LED Driver DMX 100-700mA 15W - DMX-15-100-700-E1A1 2812200

General

Product Type	Constant Current Driver
Length (mm)	175
Width (mm)	44
Height (mm)	30
Housing Color	White
Housing Material	Plastic
Mounting	Surface mounted
Weight (g)	160

Electronics

Input Domain	AC
Input Voltage	220 ~ 240V AC
Output Voltage	10 ~ 54V DC
Output Current (mA) max/output	100~700
Output Power Range (W)	1~15
Power Factor at Full Load	+0.90 @ 230VAC
Power Supply	Internal
LED Outputs	1
Input Frequency	50 ~ 60Hz
Inrush Current	10A @ 230VAC

Lighting

Color Range	Single Color

Control

Output Signal	PWM-CC
Control	DMX
RDM Support	Yes
Dimming Range	0~100%
Number of Channels	1

Protection

Protection Class	II

Environmental

Operating Temperature	-30 ~ +55 °C
Ingress Protection	IP20

CE IP20

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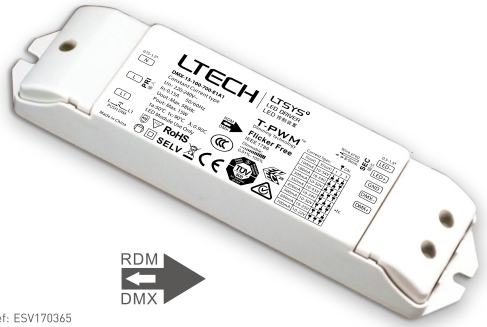
Paper size: A4

LED Intelligent Driver (constant current)

- 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 0.01% possible.
- With soft-on and fade in function, visual more comfortable.
- DIP switch for 8 optional currents' quick selection.
- 0-100% flicker-free,High frequency exemption level.
- Innovative thermal management technology, intelligent power life protection.
- Multi-current & wide voltage, suitable for different power LED.
- Short circuit / Over-heat / Over load / Non-load 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

Flicker-free
IEEE 1789

TUV Certificate No. B 17 06 01119 001
RCM Equipment registration No: E2017013627 Ref: ESV170365
ENEC Certificate No. U6 17 07 01119 004
CE EMC Certificate No. BST1702498520001Y-1EC-1
LVD Certificate No. BST1709992470001Y-1SC-2

RDM
DMX

Dimmable:
0.01-100%

IS15885 (Part2/Sec13)
R-41072265

RoHS SELV CE Class 2

DMX/RDM PUSH DIM | T-PWM Super depth dimming technology | Flicker-free IEEE 1789 | Over-heat Protection | Short Circuit Protection | Over Load Protection | Multiple Current

Specification

Model		DMX-15-100-700-E1A1	DMX-25-150-900-E1A1	DMX-36-200-1200-E1A1
OUTPUT	Output Voltage	10-54Vdc		
	Max Output Voltage	58Vdc		
	Non-load Output Voltage	0Vdc		
	Output Current	100-700mA	150-900mA	200-1200mA
	Output Power	1W~15W	1.5~25W	2W~36W
	Dimming Range	0~100%, LED start at 0.01% possible.		
	Strobe Level	No video flicker / High frequency exemption level.		
	PWM Dimming Frequency	≤3600Hz		
	LF Current Ripple(120Hz)	<2%		
	Current Accuracy	±5%		
	Ripple & Noise	≤2V (no dim)		
INPUT	Dimming Interface	DMX512/RDM, Push DIM		
	Input Voltage Range	220-240Vac		
	Frequency	50/60Hz		
	Input Current	<0.15A	<0.2A	<0.3A
	Power Factor	PF>0.90/230Vac, at full load	PF>0.93/230Vac, at full load	PF>0.95/230Vac, at full load
	THD	≤20% at 230Vac, at full load		≤15% at 230Vac, at full load
	Efficiency(typ.)	83%	84%	87%
	Inrush Current(typ.)	Cold start 2.47A at 230Vac (twidth=24.3μs measured at 50% Ipeak)	Cold start 3.05A at 230Vac (twidth=34.1μs measured at 50% Ipeak)	Cold start 6.29A at 230Vac (twidth=57.3μs measured at 50% Ipeak)
	Anti Surge	L-N: 1kV		
	Leakage Current	<0.5mA/230Vac		
ENVIRONMENT	Working Temperature	ta: 50°C tc: 90°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 rated power≥102%, auto recovers		
	Short Circuit Protection	Shut down automatically if short circuit occurs, auto recovers		
	Non-load Protection	Shut down the output if no load, auto recovers when load back to normal		
SAFETY & EMC	Withstand Voltage	I/P-O/P: 3750Vac		
	Isolation 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		
		CE European Union EN61347-1, EN61347-2-13, EN62384		
		CB CB member states IEC61347-1, IEC61347-2-13		
		RCM Australia AS61347-1, AS61347-2-13		
		ENEC Europe EN61347-1, EN61347-2-13, EN62384		
	EMC Emission	CCC China GB/T17743, GB17625.1		
		RCM Australia EN550515, EN61000-3-2, EN61000-3-3, EN61547		
		CE European Union EN550515, EN61000-3-2, EN61000-3-3		
	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.)	165g±10g		

LED Current Selection

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

DMX-15-100-700-E1A1	DIP Switch									ON OFF
	Output Current	100mA	180mA	300mA	350mA	450mA	500mA	600mA	700mA	
	Output Voltage	10-54V	10-54V	10-50V	10-43V	10-34V	10-30V	10-25V	10-22V	
	Output Power	1W-5.4W	1.8W-9.72W	3W-15W	3.5W-15.05W	4.5W-15.3W	5W-15W	6W-15W	7W-15.4W	

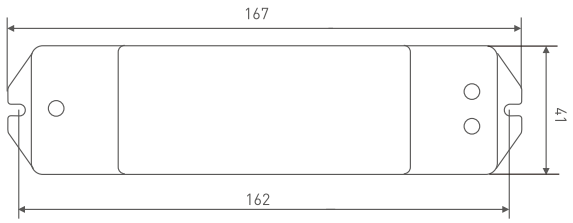
DMX-25-150-900-E1A1	DIP Switch									ON OFF
	Output Current	150mA	250mA	300mA	350mA	500mA	600mA	700mA	900mA	
	Output Voltage	10-54V	10-54V	10-54V	10-54V	10-50V	10-42V	10-36V	10-28V	
	Output Power	1.5W-8.1W	2.5W-13.5W	3W-16.2W	3.5W-18.9W	5W-25W	6W-25.2W	7W-25.2W	9W-25.2W	

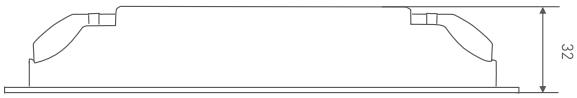
DMX-36-200-1200-E1A1	DIP Switch									ON OFF
	Output Current	200mA	350mA	500mA	600mA	700mA	900mA	1050mA	1200mA	
	Output Voltage	10-54V	10-54V	10-54V	10-54V	10-52V	10-40V	10-35V	10-30V	
	Output Power	2W-10.8W	3.5W-18.9W	5W-27W	6W-32.4W	7W-36.4W	9W-36W	10.5W-36.75W	12W-36W	

- Please choose the current value when the driver is power off.
- E.g. LED 3V/pcs: 10-54V can power 3-18pcs LEDs in series, 10-22V can power 3-7pcs LEDs, the max quantity of LEDs in series will be subject to the actual voltage of LED.
- Setting DMX address via RDM function

Dimensions

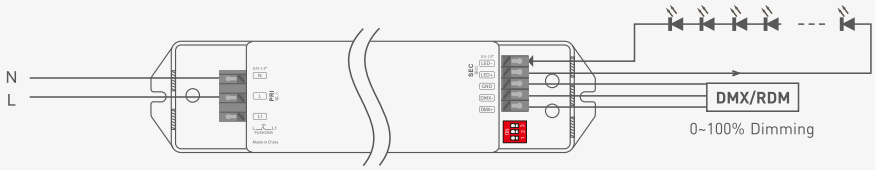
Unit: mm



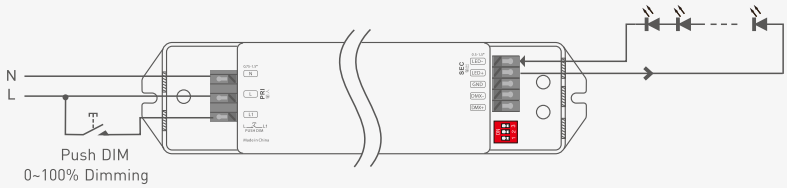


Wiring Diagram

DMX/RDM connection



Push DIM connection



Short press to on/off, long press to DIM.

The dimming interface priority: First DMX/RDM, next Push DIM.

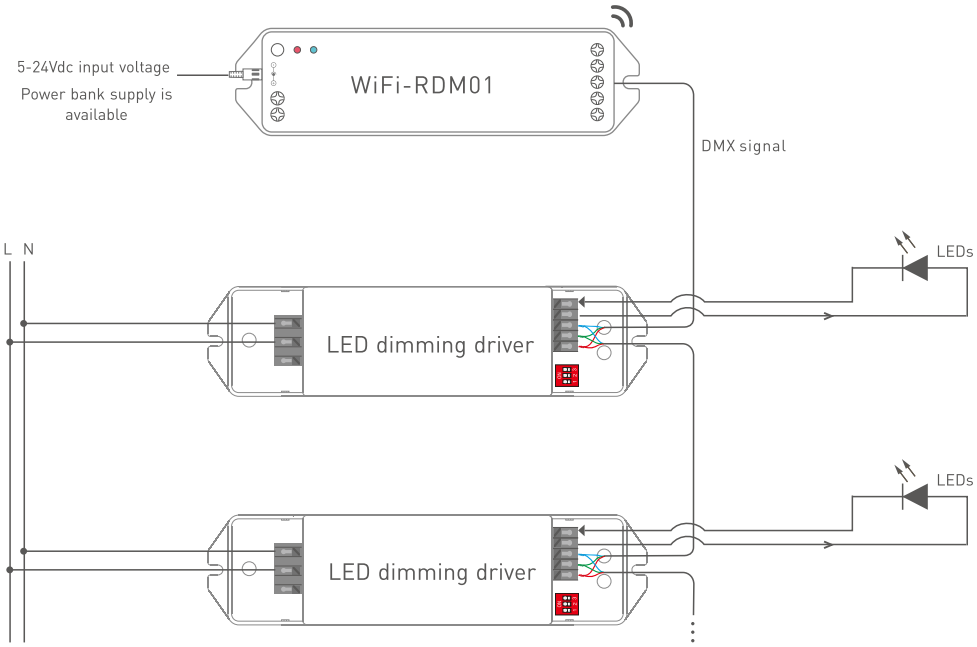
Push DIM

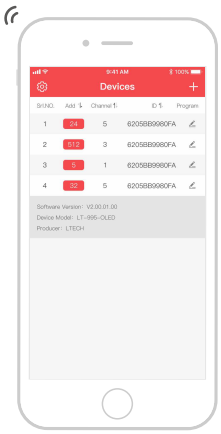
Reset Switch

- On/off control: Short press.
- Stepless dimming: Long press.
- With every other long press, the brightness goes to the opposite direction.
- Dimming memory: Brightness will be the same as previously adjusted when turning 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:

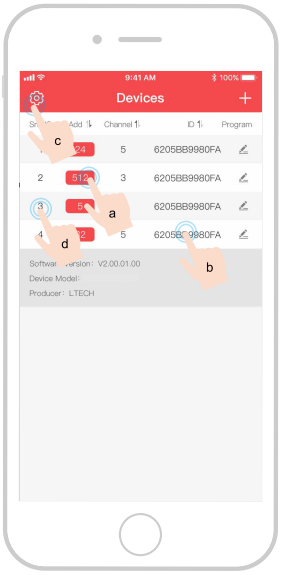


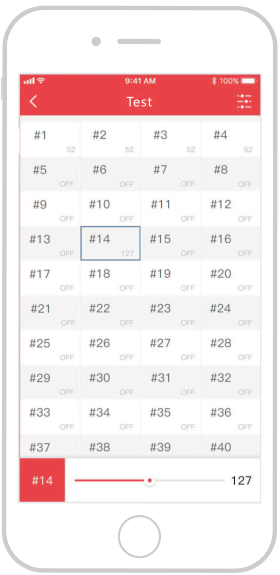


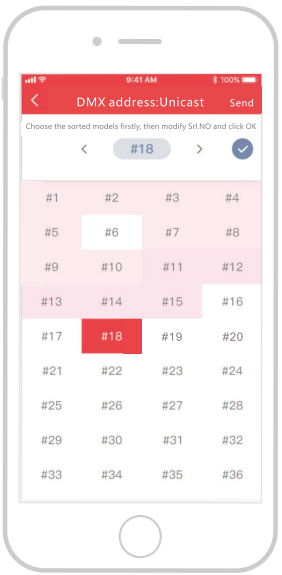
✻ the defaulted DMX address of the driver is 1.

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.







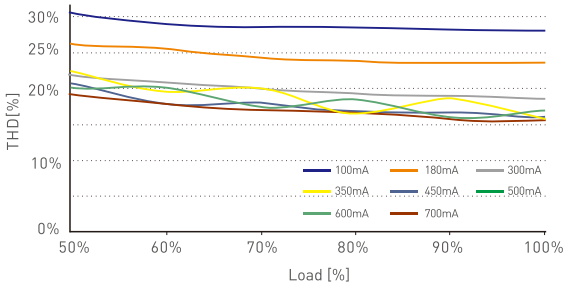
a: Click"Add", edited the address in corresponding box.
b: Click"ID", get more product details.
c: Click"⚙", enter setting interface.
d: Click"No.", issue the recognizing command.

Test

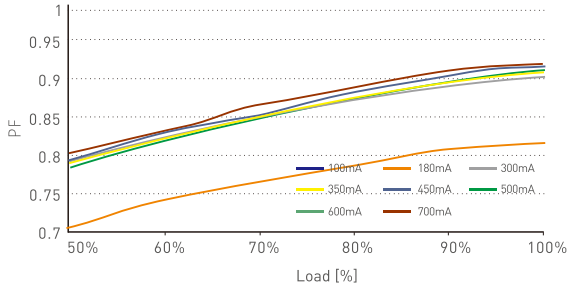
DMX address setting

Relationship Diagrams

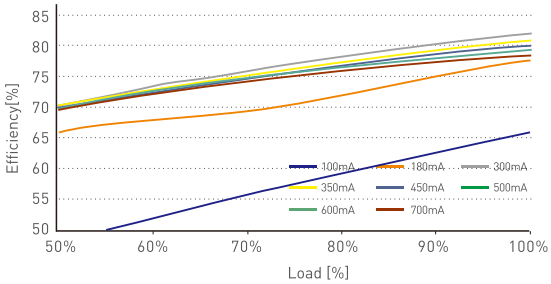
THD vs Load



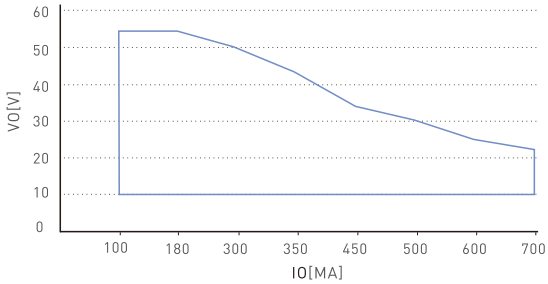
Power Factor Characteristic



Efficiency vs Load



Current vs Voltage



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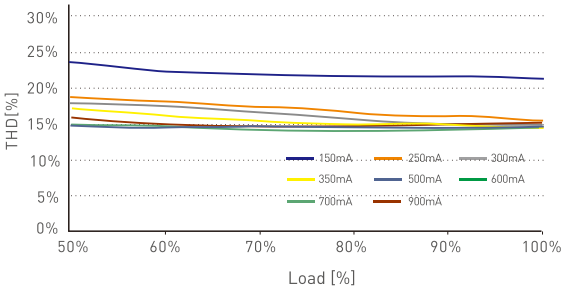
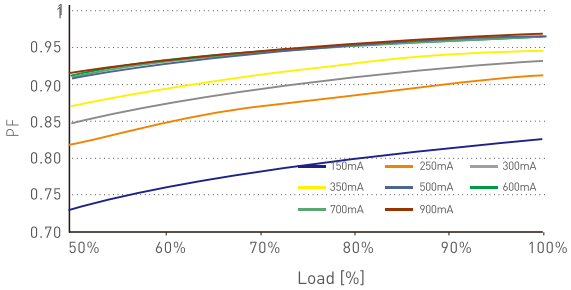
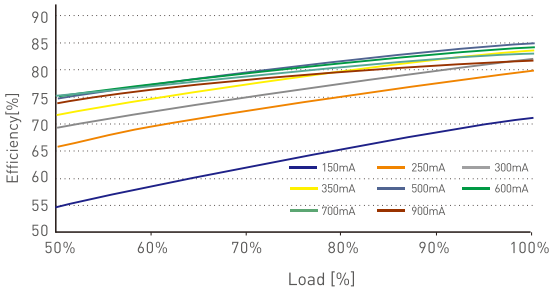
THD vs Load



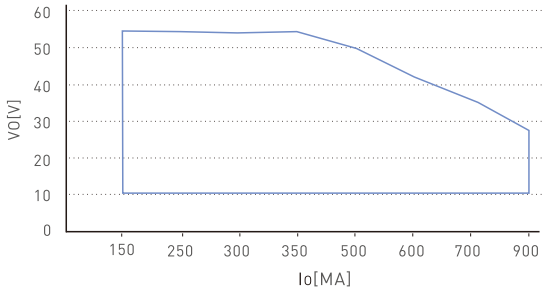
Power Factor Characteristic



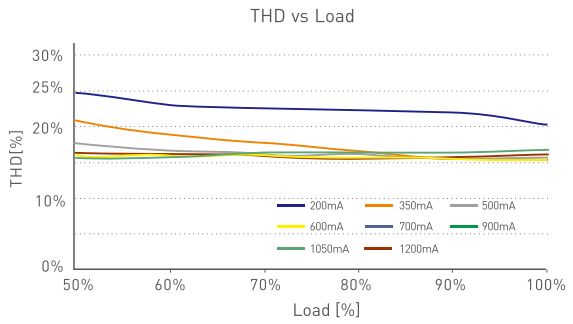
Efficiency vs Load

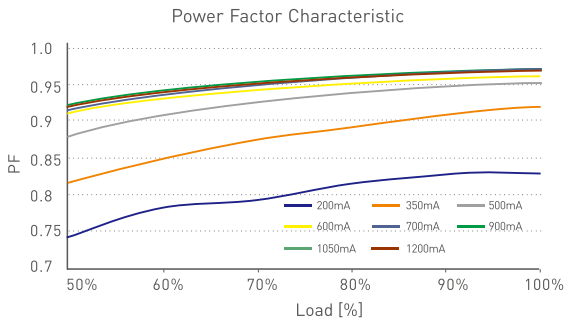


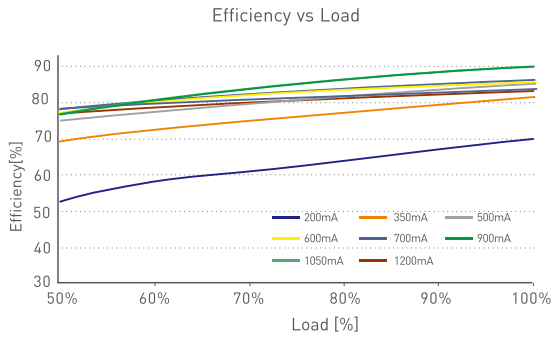
Current vs Voltage

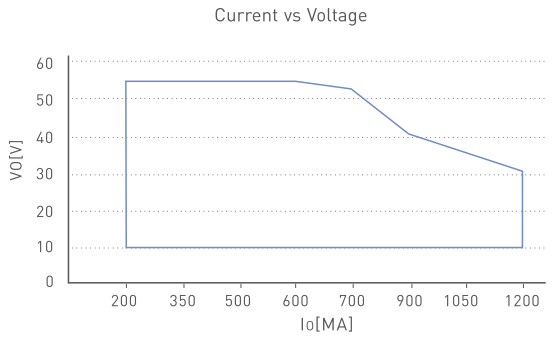


DMX-25-150-900-E1A1









DMX-36-200-1200-E1A1

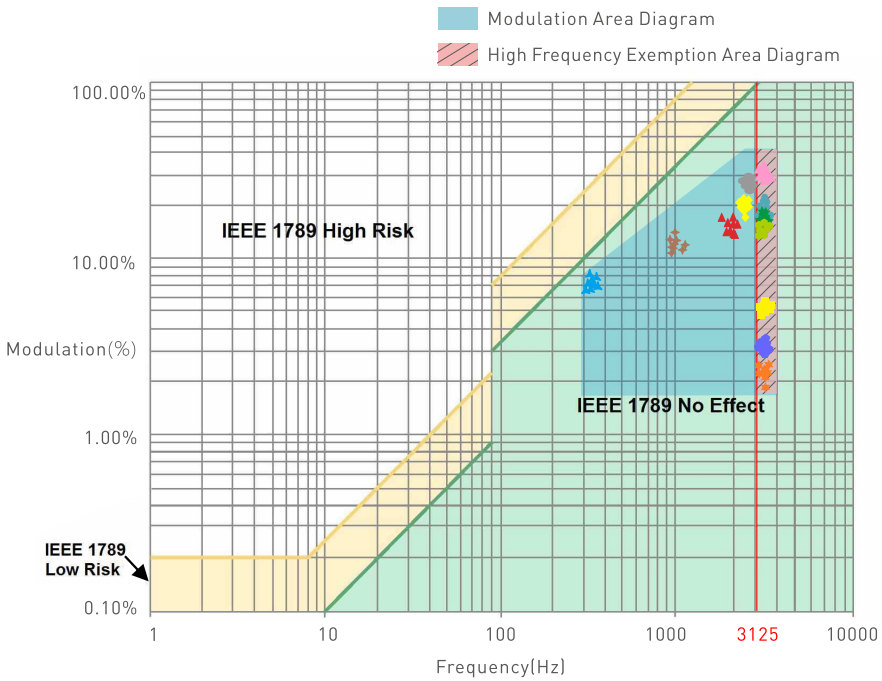
Flicker Test Form

IEEE 1789

Limit of Modulation in low risk area	
Waveform frequency of Optical output	limit [%]
$f \leqslant 8Hz$	0.2
$8Hz < f \leqslant 90Hz$	$0.025 \times f$
$90Hz < f \leqslant 1250Hz$	$0.08 \times f$
$f > 1250Hz$	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 modulationis 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	2019.10.24	Add RDM editor connection diagram	Liu Weili
A5	2021.03.02	Update product silk screen, TUV certification icon; add precautions and warranty agreement	Liu Weili