LTECH

Intelligent Tunable White LED Driver (Constant Current)

- Housing made from SAMSUNG/COVESTRO's V0 flame retardant PC materials.
- Ultra small, thin and lightweight, screwless end cap.
- Change the output current, dimming mode and other parameters via the APP.
- Adjustable output current with 1mA step.
- Automatically recognize 0-10V and 1-10V input signal.
- Ultra-low consumption of 0-10V ports < 0.05mA.
- 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).

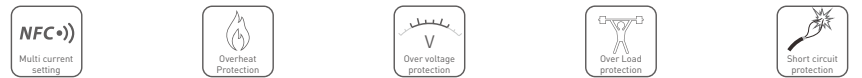4 in 1 dimming
0-10V
1-10V
10V PWM
RX

DIM / CT

T-PWM™
Dimming Technology
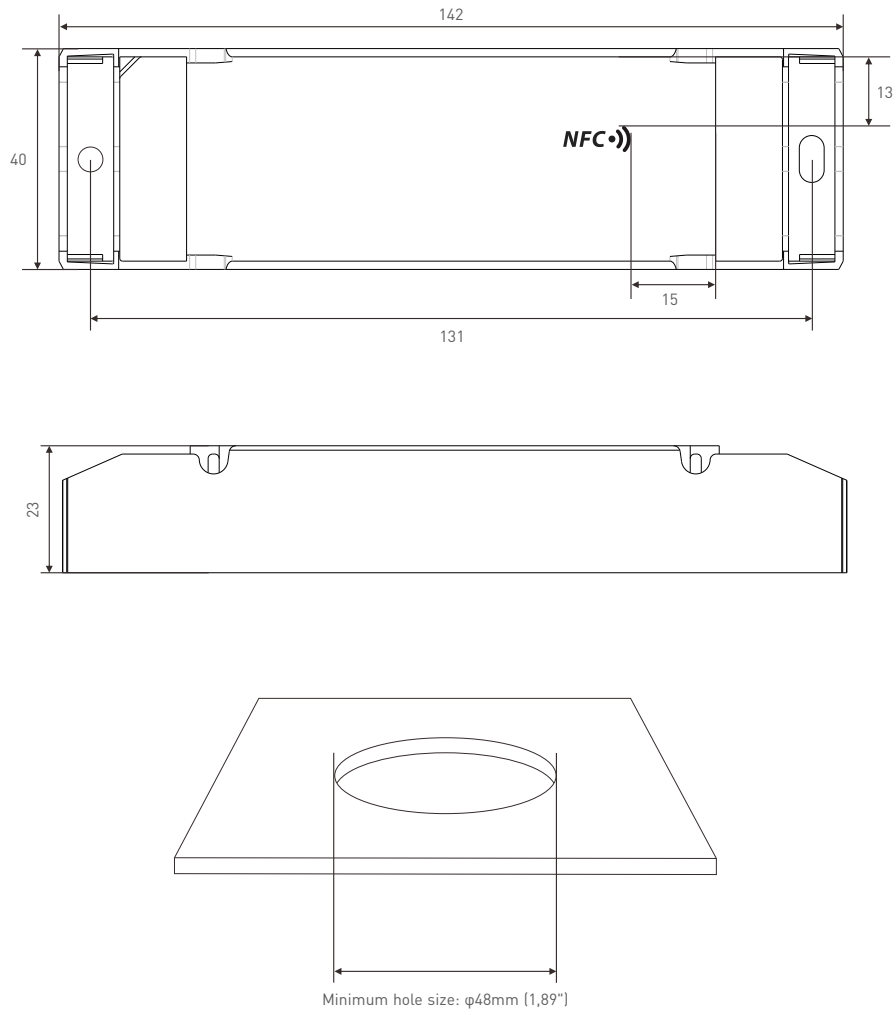
Flicker Free
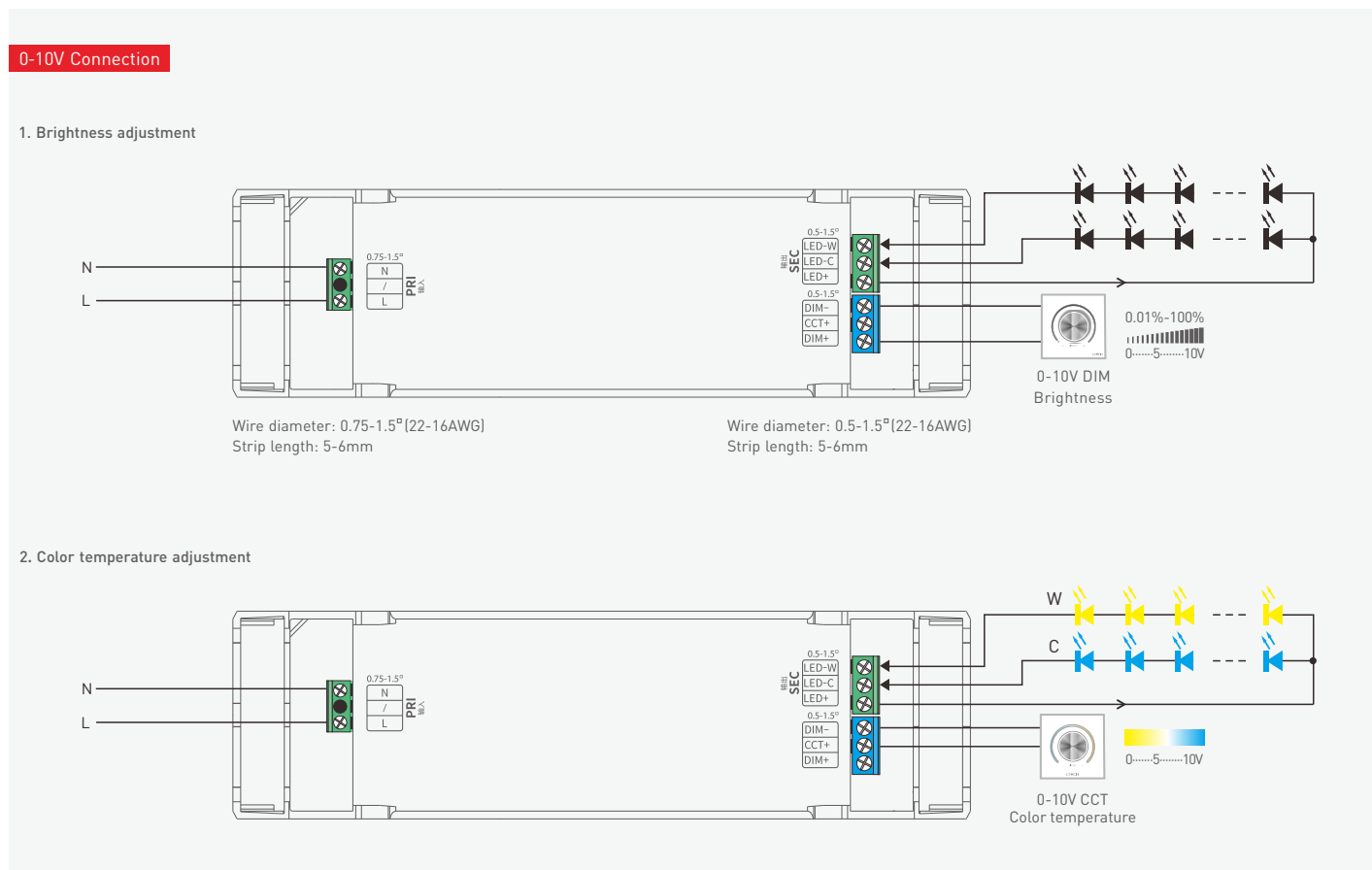IEEE 1789

Dimmable：
10000 : 1

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

NFC•)) Multi current setting

Overheat Protection

Over voltage protection

Over Load protection

Short circuit protection

Technical Specs

Model		SE-40-300-1050-W2A	SE-30-200-800-W2A
Features	Output Type	Constant current	
	Dimming Interface	0-10V (1-10V, 10V PWM, RX)	
	Output Feature	Isolation	
	Protection Grade	IP20	
	Insulation Grade	Class II (Suitable for class I/ II /III light fixtures)	
OUTPUT	Output Voltage	9-42Vdc	
	Maximum output voltage	≤55Vdc	
	Output Current Range	300-1050mA	200-800mA
	Output Power Range	2.7W-40W	1.8W-30W
	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	120-250Vdc	
	AC Voltage Range	100-240Vac	
	EoFᵢ	100%	
	Input Voltage	115Vac/230Vac	
	Frequency	50/60Hz	
	Input Current	≤0.45A/115Vac, ≤0.22A/230Vac	≤0.34A/115Vac, ≤0.17A/230Vac
	Power Factor	PF>0.95/115Vac (at full load), PF>0.9C/230Vac (at full load)	
	THD	THD≤10%/230Vac, at full load	
	Efficiency (Typ.)	88%	87%
	Inrush Current	Cold start 25A(Test twidth=130us tested under 50% Ipeak)/230Vac	
	Anti Surge	L-N: 2KV	
	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(0-50°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)
		CUL Canada	CSA C22.2 NO.250.13
		UL America	UL 8750
	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
		CUL Canada	ICES-005
		UL America	FCC PART 15B
	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
	DF	Phase factor	DF≥0.9
OTHERS	Weight(N.W.)	170g±10g	150g±10g
	Dimensions	142×40×23mm(L×W×H)	

Product Size

Unit: mm

142

40

13

131

15

NFC •))

23

Minimum hole size: φ48mm (1,89")

Wiring Diagram

1. Brightness adjustment

N

L

0.75-1.5°
N
/
L
PRI

0.5-1.5°
LED-W
LED-C
LED+
SEC

0.5-1.5°
DIM−
CCT+
DIM+

0.01%-100%

0-------5--------10V

0-10V DIM
Brightness

Wire diameter: 0.75-1.5° (22-16AWG)
Strip length: 5-6mm

Wire diameter: 0.5-1.5° (22-16AWG)
Strip length: 5-6mm

2. Color temperature adjustment

N

L

0.75-1.5°
N
/
L
PRI

0.5-1.5°
LED-W
LED-C
LED+
SEC

0.5-1.5°
DIM−
CCT+
DIM+

W

C

0-------5--------10V

0-10V CCT
Color temperature

3. Brightness and color temperature adjustment respective

N

L

PRI
0.75-1.5□
N
/
L

SEC
0.5-1.5□
LED-W
LED-C
LED+
DIM−
CCT+
DIM+

W

C

0------5--------10V

0-10V CCT
Color temperature

0.01%-100%
0------5--------10V

0-10V DIM
Brightness
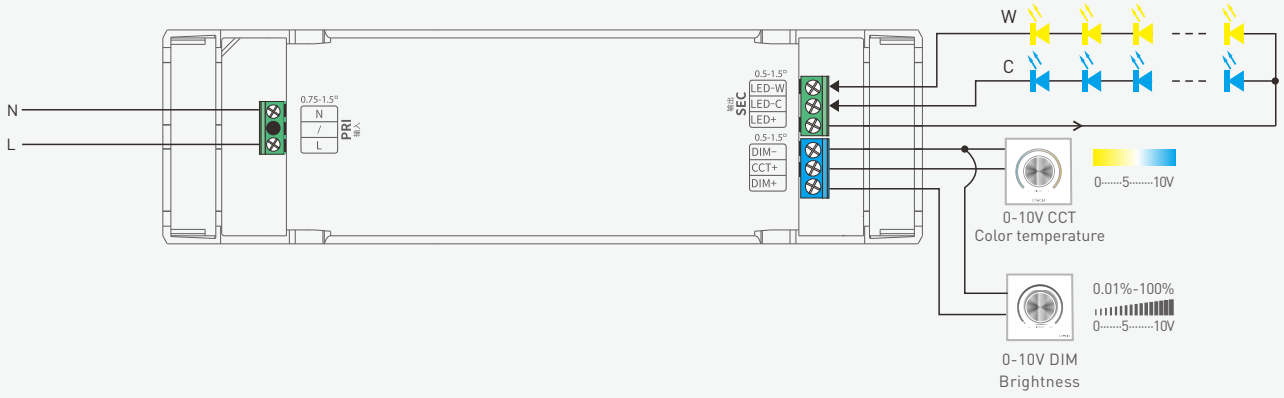
4. Brightness and color temperature adjustment simultaneous

N

L

PRI
0.75-1.5□
N
/
L

SEC
0.5-1.5□
LED-W
LED-C
LED+
0.5-1.5□
DIM−
CCT+
DIM+

W

C

0.01%-100%
0------5--------10V

0-10V DIM/CCT
Brightness/Color temperature

N

L

PRI
0.75-1.5□
N
/
L

SEC
0.5-1.5□
LED-W
LED-C
LED+
0.5-1.5□
DIM−
CCT+
DIM+

− W

+

− C

+
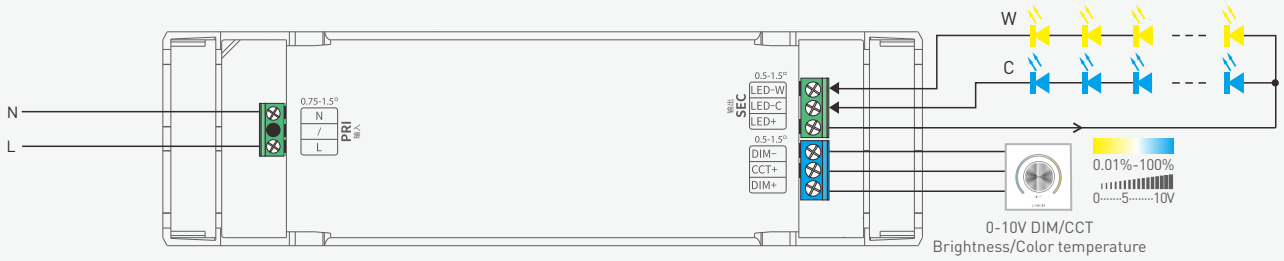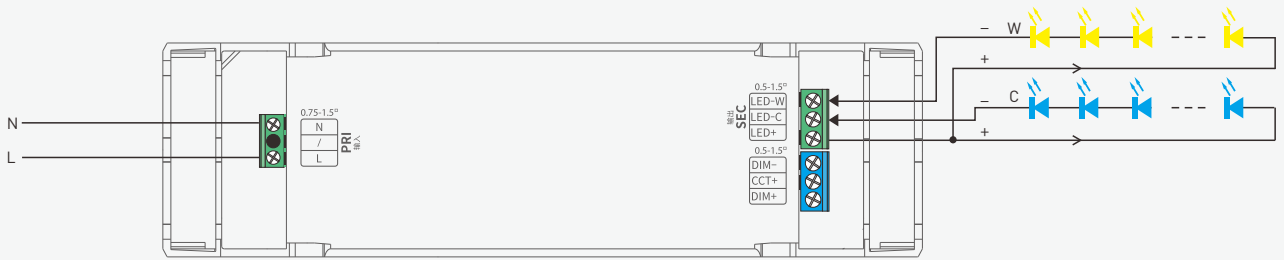
∗ Adopting constant power program design, it keeps the same brightness in color temperature dimming,

twice the rated power load can be connected.

40W driver, 40W X 2CH load can be connected, the total power of the 2 channels will be kept in 40W.

W   Max. 40W

LED-W
LED-C
LED+

C   Max. 40W

Table of Typical Corresponding Parameters for Current

The typical 16 current data sets below are for reference when selecting LED fixture models. More current levels can be set by NFC using mobile APP with 300-1050mA adjustable in 1mA step								
SE-40-300-1050-W2A	Output Current	300mA	350mA	400mA	450mA	500mA	550mA	600mA	650mA
	Output Voltage	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc
	Output Power	2.7-12.6W	3.15-14.7W	3.6-16.8W	4.05-18.9W	4.5-21W	4.95-23.1W	5.4-25.2W	5.85-27.3W
	Output Current	700mA	750mA	800mA	850mA	900mA	950mA	1000mA	1050mA
	Output Voltage	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-40Vdc	9-38Vdc
	Output Power	6.3-29.4W	6.75-31.5W	7.2-33.6W	7.65-35.7W	8.1-37.8W	8.54-39.9W	9-40W	9.45-40W

| The typical 13 current data sets below are for reference when selecting LED fixture models. More current levels can be set by NFC using mobile APP with 200-800mA adjustable in 1mA step								
SE-30-200-800-W2A	Output Current	200mA	250mA	300mA	350mA	400mA	450mA	500mA	550mA
	Output Voltage	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc
	Output Power	1.8-8.4W	2.25-10.5W	2.7-12.6W	3.15-14.7W	3.6-16.8W	4.05-18.9W	4.5-21W	4.95-23.1W
	Output Current	600mA	650mA	700mA	750mA	800mA	/	/	/
	Output Voltage	9-42Vdc	9-42Vdc	9-42Vdc	9-40Vdc	9-37.5Vdc	/	/	/
	Output Power	5.4-25.2W	5.85-27.3W	6.3-29.4W	6.75-30W	7.2-30W	/	/	/

Application Diagram of Protective Cover
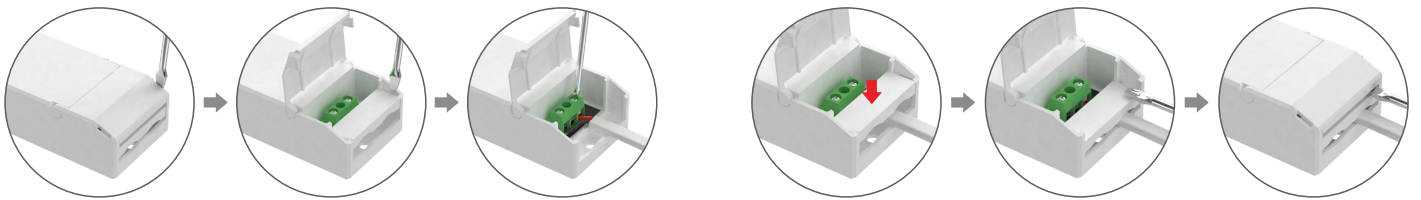
1. Put the head of a screwdriver on the side of the housing to pry up both the protective cover and wire fixing board. Then remove the wire fixing board and connect to the wires as wiring diagram shows.

2. Install the wire fixing board and press it down. Then snap on the protective cover while pressing the wire fixing board with a small flat-head screwdriver

Installation Precautions
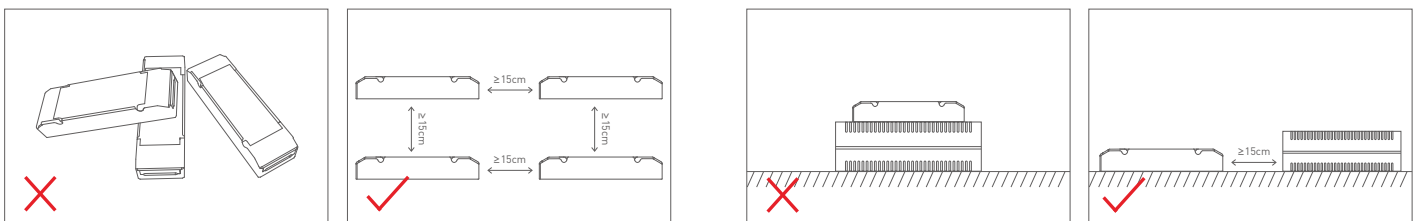
Please do not stack the products. The distance between two products should be ≥15cm so as not to affect heat dissipation or the lifetime of the products.

Please not place the products on power supplies. The distance between the product and the power supplies should be ≥15cm so as not to affect heat dissipation or shorten the lifetime 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.

NFC•)) ──── NFC logo of the driver

2. Edit the parameters
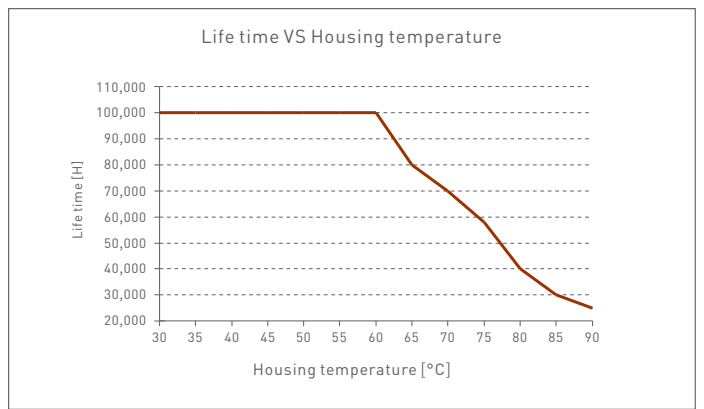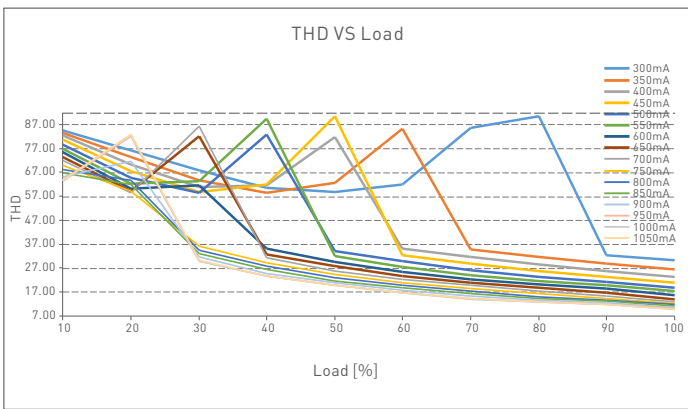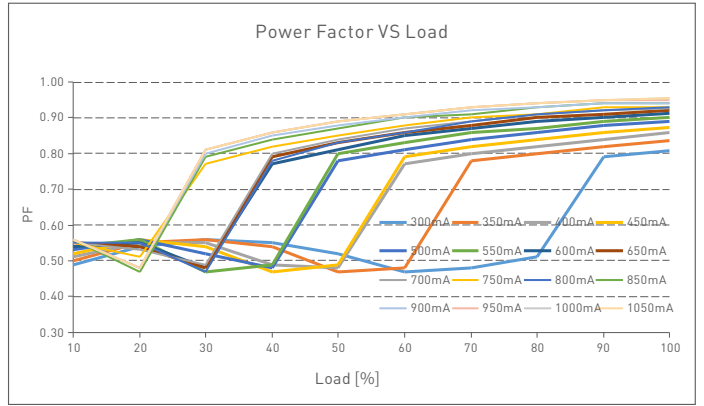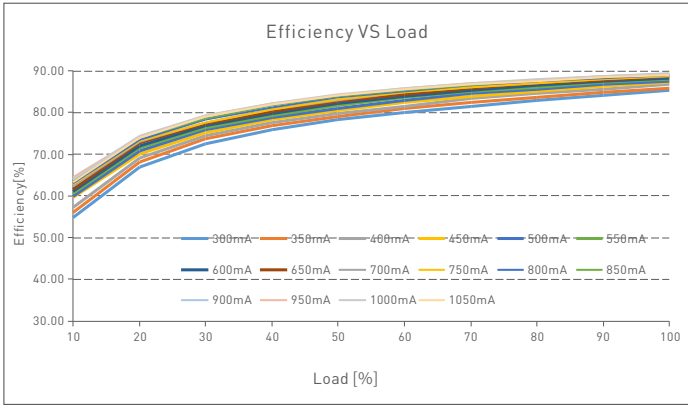
Click 【Parameter settings】to edit the advanced parameters, like output current, dimming mode, low power mode, etc.
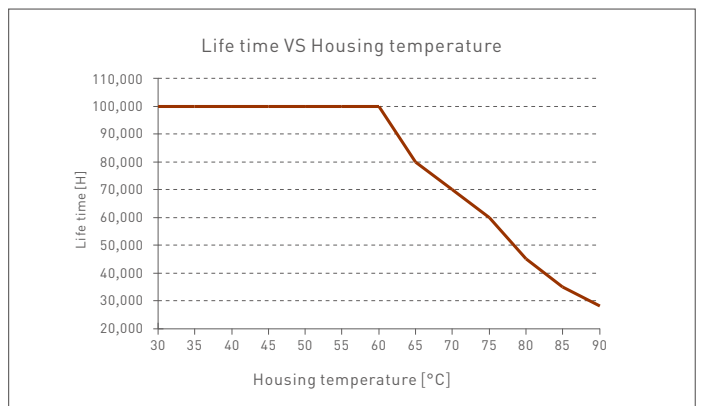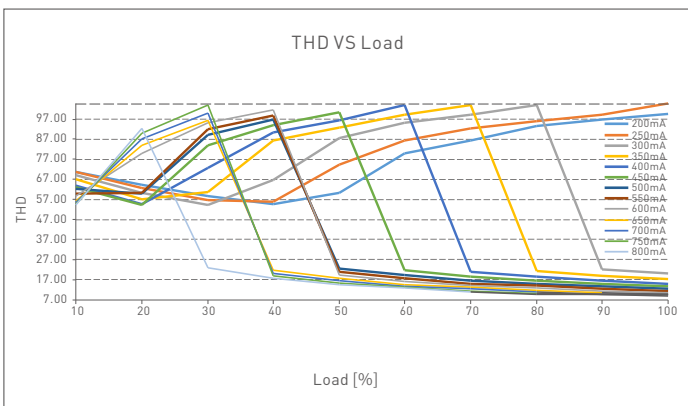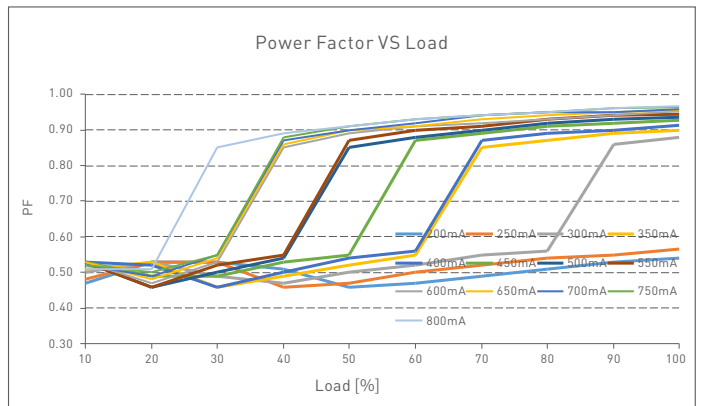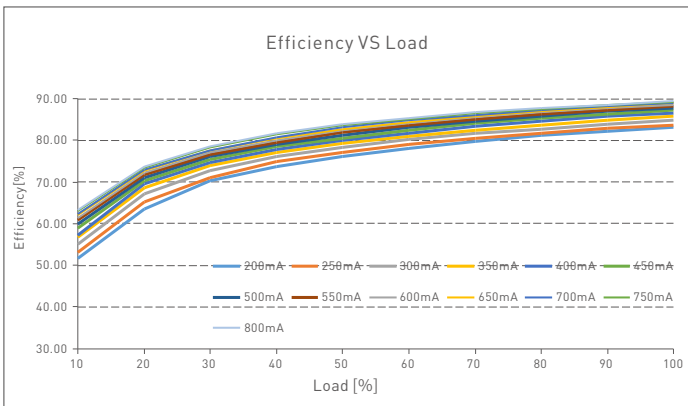
3. Write to the driver

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.

Relationship Diagrams

Efficiency VS Load



Power Factor VS Load

THD VS Load

Life time VS Housing temperature

SE-40-300-1050-W2A

Efficiency VS Load

Power Factor VS Load

THD VS Load

Life time VS Housing temperature

SE-30-200-800-W2A

LTECH
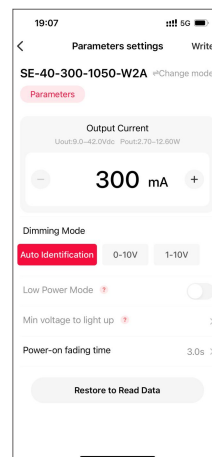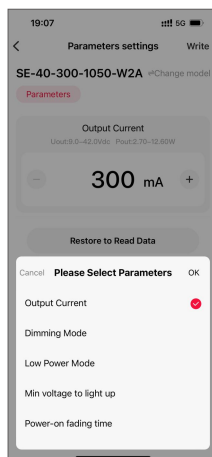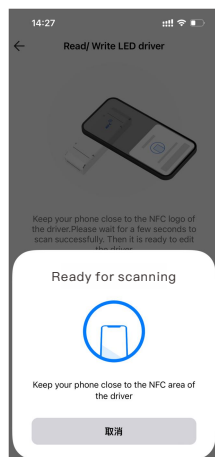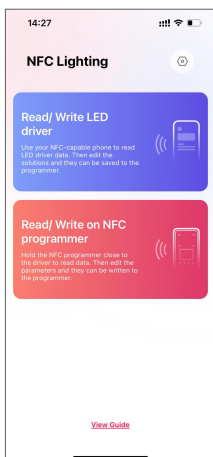
Flicker Test Sheet

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%

Modulation Area Diagram
High Frequency Exemption Area Diagram
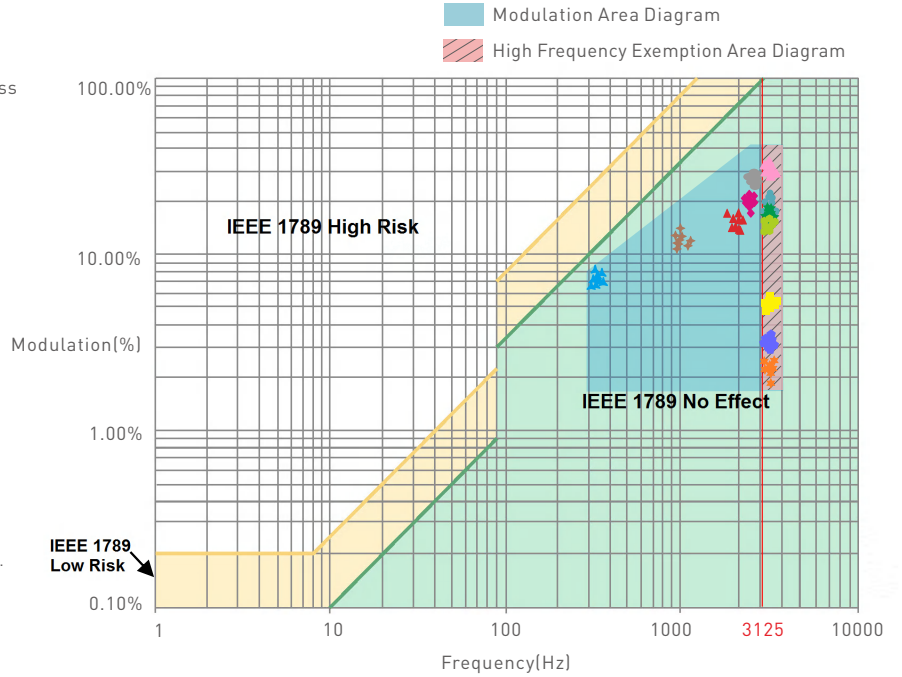
Marks in the right chart were tested results of different current ranges.

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-40-300-1050-W2A	SE-30-200-800-W2A
Carton Dimensions	320×275×106mm(L×W×H)	320×275×106mm(L×W×H)
Quantity	20 PCS/Layer; 2 Layers/Carton; 40 PCS/Carton	20 PCS/Layer; 2 Layers/Carton; 40 PCS/Carton
Weight	0.17 kg/PC; 7.6 kg±5%/Carton	0.15 kg/PC; 6.8 kg±5%/Carton

Packaging Image
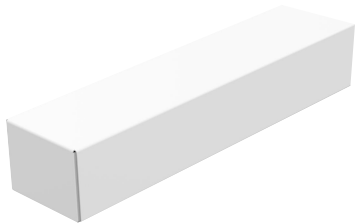
Inner Packaging Box

Carton Packaging

LTECH

SE-40-300-1050-W2A
SE-30-200-800-W2A

0-10V

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

· Products shall be installed by qualified professionals.
· LTECH products are and not lightningproof non-waterproof (special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure they are mounted in a water proof enclosure or in an area equipped with lightning protection devices.
· Good heat dissipation will prolong 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.

ZHUHAI LTECH TECHNOLOGY CO., LTD.

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Update Log

Version	Updated Time	Update Content	Updated by
A0	2023.02.23	Original version	Liu Weili