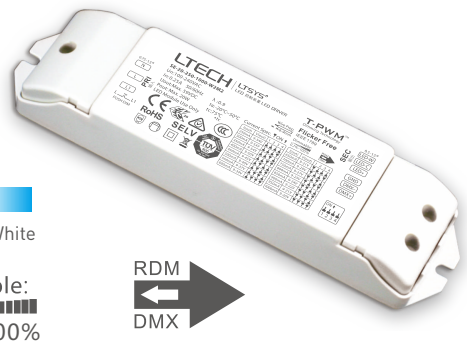
SE-20-250-1000-W2M2

LED Intelligent CT Driver (constant current)

LTECH

DMX/RDM
PUSH DIM/CCT

2.25~20W 250~1000mA 9~54Vdc



- Dimming interface: DMX512/RDM, Push DIM.
- T-PWM™ digital dimming,present a perfect visual experience.
- With RDM remote device management protocol.
- Dimming range: 0~100%, LED start at 0.1% possible.
- With soft-on and fade in function, visual more comfortable.
- DIP switch for 16 optional currents' quick selection.
- 0-100% flicker-free,High frequency exemption level.
- Dimming interface with photoelectric isolation, in line with the latest safety standards, more safe and reliable.
- In line with the EU energy efficiency ERP directive, standby power consumption < 0.5W
- Innovative thermal management technology, intelligent power life protection.
- Over temp. / Over voltage / Over load / Short circuit protection, recover automatically.
- Non-load output voltage 0V to prevent damages to LED caused by poor contact.
- 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

Tunable White

Flicker-free
IEEE 1789

Dimmable:
0.1%-100%

RDM
DMX

5 years warranty

SELV Class 2
RoHS

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

DMX/RDM Push DIM | T-PWM Super depth dimming technology | Flicker-free IEEE 1789 | Over voltage Protection | Short Circuit Protection | Over Load Protection | Over Temp. Protection

Main characteristics

Dimming interface:	DMX512/RDM, Push DIM
Input voltage:	100-240Vac (120-300Vdc)
Frequency:	50/60Hz
Input current:	115Vac≤0.25A, 230Vac≤0.13A
Output current:	250-1000mA
Output power:	Max. 20W
Power factor:	PF>0.95/115Vac , PF>0.90/230Vac, at full load
THD:	230Vac@THD≤9%, at full load
Efficiency:	83%
Standby power Loss:	<0.5W
Inrush current(typ.):	Cold start 10A at 230Vac (twidth=40μs measured at 50% Ipeak)
Anti surge:	L-N: 2kV
Leakage current:	<0.24mA/230Vac

Output voltage:	9-54Vdc
Max output voltage:	59Vdc
Strobe level:	No video flicker / High frequency exemption assessment level.
Dimming range:	0~100%, 0.1% dimming depth.
LF current ripple(<120Hz):	<1%
Current accuracy:	±5%
Ripple & Noise:	≤2V
PWM dimming frequency:	≤3600Hz
Working temperature:	ta: -20 ~ 50°C tc: 75°C
Working humidity:	20 ~ 95%RH, non-condensing
Storage temp., humidity:	-40 ~ 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.

LED current selection

DIP switch for 8 optional currents' quick selection(see the table below).

Choose current via DIP switch 

SE-20-250-1000-W2M2	DIP switch							
	Output current	250mA	300mA	350mA	400mA	450mA	500mA	550mA	600mA
	Output voltage	9-54V	9-54V	9-54V	9-50V	9-45V	9-40V	9-37V	9-34V
	Output power	2.25-13.5W	2.7-16.2W	3.15-18.9W	3.6-20W	4.05-20.25W	4.5-20W	4.95-20.35W	5.4-20.4W
	DIP switch							
	Output current	650mA	700mA	750mA	800mA	850mA	900mA	950mA	1000mA
	Output voltage	9-31V	9-29V	9-27V	9-25V	9-24V	9-22V	9-21V	9-20V
	Output power	5.85-20.15W	6.3-20.3W	6.75-20.25W	7.2-20W	7.65-20.4W	8.1-19.8W	8.55-19.95W	9-20W

ON / OFF

- Please choose the current value when the driver is power off.
- E.g. LED 3V/pcs: 9-20V can power 3-6pcs LEDs in series, 9-54V can power 3-18pcs LEDs, the max quantity of LEDs in series will be subject to the actual voltage of LED.
- Setting DMX address via RDM function

Protection

Over temp. 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.
Over voltage protection:	Output current declined when over non-load voltage, auto recovers.
Non-load Protection	Shut down the output if no load, auto recovers.

Safety & EMC

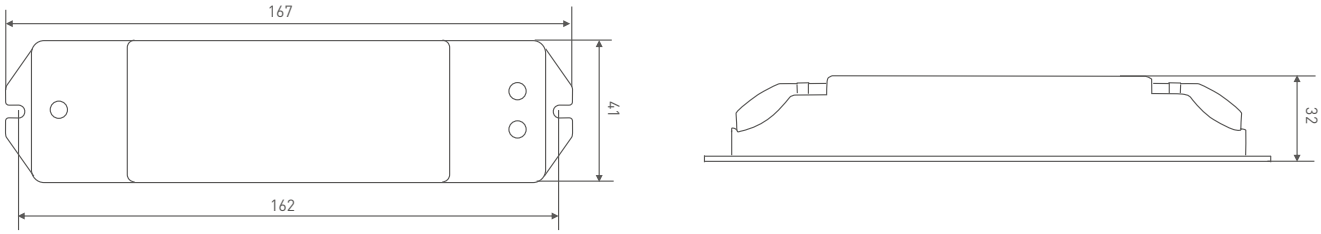
Withstand voltage:	I/P-O/P: 3750Vac
Isolation resistance:	I/P-O/P: 100MΩ/500VDC/25°C/70%RH
Safety standards:	IEC/EN61347-1, IEC/EN61347-2-13
EMC emission:	EN55015, EN61000-3-2 Class C, IEC61000-3-3
EMC immunity:	EN61000-4-2,3,4,5,6,8,11, EN61547
Strobe test standard:	IEEE 1789

Others

Dimension:	167×41×32mm(L×W×H)
Packing:	168×43×35mm(L×W×H)
Weight(G.W.):	160g±10g

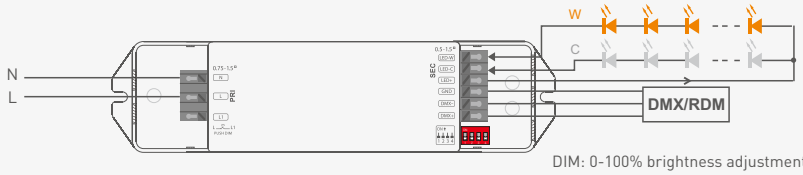
Dimensions

Unit: mm



Wiring diagram

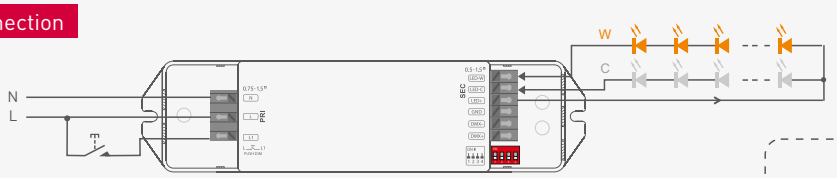
DMX/RDM connection



First address N: adjust brightness
N+1 address: adjust CT
0-100%

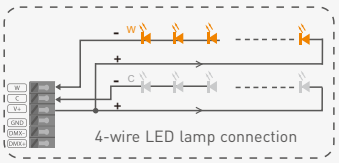
DIM: 0-100% brightness adjustment.
CCT: 2700-6500K color temperature adjustment.

Push DIM connection



Push DIM
0-100%
DIM: 0-100% brightness adjustment.
CCT: 2700-6500K Color Temperature adjustment.
Short press to on/off, long press to dim.

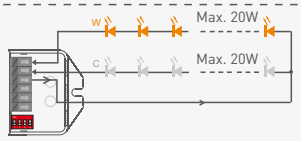
✻ In the case of DC voltage input, PUSH dimming is invalid.



✻ Dimming interface priority: First DMX/RDM, next Push DIM.

✻ Adopting constant power program design, it keeps the same brightness in color temperature dimming, twice the rated power load can be connected.

20W driver, **20W × 2CH load** can be connected, the total power of the 2 channels will be kept in 20W.



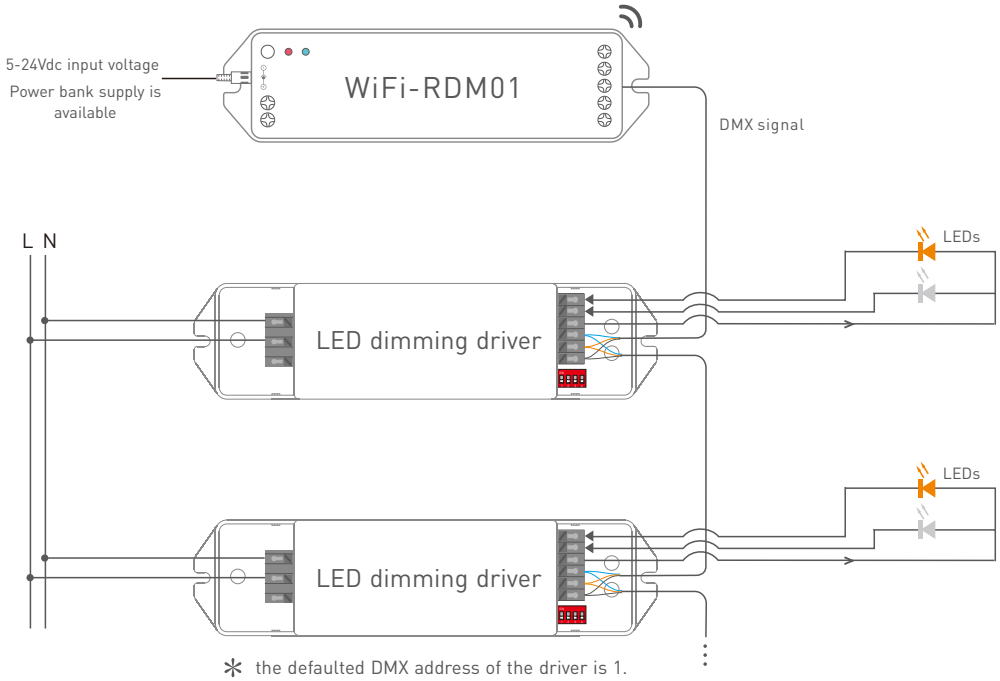
Push DIM/CCT

Reset switch

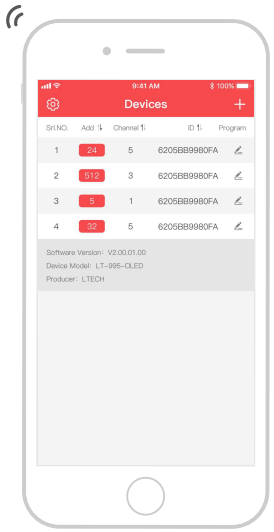
- On/off control: Short press.
- Stepless DIM/CT: Long press.
- With every other long press, the light level goes to the opposite direction.
- Dimming memory: Brightness will be the same as previously adjusted when turning off and on again.

DMX Address Setting

The DMX driver can work with the address editor that complies with standard RDM protocol.
It is recommended to use LTECH's RDM editor (model WiFi-RDM01), which can achieve more functions such as remote browsing and parameter setting. Wiring diagram as below:

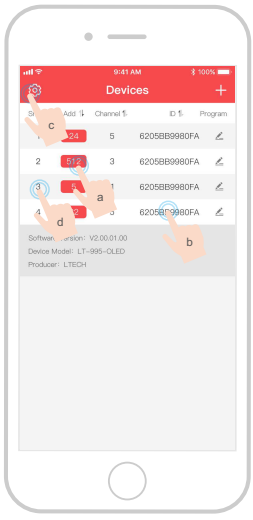


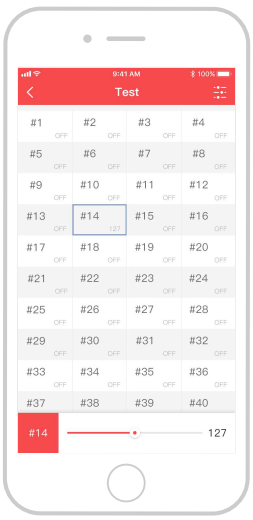
✻ the defaulted DMX address of the driver is 1.



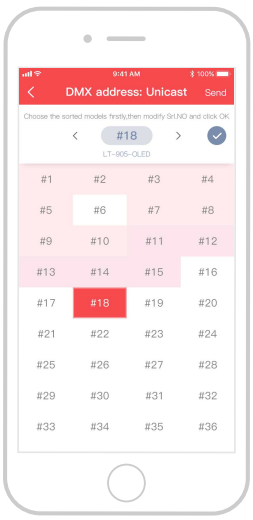
LTECH RDM editor App interface instruction

Download the App, setting the parameters after well connecting the RDM editor, please check the manual of WiFi-RDM01 for more details.





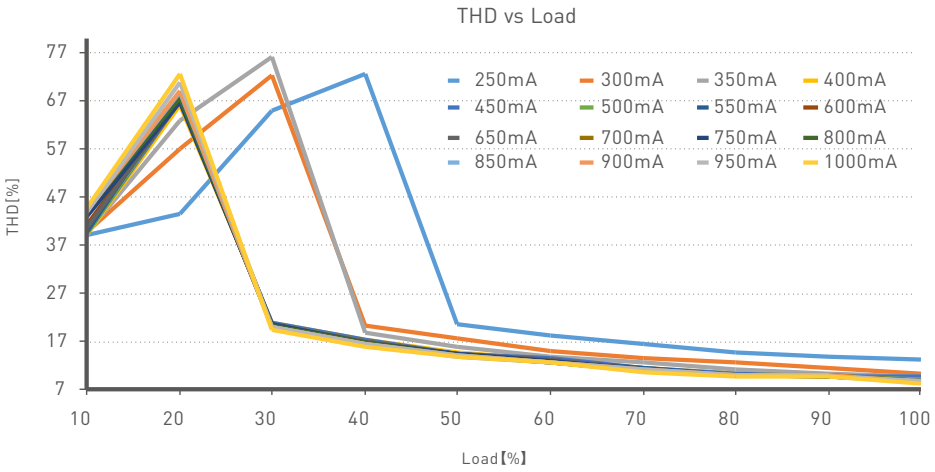
Test

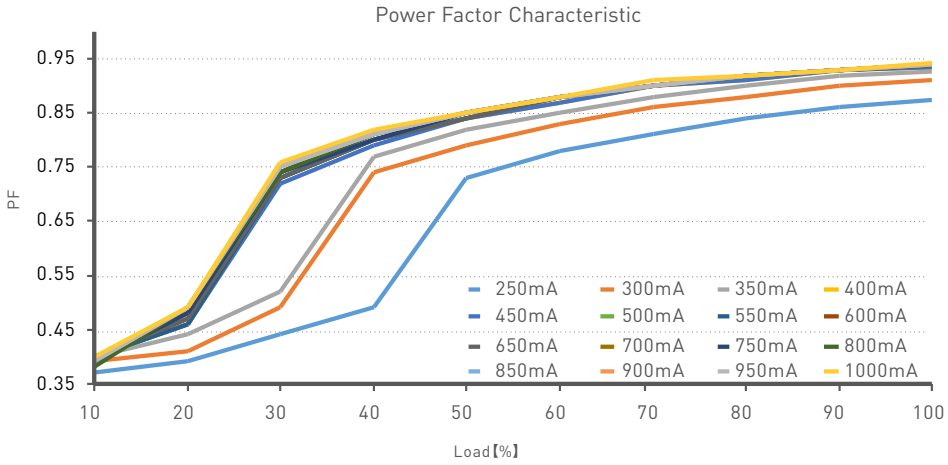


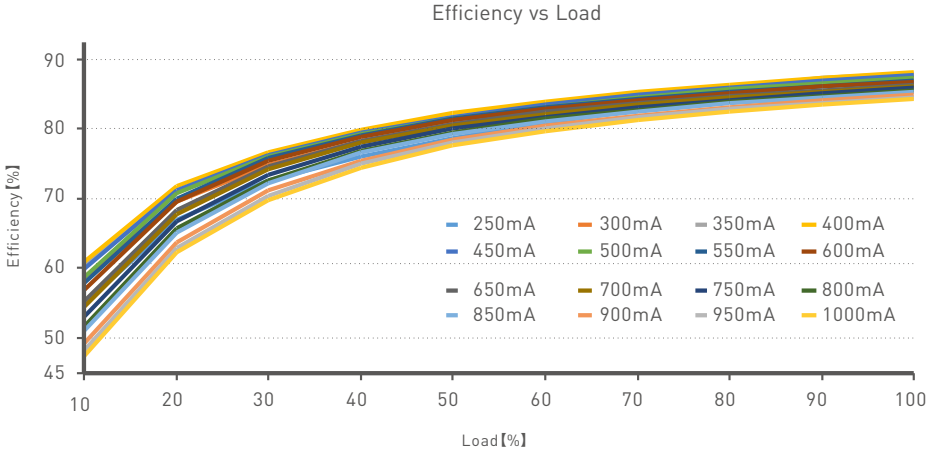
DMX address setting

a: Click"Add", edited the address in corresponding box.
b: Click"ID", get more product details.
c: Click" ", enter setting interface
d: Click"No.", issue the recognizing command.

Relationship Diagrams







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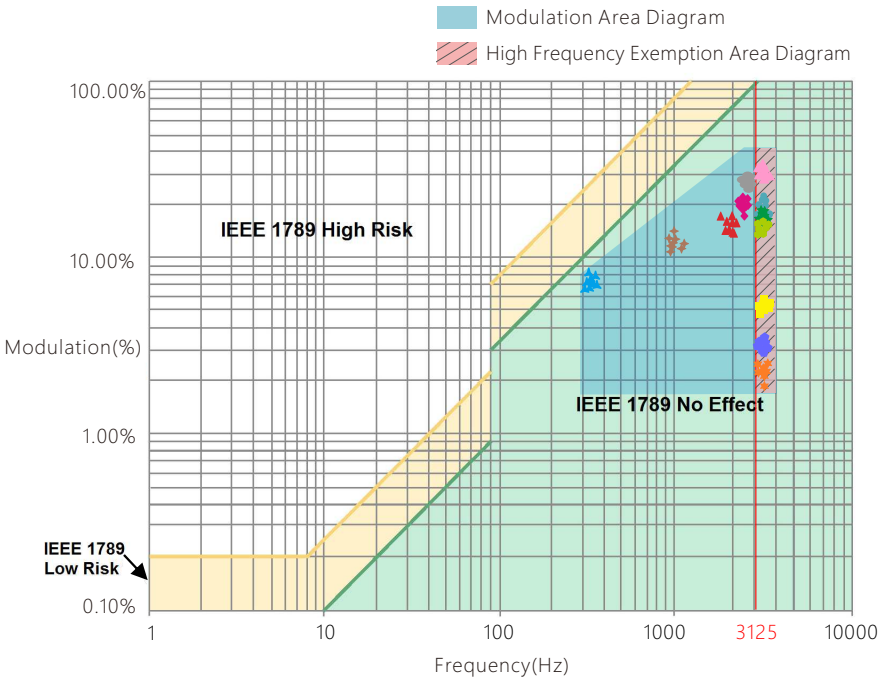
Flicker Test Form

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 × f
90Hz < $f \leqslant$ 1250Hz	0.08 × 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 × f
90Hz < $f \leqslant$ 3125Hz	(0.08/2.5) × 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.

*No further notice if any changes in the manual. Product function depends on the goods. Please feel free to contact your supplier if any question.