TD-50-500-1750-E1P1

LTECH

Triac
Push DIM

LED Intelligent Driver

5W~50W 500~1750mA 10~54Vdc

- Dimming interface: Triac/ELV, Push DIM
- Apply to leading edge and trailing edge TRIAC dimmers
- Built-in high performance MCU, dimming curve can be customized.
- PWM digital dimming, no alter LED color rendering index.
- Dimming range: Max. 0.1~100%.
- Multiple current, wide voltage, compatible with a variety of LED lights.
- Short circuit / Over-temperature / Over load / Non-load protection.
- Non-load output voltage 0V to prevent damages to LED caused by poor contact.
- Class 2 power supply. Full protective plastic housing.
- Compliant with Safety Extra Low Voltage standard.
- Suitable for indoor environments.

SELV RoHS

Triac Push DIM | PWM Digital Dimming | >85% Efficiency | Over-heat Protection | Short Circuit Protection | Over Load Protection | Multiple Current

Main Characteristics

Dimming interface:	Triac/ELV, Push DIM
Input Voltage Range:	200-240Vac ±10%
Frequency:	50/60Hz
Input Current:	230Vac≤0.55A
Efficiency:	>85%
Inrush Current(typ.):	Cold start 40A at 230Vac
Control Surge Capability:	L-N: 1kV
Leakage Current:	<0.5mA/230Vac
Operating Voltage:	10-54Vdc
Output Power Range:	5W~50W
Current Accuracy:	±3%

Max Output Voltage:	58Vdc
Non-load Output Voltage:	0Vdc
PWM Frequency:	200Hz~500Hz
Dimming Range:	Max. 0.1~100%
Working Temperature:	tc: 85°C ta: -30°C ~ 55°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.

Output Current :	500mA	700mA	900mA	1050mA	1200mA	1450mA	1600mA	1750mA
Output Voltage :	10-54V	10-54V	10-54V	10-48V	10-42V	10-34V	10-32V	10-29V
Output Power :	5-27W	7-37.8W	9-48.6W	10.5-50.4W	12-50.4W	14.5-49.3W	16-51.2W	17.5-50.8W

✻ The dimming range parameters adopted LUTRON® dimming system as testing standards. The parameters may differ by using Triac/ELV dimming systems of different brands. We can customize program for clients' high requirements.

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Protection

Over-heat Protection:	Shut down the output when PCB temp.≥110°C, auto recovers when temp. back to normal.
Over Load Protection:	When O/P voltage exceed its range, O/P current declines, auto recovers when the load is reduced.
Short Circuit Protection:	Shut down automatically if short circuit occurs, auto recovers after faulty condition is removed.
Non-load Protection.	Auto detecting, auto recovers when load back to normal.

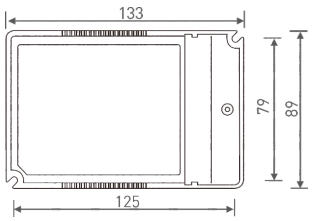
Safety & EMC

Withstand Voltage:	I/P-O/P: 3750Vac
Isolation Resistance:	I/P-O/P: 100MΩ/500VDC/25°C/70%RH
Safety Standards:	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

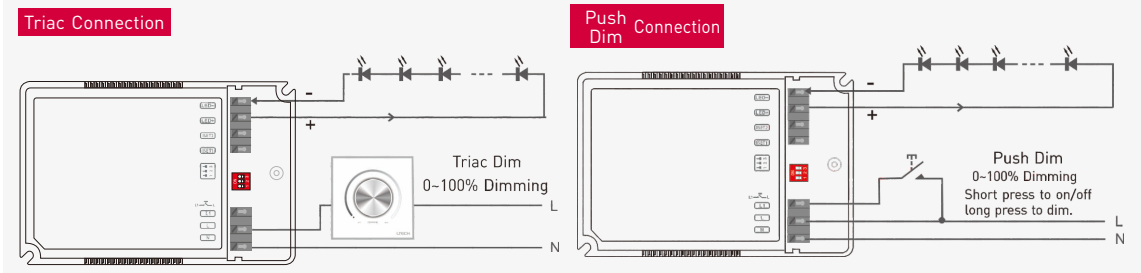
Others

Dimension:	133×89×30mm(L×W×H)
Packing:	135×90×35mm(L×W×H)
Weight(G.W.):	240g±10g

Dimensions



Connections



The dimming interface priority: First Triac, next Push Dim.

Selecting between ordinary dimmer and dimming system

Ordinary dimmer and dimming system have different dimming precision, precision of dimming system is higher. To meet customers' requirements on perfect dimming effects, we LTECH designed two programme options.

Ordinary dimmer

Dimming system

Method: Turn off the power and then remove the housing of the LED driver to find right component on the PCB. Shift system by selecting different contact pin (For installation professionals use only). Factory default as 1-2 (For ordinary dimmer).

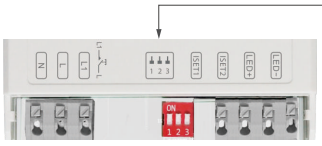
Push Dimming


Reset Switch

- On/off control: Short press.
- Stepless dimming: 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.

LED Current Selection

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

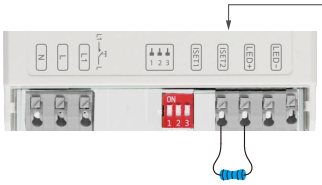


								ON	OFF
500mA/ISET	700mA	900mA	1050mA	1200mA	1450mA	1600mA	1750mA		
10-54V	10-54V	10-54V	10-48V	10-42V	10-34V	10-32V	10-29V		

✻ After current setting by DIP switch, power off and then power on to make the new current effective.

✻ E.g. LED 3.2V/pcs: 10-54V can power 3-16pcs LEDs in series, 10-29V can power 3-9pcs LEDs, the max quantity of LEDs in series will be subject to the actual voltage of LED.

Advanced options: Dial DIP switch down , connect ISET port with resistors of different values to set up any current from 500mA to 1750mA (specific resistor values refer to the table).


Connect to resistor

Connecting ISET with resistors can obtain the following typical currents.									
Current(mA)	500mA	550mA	600mA	650mA	700mA	750mA	800mA	850mA	900mA
Resistor(KΩ)	∞	130.08KΩ	83.5 KΩ	60.02 KΩ	46.37KΩ	37.01 KΩ	30.1 KΩ	25.24 KΩ	21.28 KΩ
Current(mA)	950mA	1000mA	1050mA	1100mA	1150mA	1200mA	1250mA	1300mA	1350mA
Resistor(KΩ)	18.15 KΩ	15.65 KΩ	13.5 KΩ	11.62 KΩ	10.8 KΩ	8.78 KΩ	7.57 KΩ	6.41 KΩ	5.65 KΩ
Current(mA)	1400mA	1450mA	1500mA	1550mA	1600mA	1650mA	1700mA	1750mA	
Resistor(KΩ)	4.81 KΩ	4.07 KΩ	3.4 KΩ	2.68KΩ	2.13 KΩ	1.63 KΩ	1.18 KΩ	0 KΩ	