LTECH

SE-20-250-1000-W2D2

DALI Push DIM/CCT

LED Intelligent CT Driver

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

- Dimming interface: DALI-2 DT6/DT8
- T-PWM™digital dimming,present a perfect visual experience.
- Dimming range: 0~100%, LED start at 0.1% possible.
- DALI-2 DT6/DT8, DIM and color temperature adjusting driver.
- 0-100% flicker-free,High frequency exemption level.
- Innovative thermal management technology, intelligent power life protection.
- Over temp. / Over voltage / Over load / Short circuit protection, recover automatically.
- In line with the EU energy efficiency ERP directive, standby power consumption < 0.5W.
- DALI bus standard: IEC62386-101,102, 209.
- Suitable for internal lights application for Ⅰ/Ⅱ/Ⅲ.
- Up to 50,000-hour life time.
- 5 years warranty (Rubycon capacitor).

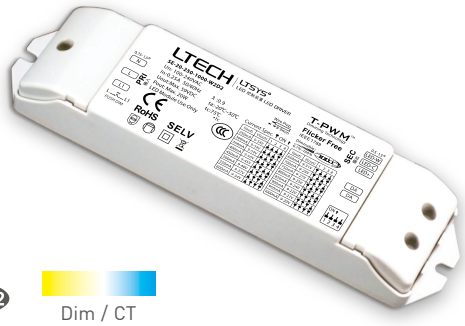
T-PWM™
Super depth dimming technology

Flicker-free
IEEE 1789

Dimmable:
0.1%-100%

DALI 2

Dim / CT



SELV Class 2 RoHS

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

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

Main characteristics

Dimming interface:	DALI-2 DT6/DT8
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 16 optional currents' quick selection(see the table below).

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

Choose current via DIP switch

SE-20-250-1000-W2D2	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

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.

Safety & EMC

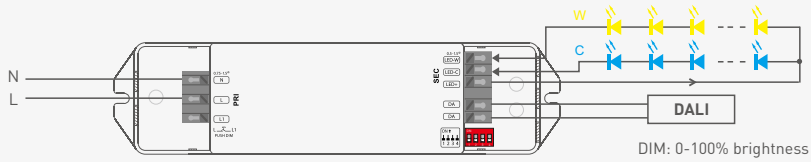
Withstand voltage:	I/P-O/P: 3750Vac
Isolation resistance:	I/P-O/P: 100MΩ/500VDC/25°C/70%RH
Safety standards:	IEC/EN61347-1, IEC/EN61347-2-13
EMC emission:	EN55015, EN61000-3-2 Class C, IEC61000-3-3
EMC immunity:	EN61000-4-2,3,4,5,6,8,11, EN61547
Strobe test standard:	IEEE 1789

Others

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

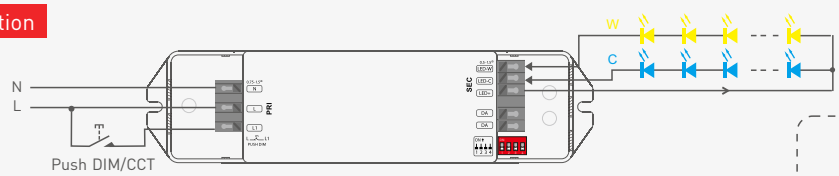
Wiring diagram

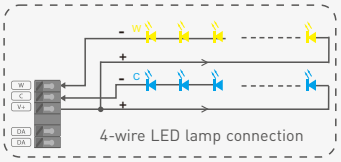
DALI connection



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

Push DIM/CCT connection





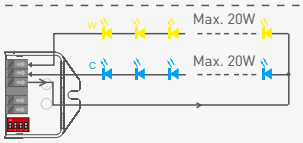
0-100%

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 DALI, 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.



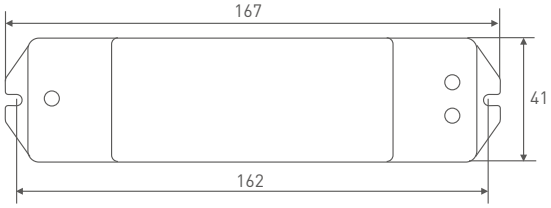
Push DIM/CCT

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.

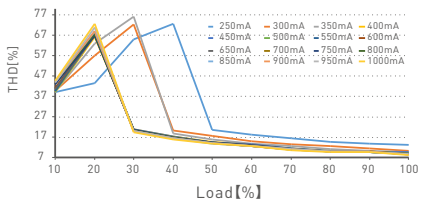
Dimensions

Unit: mm

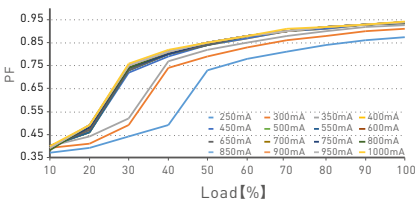


Relationship diagrams

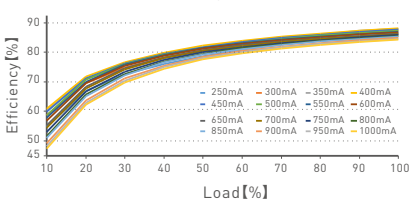
THD vs Load



Power Factor Characteristic



Efficiency vs Load

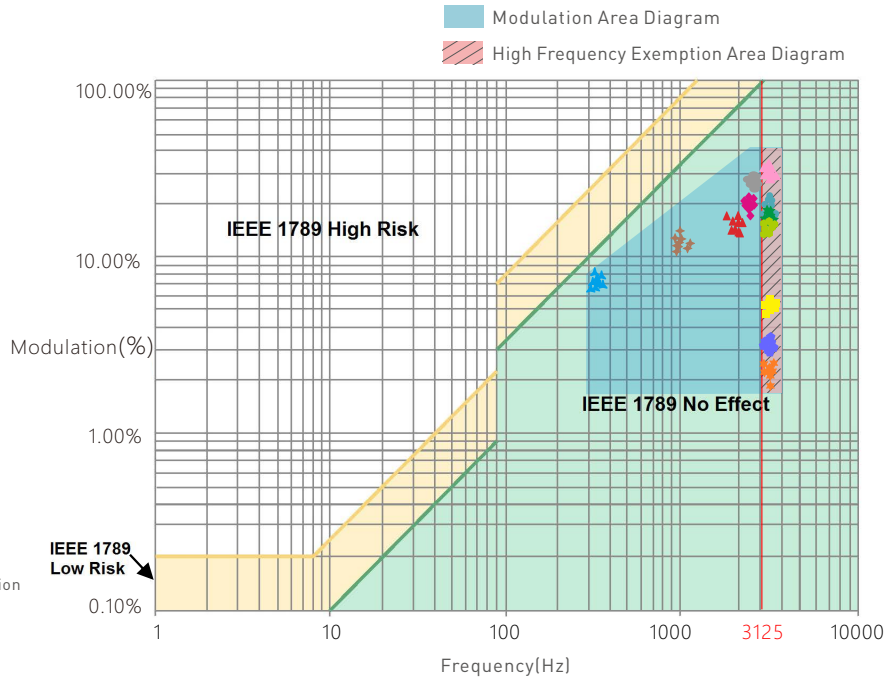


Flicker Test Form

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.

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
A1	2020.06.01	Remove the constant current stroboscopic test table (when the brightness exceeds 30%,...)	Liu Weili
A2	2021.04.30	Change the TUV certification icon, add precautions and warranty agreement	Liu Weili