



General

Product Type	Constant Current Driver
Length (mm)	167
Width (mm)	41
Height (mm)	32
Housing Color	White
Housing Material	Plastic
Mounting	Surface mounted
Weight (g)	160

Electronics

Input Domain	AC
Input Voltage	100 ~ 240V AC
Output Voltage	9 ~ 54V DC
Output Current (mA) max/output	250~1000
Output Power Range (W)	2.25~20
Power Factor at Full Load	+0.90 @ 230VAC
Power Supply	Internal
LED Outputs	1
Efficiency	83%
Leakage current max. (mA)	0.24
Standby Power Loss Max. (W)	0.5
Input Frequency	50 ~ 60Hz
Inrush Current	10A @ 230VAC

Lighting

Color Range	Tunable White
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Control

Output Signal	PWM-CC
Control	0-10V
Dimming Range	0~100%, 0.1% dimming depth.

Protection

Protection Class	II
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Environmental

Storage Temperature	-40 ~ +80 °C
Operating Temperature	-20 ~ +50 °C



5 year warranty

Disclaimer

Due to the technical evolution and improvement of our products, the data provided in this document may be updated on a regular basis, and as such, confirmation of this information is strongly recommended prior to the order process. OneEightyOne is not responsible for any discrepancies in this document following changes in our products. We reserve the right to make technical changes to our products and to change information, at its sole discretion, without notice.



LED Intelligent CT Driver

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

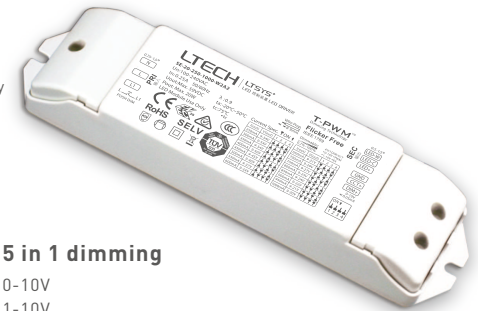
- Dimming interface: 0-10V (1-10V/10VPWM/RX), Push DIM.
- T-PWM™ digital dimming, present a perfect visual experience.
- With soft-on and fade in function, visual more comfortable.
- Achieve dimming or CT adjustment for 1CH 0-10V or 2CH 0-10V.
- Dimming range: 0~100%, LED start at 0.1% possible.
- Automatic recognition of 0-10V, 1-10V input signal.
- DIP switch for 16 optional currents' quick selection.
- 0-100% flicker-free, High frequency exemption level.
- Ultra-low consumption of 0-10V ports: < 0.05mA.
- 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

Flicker-free

IEEE 1789

Dimmable:
0.1%~100%

5 in 1 dimming

0-10V
1-10V
PWM
RX
Push DIM

Tunable White

5 years
warranty

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



Main characteristics

Dimming interface:	0-10V(1-10V/PWM/RX), Push DIM
Interface consumption:	<0.05mA @ 0-10V
Input voltage:	100-240Vac (120-300Vdc)
Frequency:	50/60Hz
Input current:	115Vac≤0.25A, 230Vac≤0.13A
Power factor:	PF>0.95/115Vac, PF>0.90/230Vac, at full load
THD	230Vac@THD≤10%, 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 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.

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

LED Current Selection

DIP switch for 16 optional currents' quick selection(see the table below).

Choose current via DIP switch

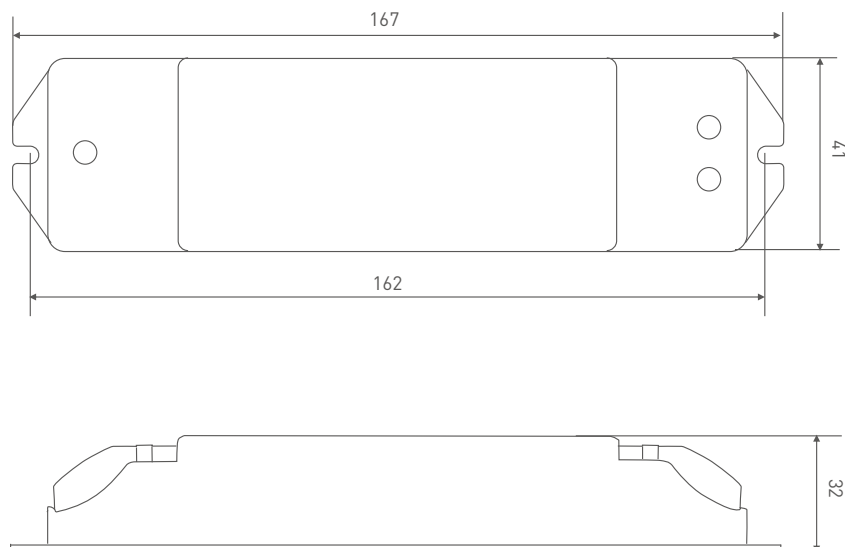


SE-20-250-1000-W2A2	DIP switch	⬇⬇⬇⬇	⬇⬇⬇⬆	⬇⬇⬆⬇	⬇⬆⬆⬆	⬆⬆⬆⬇	⬆⬆⬆⬆	⬆⬆⬆⬇	⬆⬆⬆⬆	ON ⬆
	Output current	250mA	300mA	350mA	400mA	450mA	500mA	550mA	600mA	
	Output voltage	9-54V	9-54V	9-54V	9-50V	9-45V	9-40V	9-37V	9-34V	
	Output power	2.25-13.5W	2.7-16.2W	3.15-18.9W	3.6-20W	4.05-20.25W	4.5-20W	4.95-20.35W	5.4-20.4W	
	DIP switch	⬆⬆⬆⬇	⬆⬆⬆⬆	⬆⬆⬆⬇	⬆⬆⬆⬆	⬆⬆⬆⬇	⬆⬆⬆⬆	⬆⬆⬆⬇	⬆⬆⬆⬆	OFF ⬇
	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	

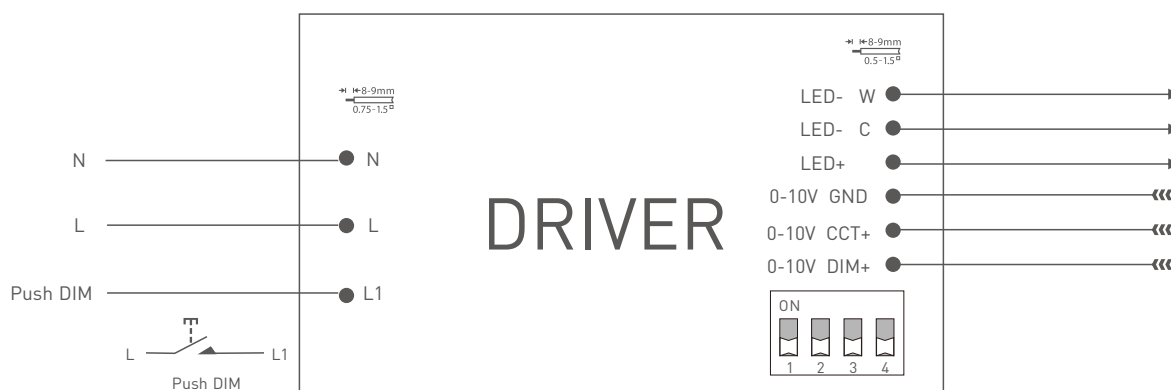
* Please choose the current value when the driver is power off.

Dimensions

Unit: mm



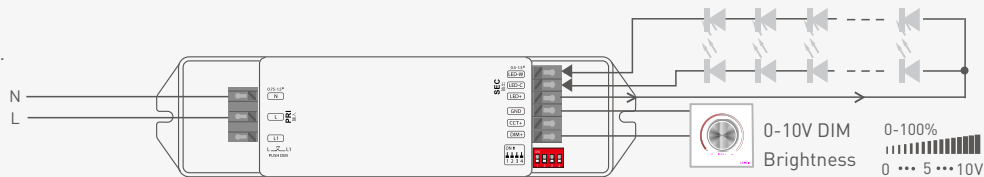
Wiring diagram



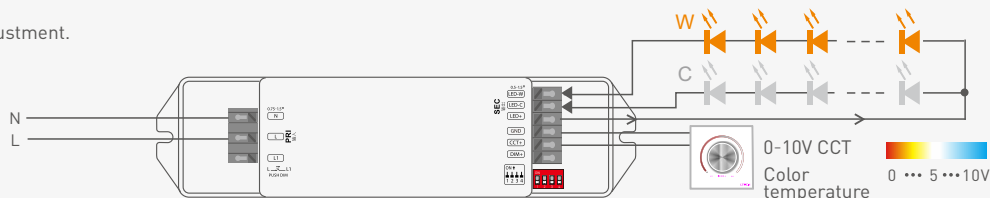
Wiring diagram

0-10V connection

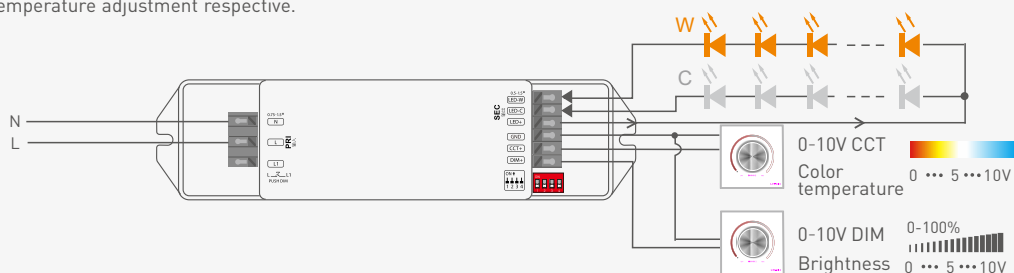
1. Brightness adjustment.



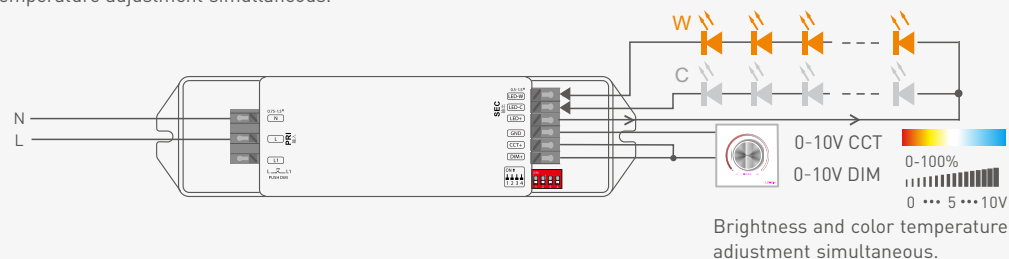
2. Color temperature adjustment.



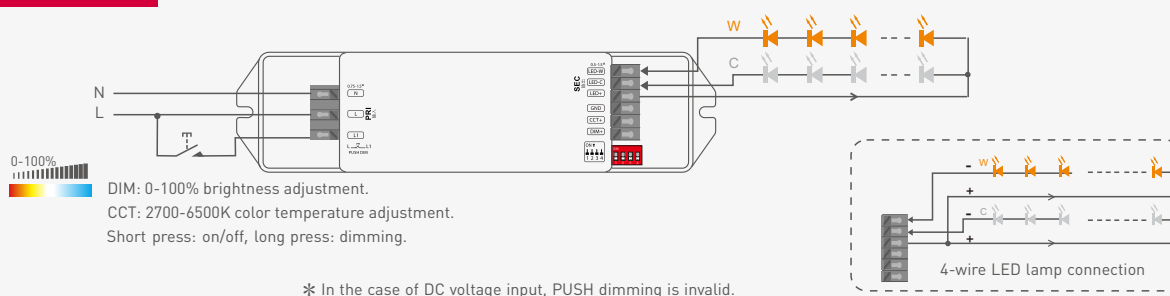
3. Brightness and color temperature adjustment respective.



4. Brightness and color temperature adjustment simultaneous.

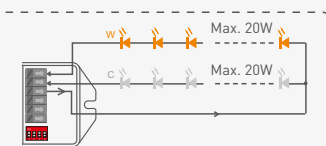


Push DIM/CCT connection



Dimming interface priority: First 0-10V, next Push DIM/CCT.

- * 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.



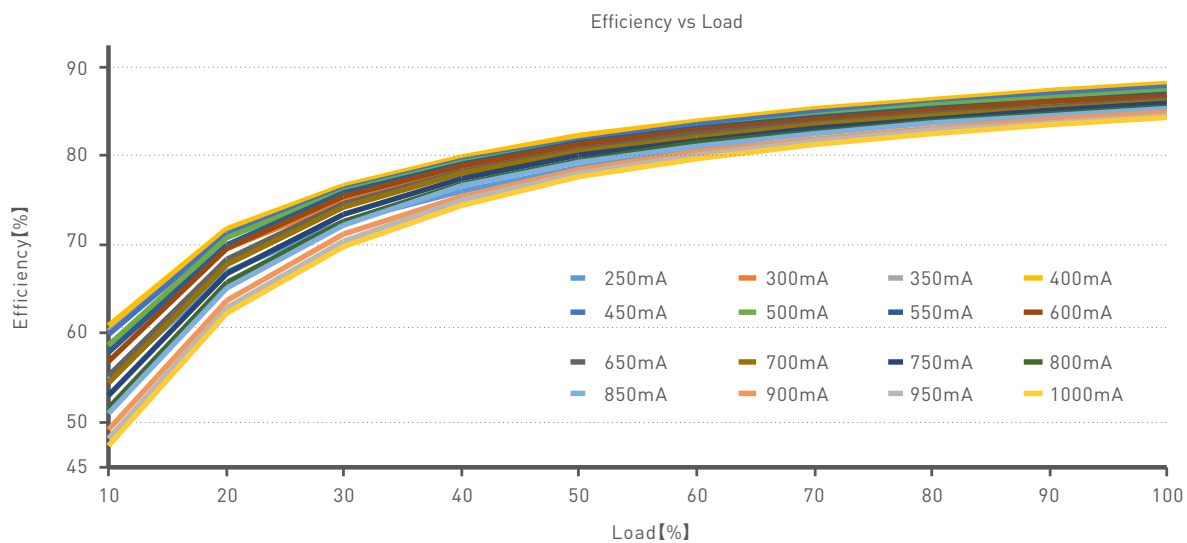
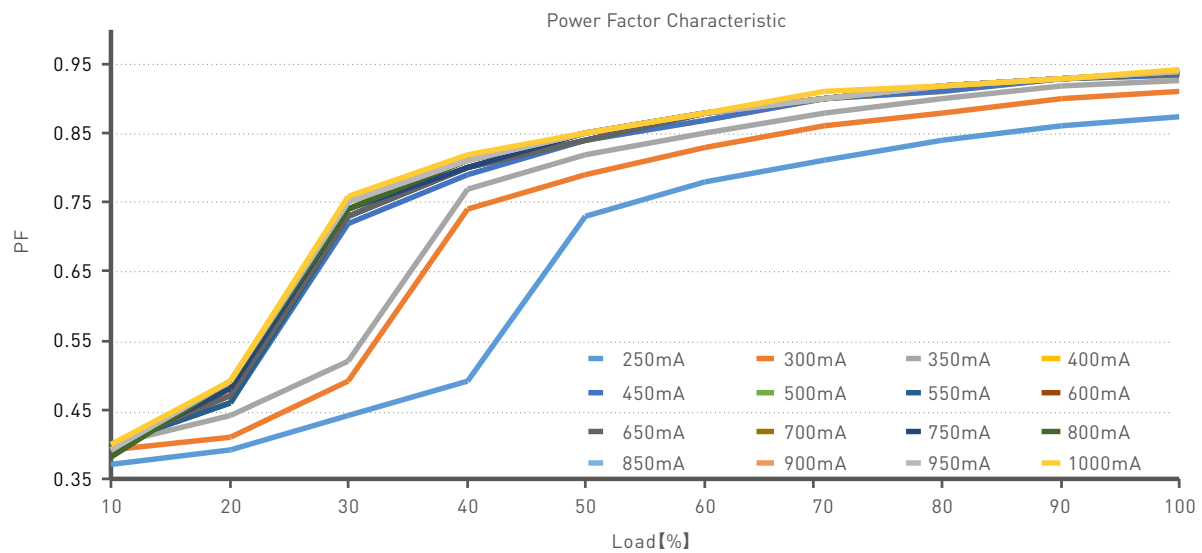
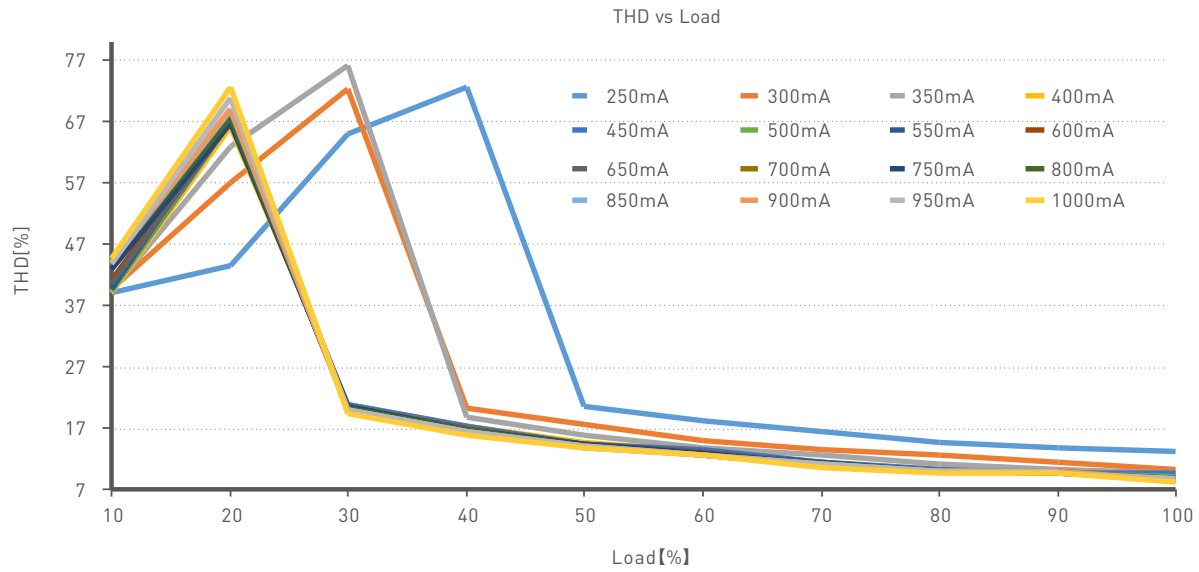
Push DIM/CCT



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.

Relationship diagrams



Flicker Test Form

IEEE 1789

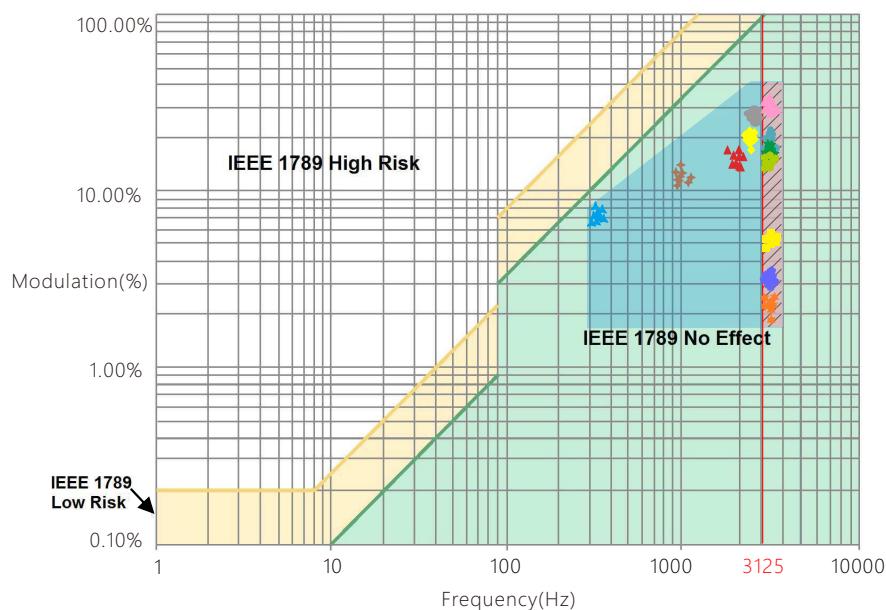
Limit of Modulation in low risk area	
Waveform frequency of Optical output	limit (%)
$f' \leq 8\text{Hz}$	0.2
$8\text{Hz} < f' \leq 90\text{Hz}$	$0.025 \times f'$
$90\text{Hz} < f' \leq 1250\text{Hz}$	$0.08 \times f'$
$f' > 1250\text{Hz}$	Exemption assessment
Limit of Modulation in no effect area	
Waveform 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%

Modulation Area Diagram

High Frequency Exemption Area Diagram



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.