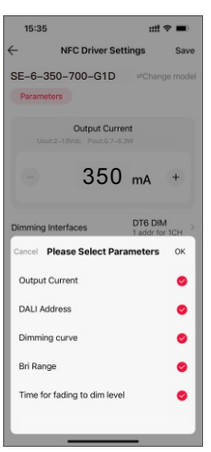
Click【Parameter settings】to edit the advanced parameters, like output current, DALI address, dimming curve, advanced DALI template, etc.

3. 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.



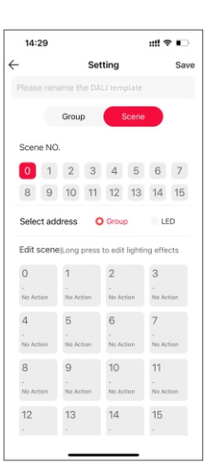




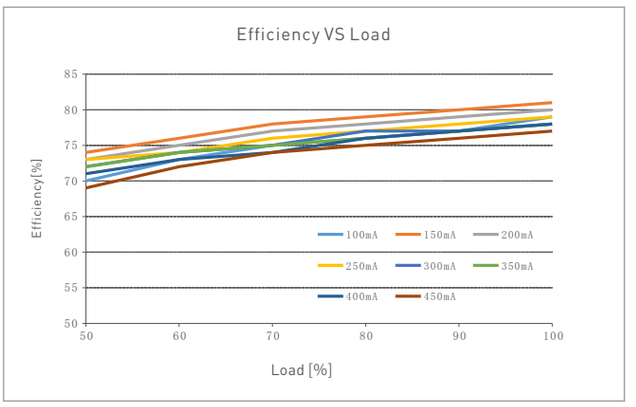
Advanced DALI template

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.

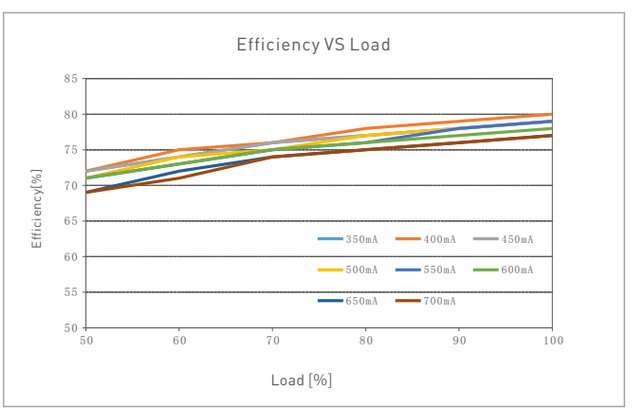
Setup page (for Read/Write LED driver) : Go to App home page — 【 ⚙ 】 icon in the top right — 【DALI template on pnone】.



Relationship Diagrams



SE-6-100-450-G1D



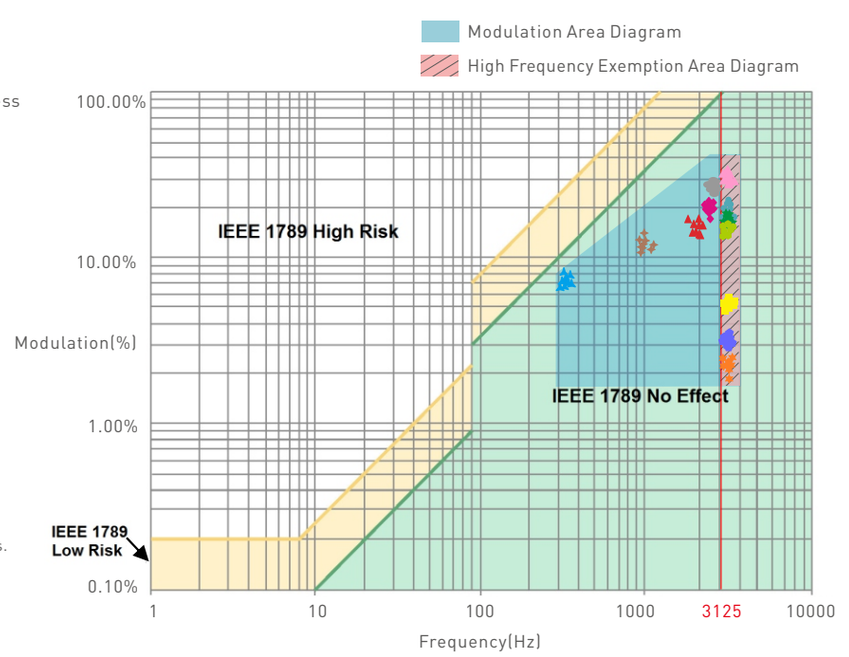
SE-6-350-700-G1D

Flicker Test Sheet

IEEE 1789

Limit of modulation in low risk area	
Waveform frequency of optical output	Limit [%]
$f \leqslant 8Hz$	0.2
$8Hz < f \leqslant 90Hz$	$0.025 \times f$
$90Hz < f \leqslant 1250Hz$	$0.08 \times f$
$f > 1250Hz$	Exemption assessment
Limit of modulation in no effect area	
Waveform frequency of optical output	Limit [%]
$f \leqslant 10Hz$	0.1
$10Hz < f \leqslant 90Hz$	$0.01 \times f$
$90Hz < f \leqslant 3125Hz$	$[0.08/2.5] \times f$
$f > 3125Hz$	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 were tested results of different current ranges.

The output frequeny is 0Hz in 100% brightness and its corresponding modulation is 0%, which could not be shown in the right chart.

Packaging Specifications

Model	SE-6-100-450-G1D/SE-6-350-700-G1D
Carton Dimensions	305×255×140mm(L×W×H)
Quantity	20 PCS/Layer; 5 Layers/Carton; 100 PCS/Carton
Weight	0.05 kg/PC; 5.0 kg±5%/Carton

Packaging Image

Inner Packaging Box

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.
- 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	20230717	Original version	Yang Weiling
A1	20250211	Update the company address	Shaoyun He