LTSYS

SE-40-300-1050-W2MA
SE-30-200-800-W2MA

Matter

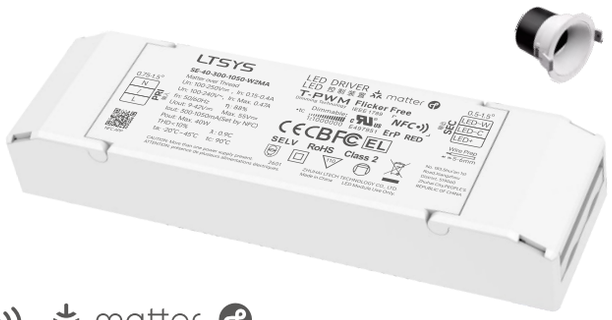
Intelligent Tunable White LED Driver (Constant Current)

- Housing made of Covestro/Samsung PC flame-retardant V0 raw material, ultra-thin and lightweight, tool-free screwless end cover for easy installation and removal.
- Matter certified device, communicates over IPv6 Thread network and requires a Matter hub with Thread Border Router functionality (such as Apple HomePod mini or Google Nest Hub).
- Supports control via mainstream Matter smart home platforms including Apple Home, SmartThings,Google Home, etc., with voice control support.
- Easy pairing and commissioning via QR code scanning.
- Supports standard Matter OTA updates.
- Supports NFC programming to adjust parameters including output current, dimming fade time, power-on fade time, brightness range, etc.
- T-PWM ultra-deep dimming technology with dimming depth down to 0.0001%.
- 0–100% full-range dimming with no visible flicker, compliant with high-frequency exemption level.
- Built-in soft start and gradual brightening for more comfortable visual experience.
- EU ERP compliant: no-load power consumption and network standby power consumption < 0.5W.
- No-load protection to prevent LED damage from poor contact.
- Over-temperature, overload and short-circuit protection with automatic recovery.
- Suitable for indoor Class I, II and III lighting applications.
- Service life up to 100,000 hours under normal operation.
- 5-year warranty (equipped with Ruby capacitors).

DIM / CCT

Flicker Free
IEEE 1789

T-PWM
Dimming Technology



Dimmable: 1:1000000

NFC matter

CE CB FC EL cULus E497951 ErP RED Class 2 SELV RoHS

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-W2MA		SE-30-200-800-W2MA	
FEATURES	Output Type	Constant current			
	Dimming Interface	Matter over Thread			
	Output Feature	Isolation			
	IP Rating	IP20			
	Insulation Class	Class II (Suitable for class I/II/III light fixtures)			
OUTPUT	Output Voltage	9-42V ⎓			
	Max. Output Voltage	≤55V ⎓			
	Rated Current Range	300-1050mA (Set higher current levels via the mobile app's NFC feature, with step increments as low as 1mA; Default: 300mA)		200-800mA (Set higher current levels via the mobile app's NFC feature, with step increments as low as 1mA; Default: 800mA)	
	Load Power Range	2.7W~40W		1.8W~30W	
	Dimming Range	0~100%，Dimming depth: 0.0001% (Set additional gear ratios via the mobile app's NFC feature,Default:0.01%)			
	LF Current Ripple	<3%(Maximum current for non dimming state)			
	Current Accuracy	±5%			
	PWM Frequency	≤3600Hz			
INPUT	DC Voltage Range	120-250V ⎓			
	AC Voltage Range	100-240V~			
	EoF_i	EoF_i=100%			
	Rated Voltage	115V~ /230V~			
	Frequency	50/60Hz			
	Input Current	≤0.45A/115V~，≤0.22A/230V~		≤0.34A/115V~，≤0.17A/230V~	
	Power Factor	PF>0.95/115V~ (Fully loaded)，PF>0.9C/230V~ (Fully loaded)			
	THD	THD≤10%/230V~ (Fully loaded)			
	Efficiency(Typ.)	88%@950mA (Fully loaded)		87%@750mA (Fully loaded)	
	Inrush Current	Cold start25A(Test twidth=130us tested under 50% Ipeak)/230V~			
	Anti Surge	L-N: 2KV			
	Leakage Current	Max. 0.5mA			
ENVIRONMENT	Operating 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(-20-45°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: 3750V~			
	Insulation Resistance	I/P-O/P: 100MΩ/500VDC/25℃/70%RH			
	Safety Certifications	CB	CB Member States	IEC61347-1，IEC61347-2-13	
		CE	European Union	EN61347-1，EN61347-2-13，EN62384	
		CUL	Canada	CSA C22.2 No.250.13	
		UL	United States	UL 8750	
	EMC Emission	CE	European Union	EN55015，EN61000-3-2，EN61000-3-3，EN61547	
		CUL	Canada	ICES-005	
		UL	United States	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)			

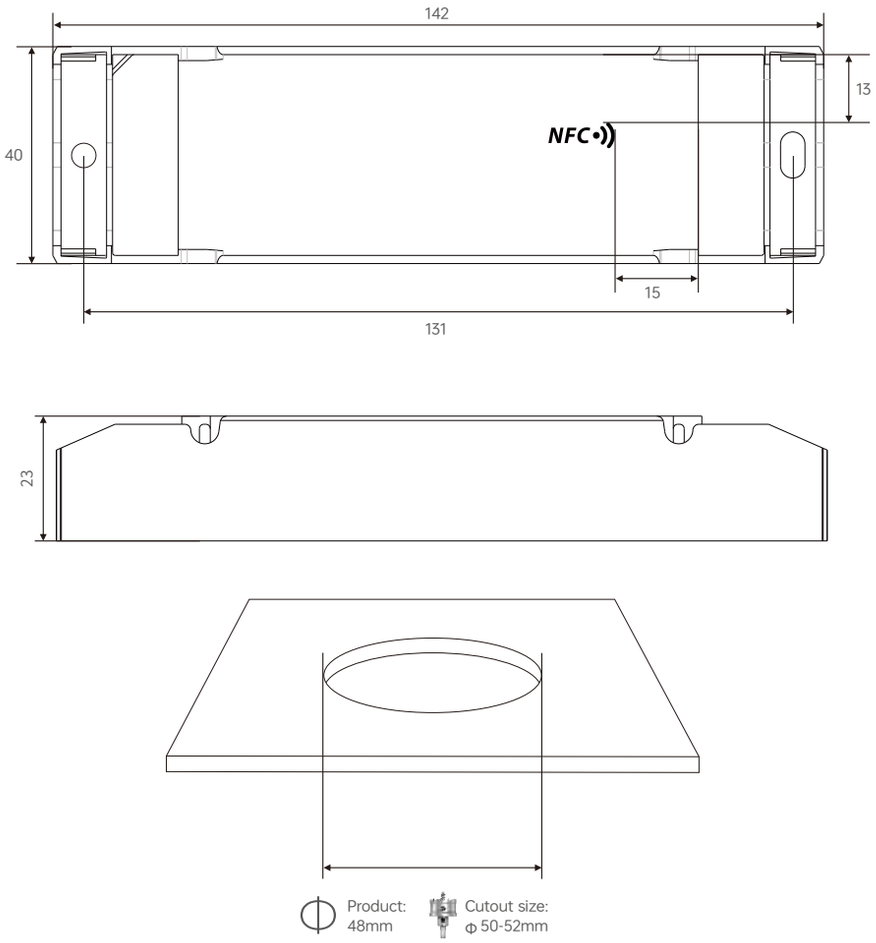
Typical Current Corresponding Parameter Table

The following 16 groups of typical current data are provided for model selection reference. More currents can be set via the mobile phone APP NFC. The settable range is 300-1050mA, and the current step value can be as low as 1mA.									
SE-40-300-1050-W2MA	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 following 13 groups of typical current data are provided for model selection reference. More currents can be set via the mobile phone APP NFC. The settable range is 200-800mA, and the current step value can be as low as 1mA.									
SE-30-200-800-W2MA	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	/	/	/

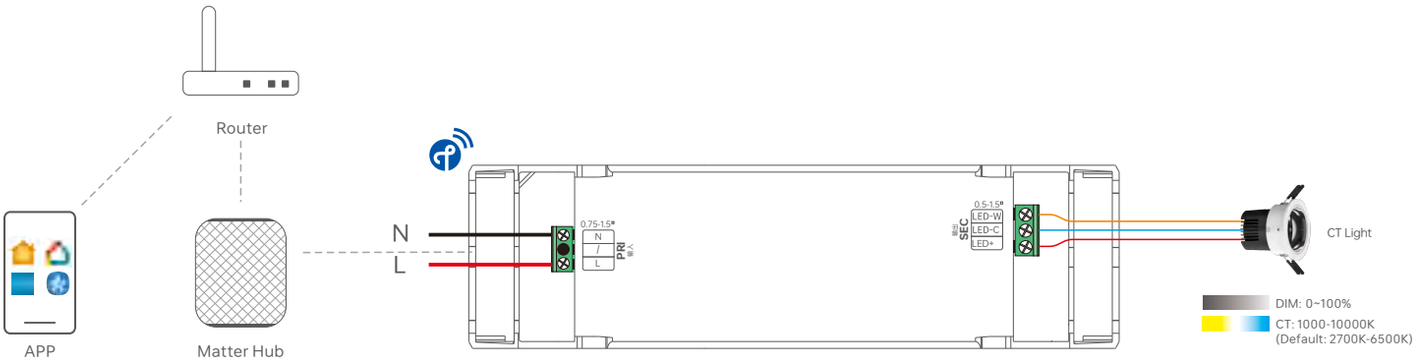
Product Size

Unit：mm



Connectivity Diagram

Wireless Connection Methods



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

*Network access control via mobile app

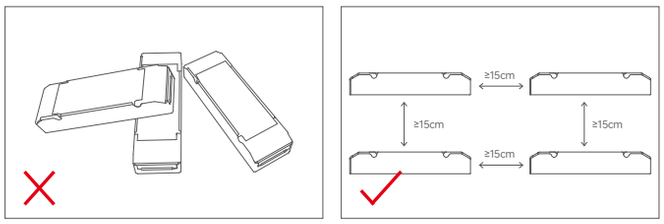
Wire diameter:0.5-1.5²(22-16AWG)
Strip length: 5-6mm

Application Diagram of Protective Cover

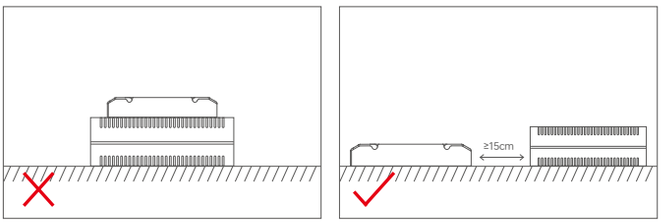
1. Put the head of a screwdriver on the side of the housing to pry up both the protective cover and wire fixing board. Then remove the wire fixing board and connect to the wires as wiring diagram shows.

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

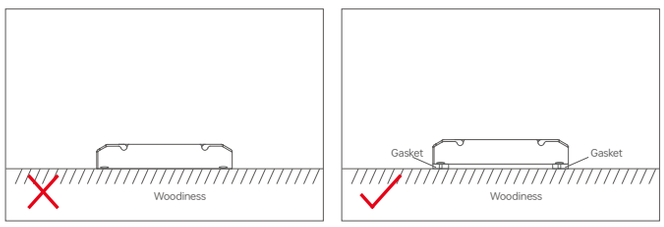
Installation Precautions



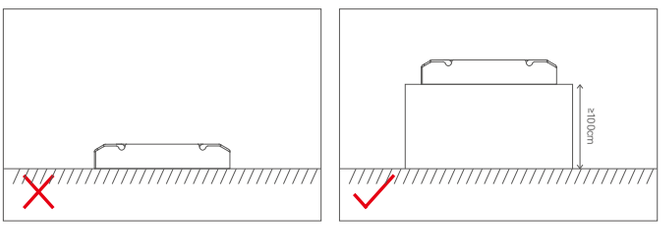
Please do not stack the products. The distance between two products should be ≥15cm so as not to affect heat dissipation and the lifespan of the products.



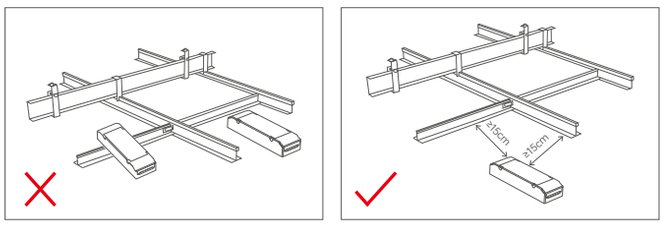
Please do not place the products on the floor. The distance between the product and the floor should be ≥100cm so as to avoid signal interference.



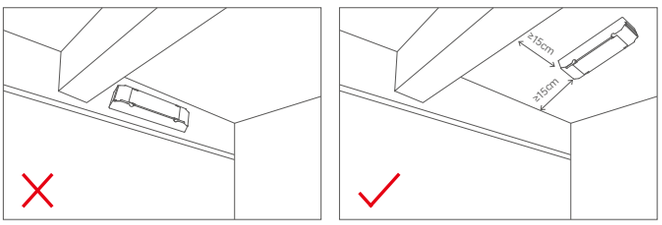
Do not fix the product tightly against the wooden board with screws. Please add a washer ≥7 mm thick under the mounting screws to leave a gap for effective heat dissipation, so as to avoid affecting the heat dissipation and service life of the product.



Please do not place the products on the floor. The distance between the product and the floor should be ≥100cm so as to avoid signal interference.

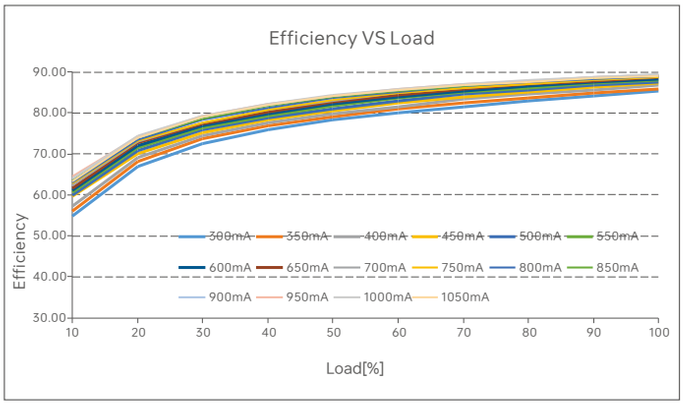


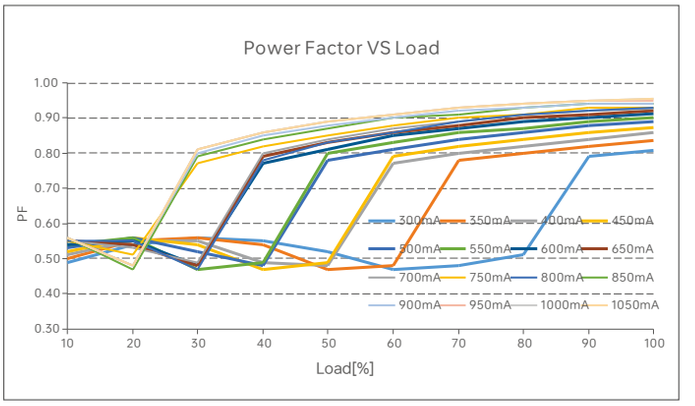
Do not allow the product to come into large-area contact with metal objects (e.g. keel frames). The separation distance shall be ≥15 cm to avoid signal interference affecting operation.

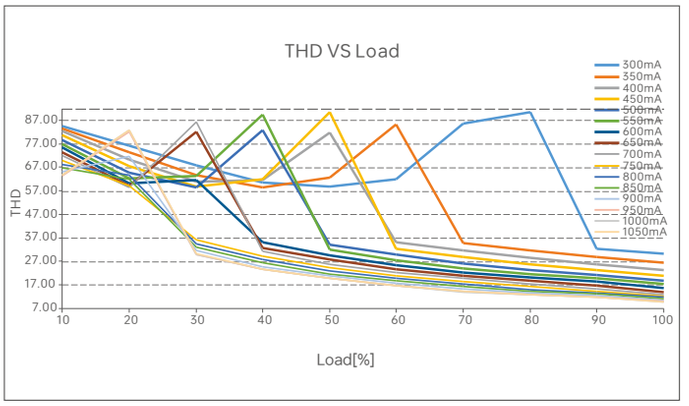


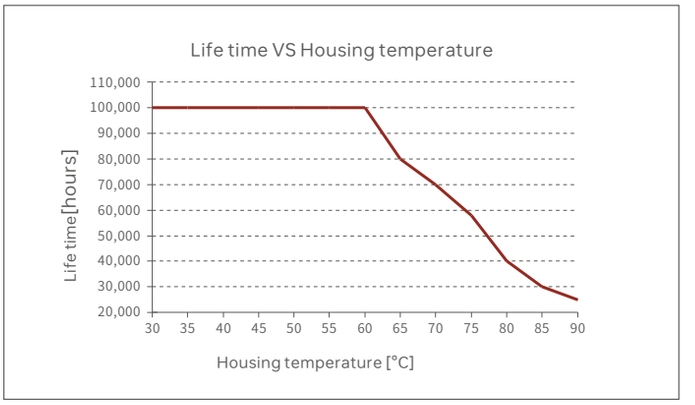
Please do not install the products on beams or near the corners. The distance between the product and the beam or the corner should be ≥15cm so as to avoid signal interference.

Relationship Diagrams

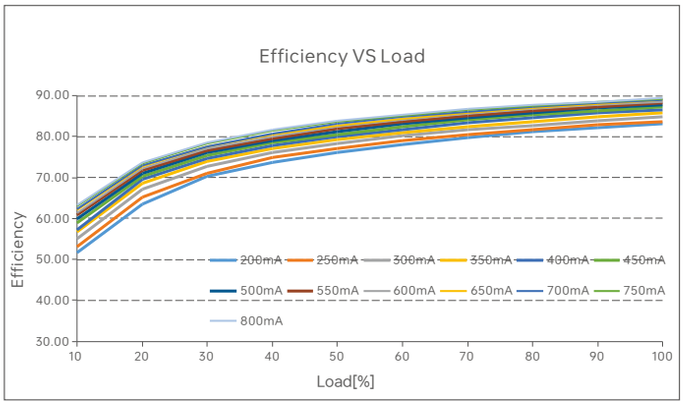


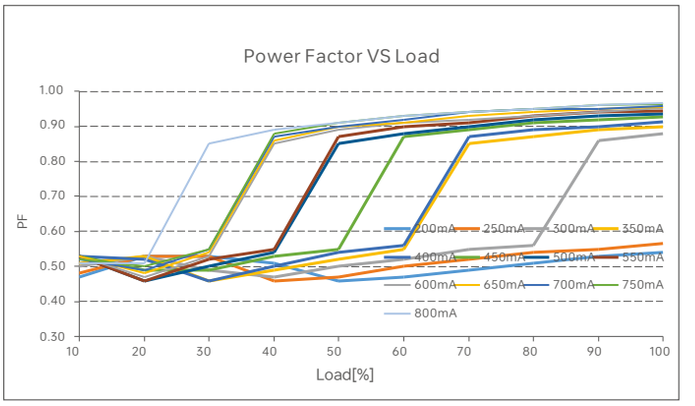


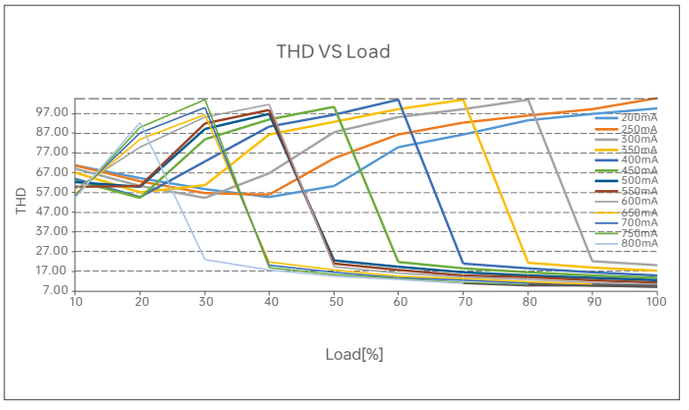


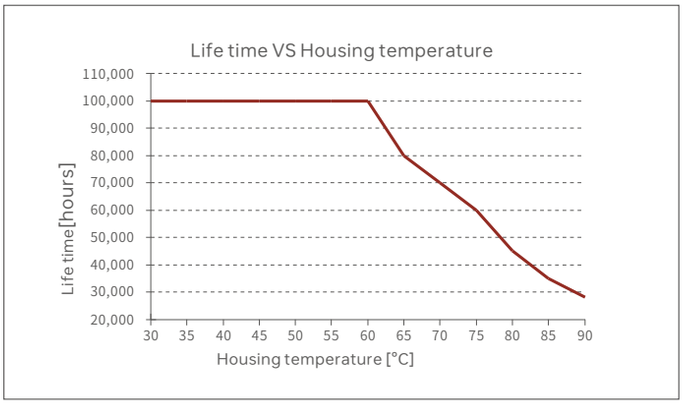


SE-40-300-1050-W2MA









SE-30-200-800-W2MA

Surge Current & Corresponding Miniature Circuit Breaker (MCB) Load Capacity Table

MCB Model	B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25
Maximum Load Capacity	15	19	24	30	40	17	22	27	35	43	20	25	31	39	49

Remarks:

1. Test Conditions: Cold start 25A(Test twidth=130us tested under 50% Ipeak)/230V～ .
2. The number of supported drivers may vary depending on the brand and model of the MCB.
3. It is recommended not to exceed the specified load capacity during on-site installation. The actual load should be determined based on field conditions.
4. If the ambient temperature exceeds 30°C or multiple MCBs are installed side by side, the number of installed drivers must be reduced and recalculated accordingly.
5. Electricians typically use Type B MCBs for residential lighting and Type C MCBs for commercial lighting applications.
6. Different testing equipment may yield variations in measured current peaks and pulse widths. Always use professional-grade instruments for accurate testing.

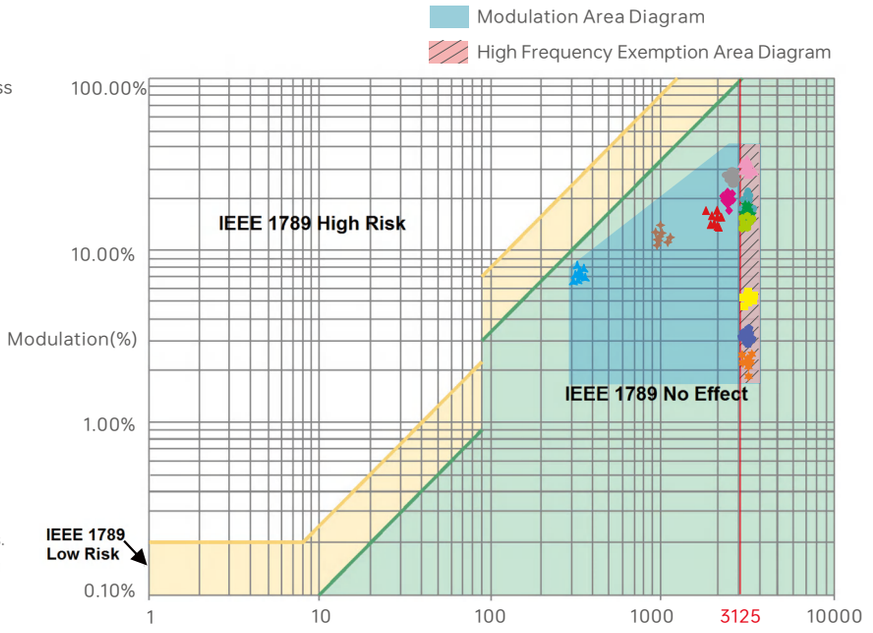
Flicker Test Sheet

IEEE 1789

Limit of modulation in low risk area	
Waveform frequency of optical output	limit (%)
$f \leq 8Hz$	0.2
$8Hz < f \leq 90Hz$	$0.025 \times f$
$90Hz < f \leq 1250Hz$	$0.08 \times f$
$f > 1250Hz$	Exemption assessment
Limit of modulation in no effect area	
Waveform frequency of optical output	limit (%)
$f \leq 10Hz$	0.1
$10Hz < f \leq 90Hz$	$0.01 \times f$
$90Hz < f \leq 3125Hz$	$(0.08/2.5) \times f$
$f > 3125Hz$	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.

Add to Matter Platform Instructions

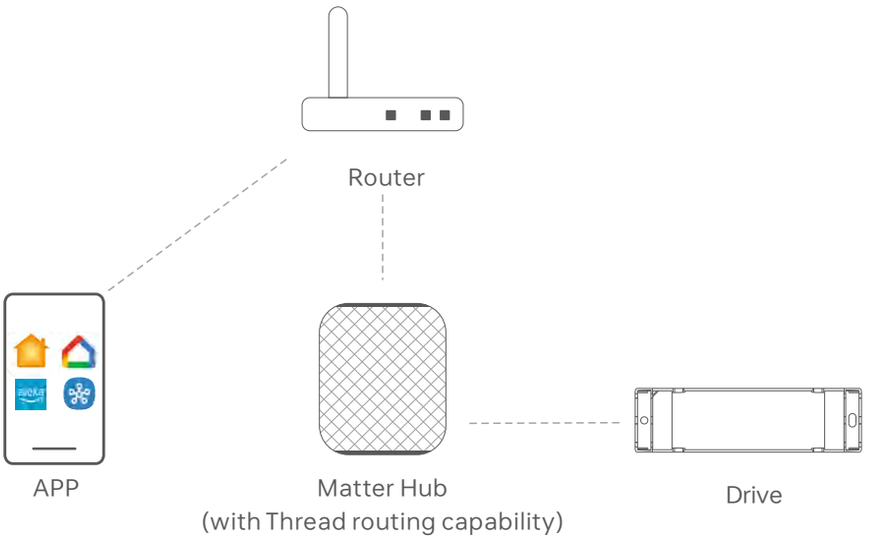
1. This device supports control via major smart home platforms, including Apple Home, SmartThings, Amazon Alexa, Google Home, and others.
2. To connect Matter over Thread devices, you need a Matter hub supporting Thread border router functionality from major platforms. Refer to the image below for compatible models.

Apple Home	SmartThings	Google Home	Amazon Alexa
Apple HomePod (second-gen)	Aeotec SmartThings Smart Home Hub	Google Nest Hub (2nd Gen)	Amazon Echo (4th-gen)
Apple HomePod Mini	Samsung SmartThings Station	Google Nest Hub Max	Amazon Echo Hub
Apple TV 4K (2nd gen)	Samsung SmartThings Hub Dongle	Google Nest Wifi Pro	Amazon Echo Show 8 (3rd-gen)
Apple TV 4K (3rd gen,128 GB)	Samsung SmartThings Hub v3	Google TV Streamer (4K)	Amazon Eero 6, Pro 6, 6 Plus, Max 7 etc.

3. This guide uses Apple Home as an example. First, prepare an iPhone (iOS 16.2 or later) or iPad (iPadOS 16.2 or later) with the latest firmware, along with an Apple HomePod mini also running the latest firmware. Then connect your iPhone or iPad to your home Wi-Fi network, launch the Apple Home app, and follow Apple's instructions to set up the HomePod mini.

*For iPhone models 16 and above, no Matter hub is required; devices can be added directly.

Matter System Diagram

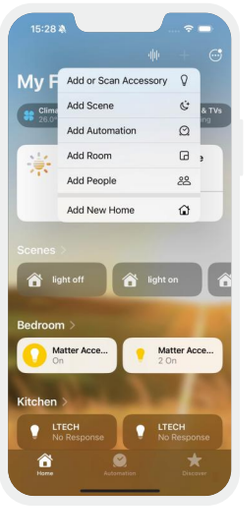


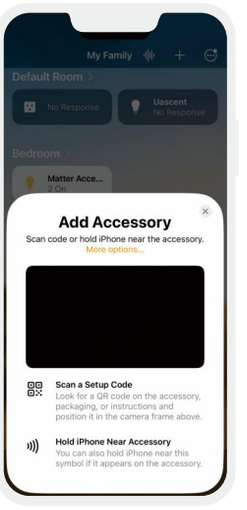
Add Steps

1. Add accessories

Open the Apple Home app and tap “Add or Scan Accessories.” Add the device to the Home app by scanning the QR code sticker on the device, as shown below.

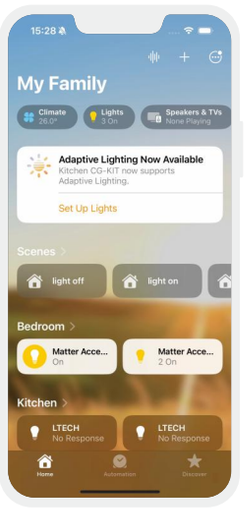
*Alternatively, you can add it via NFC: Open the Home app and hold it near the device's NFC sensor area to add it.

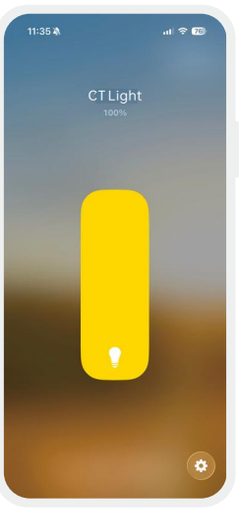




2.Control device

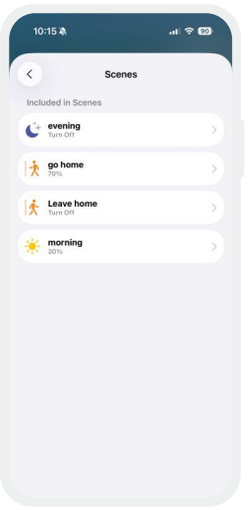
After successfully adding a device, click the device icon to turn it on or off; click the device card to enter the brightness control interface.

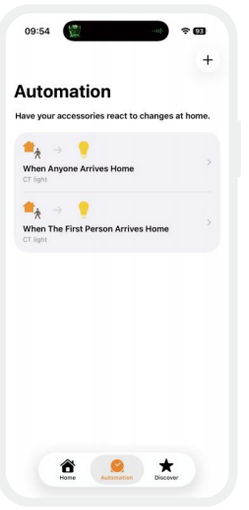




3. Advanced Features

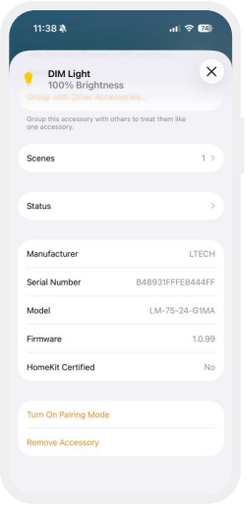
Supports creating groups, scenes, and automations, enabling remote control and scheduled control. Devices can also be controlled via Siri voice commands.

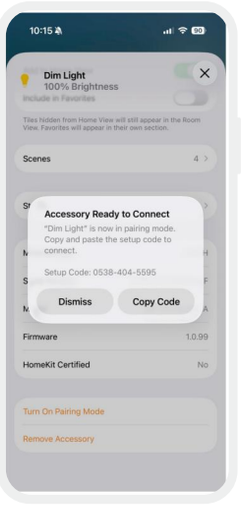




4.Multi-Ecological Distribution Network

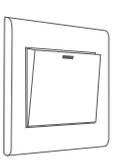
If the product needs to be added to two or more ecosystems, go to the device settings page, tap “Enable Pairing Mode,” obtain the pairing code, and add it to the third-party platform.





Reset The Device (Reset to factory defaults)

Make sure the driver is well-connected to a lamp and the lamp is on, turn it off with the switch and after 15s turn it on. After 2s, turn it off again. Repeat the same operation 6 times. When the lamp flashes 5 times , reset the device to factory defaults successfully.



Turn it on 2s

Turn it off 15s

Under the driver being power-on

Turn it off —15s— Turn it on —2s— ……

(Repeat 6 times)

Use the NFC Lighting APP

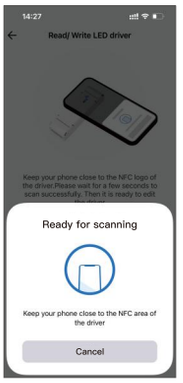
Scan the QR code below with your mobile phone and follow the prompts to complete the APP installation (According to performance requirements, you need to use a NFC-capable Android phone, or an iphone 8 and later that are compatible with iOS 13 or higher).

✱ Before you begin setting the parameters of the driver, please make sure the driver is powered off.

Read/Write the LED driver

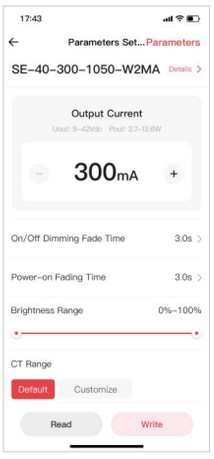
Use your NFC-capable phone to read LED driver data, then edit the parameters and they can be directly written to the driver

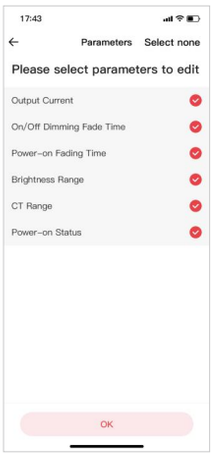
1.Read the LED driver
On the APP home page, click【Read/Write LED driver】, then keep the programmer's sensing area close to the NFC sensing area of the driver to read the driver parameters.

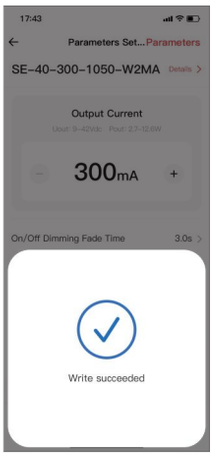


2. Edit parameters
Click on [Parameter Management] to edit more advanced parameters such as Output Current,On/Off Dimming Fade Time,Power-on Fading Time, Brightness Range, CT Range,Power-on Status.

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



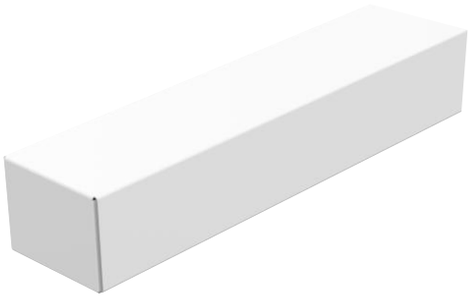




Packaging Specifications

Model	SE-40-300-1050-W2MA	SE-30-200-800-W2MA
Carton Dimensions	320×275×106mm(L×W×H)	320×275×106mm(L×W×H)
Quantity	20PCS/Layer； 2Layer/Carton； 40PCS/Carton	20PCS/Layer； 2Layer/Carton； 40PCS/Carton
Weight	0.17kg/PC; 7.6kg±5%/Carton	0.15kg/PC; 6.8kg±5%/Carton

Packaging Style Drawing



Inner packaging box

Full box packaging

FAQ

This product is designed in compliance with the Matter protocol standard. As the protocol is still in the early stage of industry development and limited by the current version, some functions, performance and network connection stability may be subject to further optimization.
Product performance is subject to the current version of the Matter protocol. Our company will continuously upgrade and optimize product functions and performance in line with official updates. Please kindly note.

1. What should I do if the large number of Matter devices managed by the Matter hub gateway causes unstable connections and control?
1.1 It is recommended that each hub gateway add no more than 40 Matter devices.
1.2 It is recommended that the hub gateway remain powered on at all times; otherwise, the device reconnection time will be long.
1.3 Routers of different brands and performances have a certain impact on the number of devices managed by the Matter hub. It is recommended to choose a high-performance router.

2. What should I do if packet loss occurs during group control switching or dimming, and the app status flips back and forth?
It is recommended to keep the number of devices in a group within 10 units.

3. What should I do if the device goes offline and cannot recover after a long period of inactivity?
It is recommended to power the device off and on again to reconnect.

4. What should I do if adding the device still fails after restoring it to factory settings?
Please try powering the device off and on again before adding it.

5. Common reasons for failed device addition caused by router issues.
5.1 The router must have the IPv6 option enabled.
5.2 The router must have the "Brute-force network attack prevention" option disabled.
5.3 Do not connect to the guest Wi-Fi; connect to the main Wi-Fi network instead.

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

- Product installation and commissioning should be done by a qualified professional.
- 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.

Update Log

Version	Updated Time	Update Conten	Updated by
A0	20251225	Original version	Haipeng Li