

## LED Intelligent Driver

- Dimming interface: 0-10V (1-10V/10VPWM/RX).
- T-PWM™ digital dimming, present a perfect visual experience.
- With soft-on and fade in function, visual more comfortable.
- Automatic recognition of 0-10V, 1-10V input signal.
- DIP switch for multiple optional currents' quick selection.
- Dimming range: 0-100%, LED start at 0.01% possible.
- 0-100% flicker-free, High frequency exemption level.
- Ultra-low consumption of 0-10V ports: < 0.05mA.
- Innovative thermal management technology, intelligent power life protection.
- Over-heat / Over load / Short circuit protection, recover automatically.
- Suitable for internal lights application for I/II/III.
- Up to 50000-hour life time.
- 5 years warranty (Rubycon capacitor).

### T-PWM

Super depth dimming technology

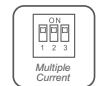
### Flicker-free

IEEE 1789

Dimmable:  
10000 : 1

TUV Certificate No. B 001119 0007 Rev. 00  
CB Certificate No. SG PSB-LE-01925  
RCM Certificate No. RCMP19279 001  
CE EMC Certificate No. BSTXD190412501201EC  
LVD Certificate No. BST190412501201SC  
CCC Certificate No. 2019011002209509

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

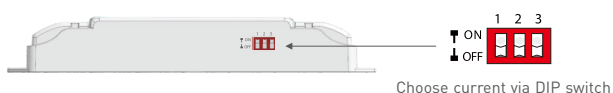


## Specification

Model		SE-10-350-700-W1A	SE-12-100-400-W1A	SE-12-350-700-W1A
OUTPUT	Output Voltage	2-12Vdc	10-42Vdc	10-24Vdc
	Max Output Voltage	20Vdc	50Vdc	35Vdc
	Output Current	350-700mA	100-400mA	350-700mA
	Output Power Range	0.7W-8.4W	1W-12W	3.5W-12W
	Strobe Level	No video flicker / High frequency exemption assessment level.		
	Dimming Range	0-100%, 0.01% dimming depth.		
	LF current ripple(<120Hz)	<1%		
	Current Accuracy	±5%		
	Ripple & Noise	≤2V		
	PWM Dimming Frequency	≤3600Hz		
INPUT	Dimming Interface	0-10V (1-10V/10VPWM/RX) 0-10V Interface consumption: <0.05mA		
	Input Voltage	100-240Vac		
	Frequency	50/60Hz		
	Input Current	0.15A@115Vac, 0.1A@230Vac	0.25A@115Vac, 0.15A@230Vac	
	Power Factor	PF>0.95/115Vac, PF>0.8/230Vac, at full load		
	Efficiency	75%	82%	81%
	Inrush Current(typ.)	Cold start 5A at 230Vac		
	Anti Surge	L-N: 1kV		
	Leakage Current	<0.35mA/230Vac	<0.5mA/230Vac	
ENVIRONMENT	Working Temperature	ta: -30°C ~ 50°C tc: 75°C		
	Working Humidity	20 ~ 95%RH, non-condensing		
	Storage Temp., Humidity	-40°C ~ 80°C, 10-95%RH		
	Temp. Coefficient	±0.03%/°C (0-50°C)		
	Vibration	10-500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes.		
PROTECTION	Over-heat Protection	Intelligently adjusting or turning off the output current if the PCB temperature ≥110°C, auto recovers.		
	Over Load Protection	Shut down the output when current load ≥102%, auto recovers.		
	Short Circuit Protection	Shut down automatically if short circuit occurs, auto recovers.		
SAFETY & EMC	Withstand Voltage	I/P-O/P: 3750Vac		
	Isolation Resistance	I/P-O/P: 100MΩ/500VDC/25°C/70%RH		
	Safety Standards	IEC/EN61347-1, IEC/EN61347-2-13		
	EMC Emission	EN55015, EN61000-3-2 Class C, IEC61000-3-3		
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11 EN61547		
	Strobe Test Standard	IEEE 1789		
OTHERS	Dimension	135×30×20mm(L×W×H)		
	Packing	140×34×23mm(L×W×H)		
	Weight(G.W.)	80g±10g		

## LED current selection

DIP switch for multi optional currents' quick selection  
(see the table below).



SE-10-350-700-W1A	DIP Switch										 ON  OFF
	Output Current	350mA	400mA	450mA	500mA	550mA	600mA	650mA	700mA		
	Output Voltage	2-12V	2-12V	2-12V	2-12V	2-12V	2-12V	2-12V	2-12V		
	Output Power	0.7-4.2W	0.8-4.8W	0.9-5.4W	1-6W	1.1-6.6W	1.2-7.2W	1.3-7.8W	1.4-8.4W		

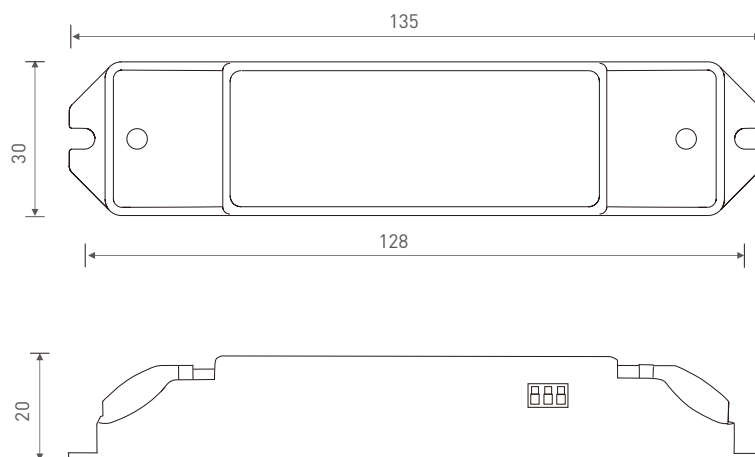
SE-12-100-400-W1A	DIP Switch									 ON  OFF
	Output Current	100mA	150mA	200mA	250mA	300mA	350mA	400mA		
	Output Voltage	10-42V	10-42V	10-42V	10-42V	10-40V	10-34V	10-30V		
	Output Power	1-4.2W	1.5-6.3W	2-8.4W	2.5-10.5W	3-12W	3.5-12W	4-12W		

SE-12-350-700-W1A	DIP Switch									 ON  OFF
	Output Current	350mA	400mA	450mA	500mA	550mA	600mA	650mA	700mA	
	Output Voltage	10-24V	10-24V	10-24V	10-24V	10-22V	10-20V	10-18.5V	10-17V	
	Output Power	3.5-8.4W	4-9.6W	4.5-10.8W	5-12W	5.5-12.1W	6-12W	6.5-12W	7-12W	

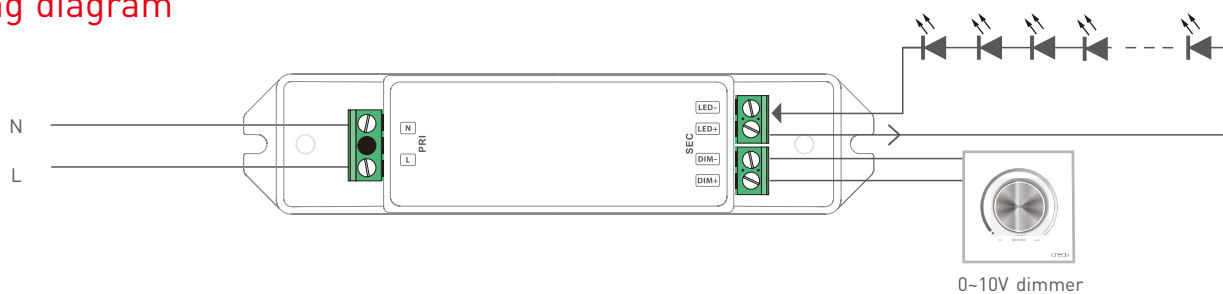
\* Please choose the current value when the driver is power off.

## Dimensions

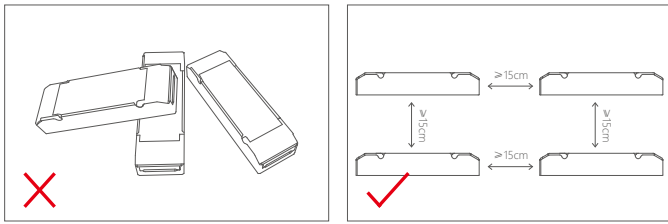
Unit: mm



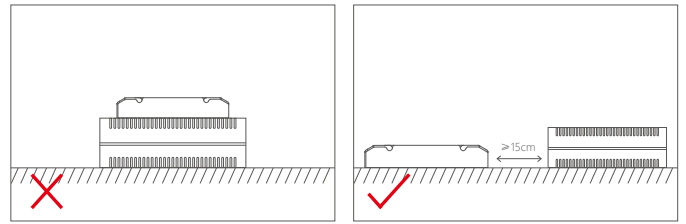
## Wiring diagram



## Installation Precautions



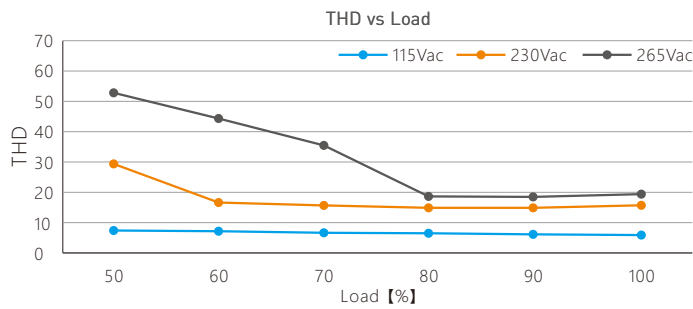
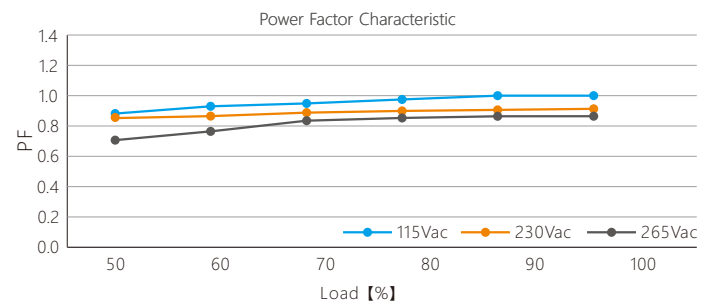
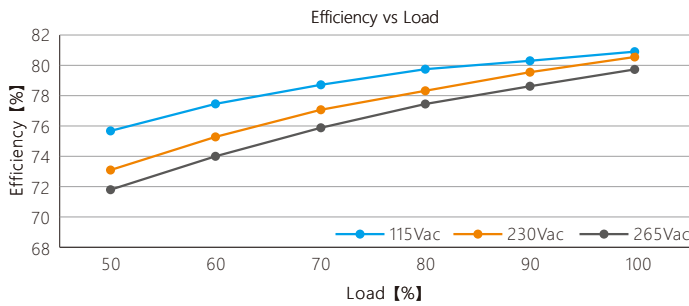
Please do not stack the products. The distance between two products should be  $\geq 15\text{cm}$  so as not to affect heat dissipation and the lifespan of the products.



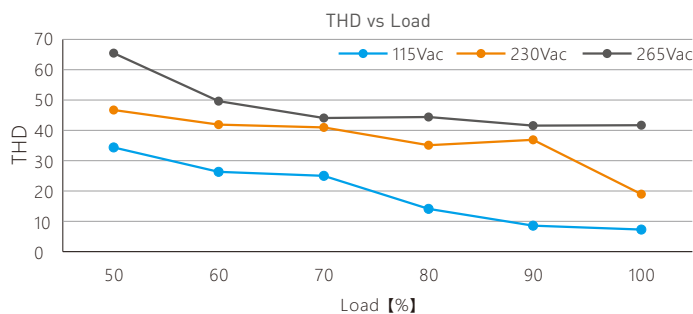
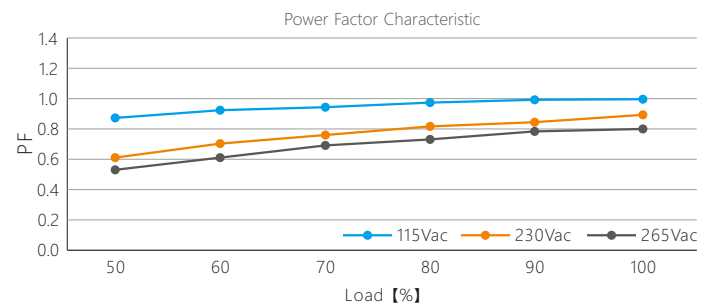
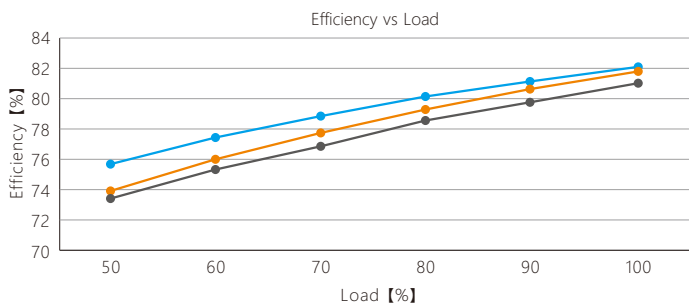
Please not place the products on LED drivers. The distance between the product and the driver should be  $\geq 15\text{cm}$  so as not to affect heat dissipation and shorten the lifespan of the products.

## Relationship Diagrams

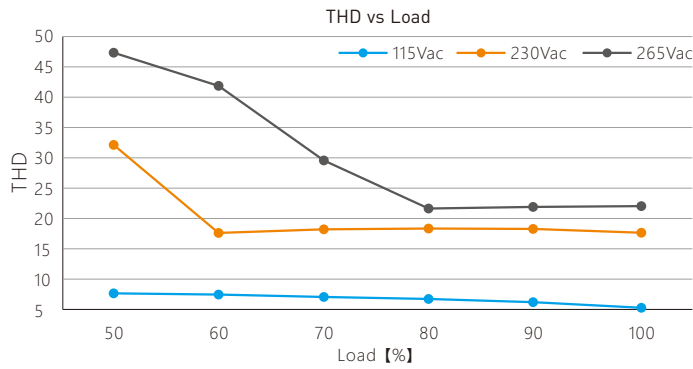
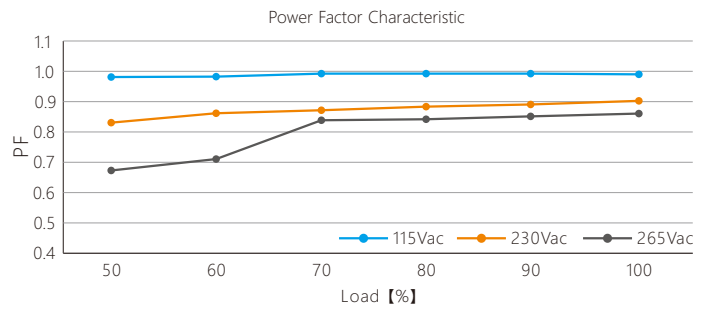
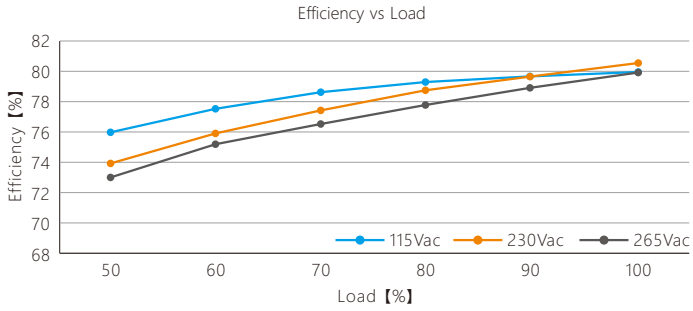
SE-10-350-700-W1A



SE-12-100-400-W1A



SE-12-350-700-W1A



## Flicker Test Form

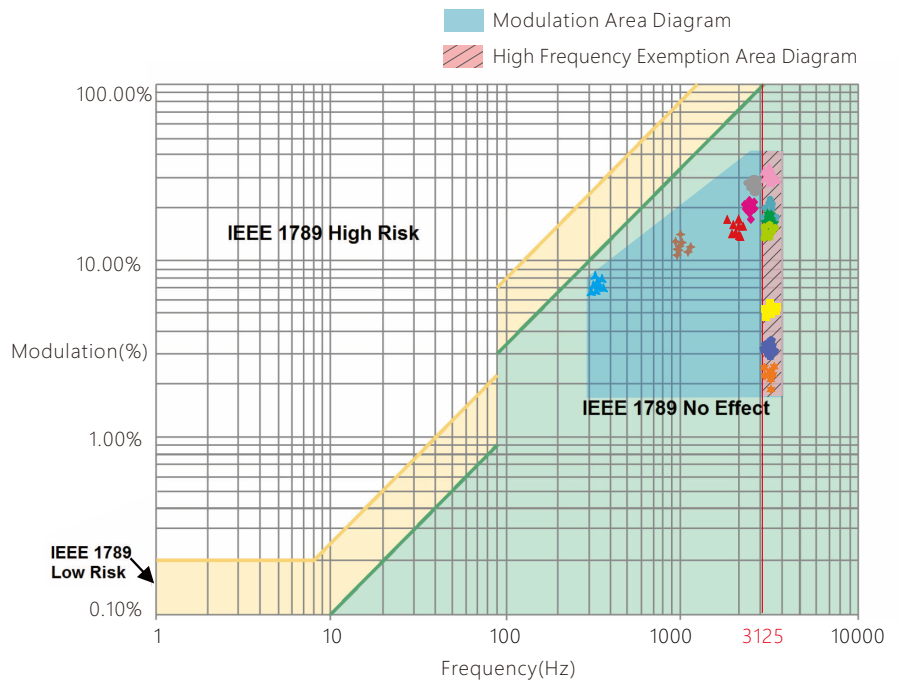
IEEE 1789

Limit of Modulation in low risk area	
Waveform frequency of Optical output	limit [%]
$f \leq 8\text{Hz}$	0.2
$8\text{Hz} < f \leq 90\text{Hz}$	$0.025 \times f$
$90\text{Hz} < f \leq 1250\text{Hz}$	$0.08 \times f$
$f > 1250\text{Hz}$	Exemption assessment
Limit of Modulation in no effect area	
Waveform frequency of Optical output	limit [%]
$f \leq 10\text{Hz}$	0.1
$10\text{Hz} < f \leq 90\text{Hz}$	$0.01 \times f$
$90\text{Hz} < f \leq 3125\text{Hz}$	$(0.08/2.5) \times f$
$f > 3125\text{Hz}$	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 frequency is 0Hz in 100% brightness and its corresponding modulation is 0%, which could not be shown in the right chart.



## 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.
  - 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
A4	2021.12.24	Updated the silkscreen on the product.	Xu Shujun
A5	2024.06.07	Update product certification.	YangWeiling