# YSD 研硕达

## 100W-12V/24V LED Intelligent Switch Driver (CV)

- TRIAC/ 0-10V/1-10V/10V PWM/RESISTANCE DIM
- With soft-on and fade in function, visual more comfortable.
- Dimming range: 0~100%, LED start at 1% possible.
- 0-100% flicker-free, High frequency exemption level.
- High Efficient driver: efficiency 90%,PF>0.95, THD<10%
- Over load / Over temp. / Short circuit / Over voltage protection, recover automatically.
- Suitable for internal lights application for Ⅰ/Ⅱ/Ⅲ.
- Up to 50000-hour life time.
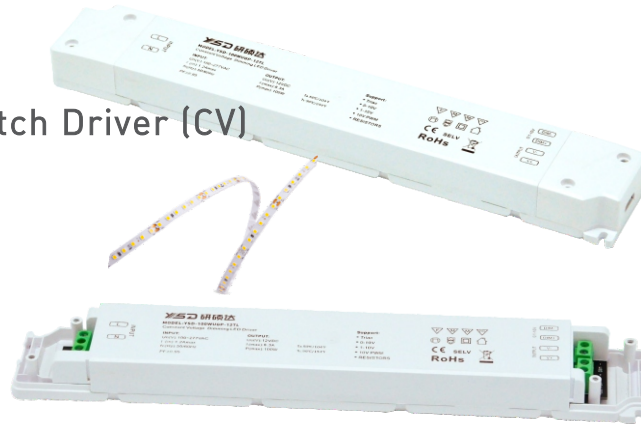
Flicker-free
IEEE 1789
High frequency exemption level

CE  SELV  CE  IP20

0-10V 1-10V DIM | Triac/ Resistance DIM | PWM Digital Dimming | Over-heat Protection | Short Circuit Protection | Over Load Protection | V Over voltage protection
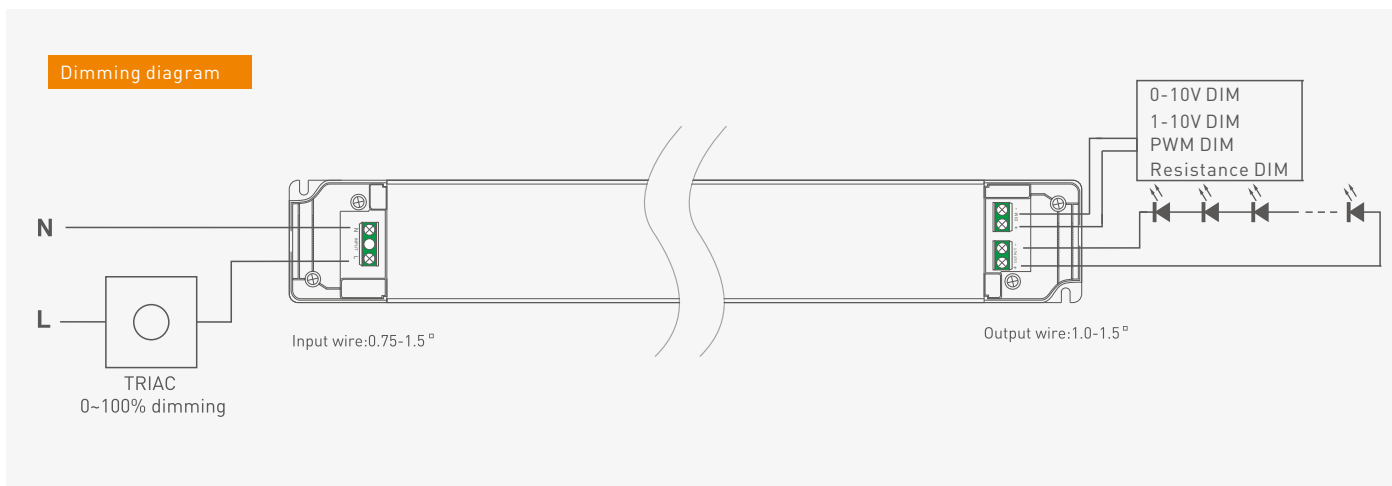
## Specification

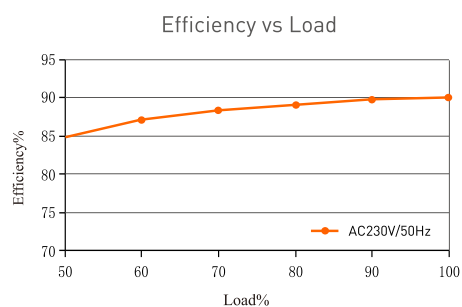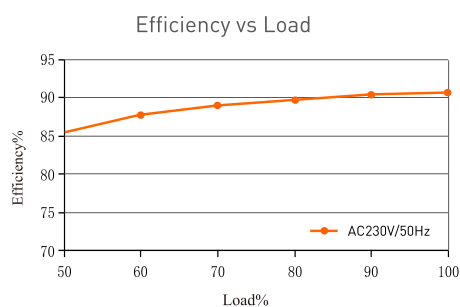| Model | | YSD-100WUGP-12TL | YSD-100WUGP-24TL |
|---|---|---|---|
| OUTPUT | Output voltage | 12VDC | 24VDC |
| | Output voltage range | 12VDC±0.3VDC | 24VDC±0.6VDC |
| | Output current | Max 8.3A | Max 4.17A |
| | Output power | Max 100W | |
| | Output power range | 0~100W | |
| | With or without strobe | No strobe | |
| | Dimming range | 0~100%, dimming depth: Max. 1% | |
| | Ripple & Noise | ≤200mV | ≤400mV |
| | PWM frequency | 3500Hz | |
| INPUT | Dimming interface | TRIAC/ 0-10V/1-10V/10V PWM/RESISTANCE DIM | |
| | Input voltage | 100-277Vac | |
| | Frequency | 50/60Hz | |
| | Input current | 1.17~0.42A | |
| | Power factor | PF>0.95/230Vac, at full load | |
| | THD | ≤10% at 230Vac, at full load | |
| | Efficiency (typ.) | 90% | 91% |
| | Inrush current(typ.) | Cold start 50A at 230Vac | |
| | Control surge capability | L-N:2KV | |
| | Leakage current | Max. 0.5mA | |
| ENVIRONMENT | Working temperature | ta: -30℃ ~ 50℃  tc: 80℃ | |
| | Working humidity | 20 ~ 95%RH, non-condensing | |
| | Storage temp., humidity | -40℃ ~ 80℃, 10~95%RH | |
| | Vibration | 10~500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes. | |
| PROTECTION | Overtemperature | Protection type:Shut down o/p voltage,re--power on to recover | |
| | Over voltage protection | Shut down the output when non-load voltage≥13V, re-power on to recover after fault condition is removed. | Shut down the output when non-load voltage≥26V, re-power on to recover after fault condition is removed. |
| | Over load protection | Shut down the output when current load ≥110%, auto recovers. | |
| | Short circuit protection | Protection type: 1. When the first-level short-circuit protection is triggered, the fault can be automatically recovered; 2. When the second-level short-circuit protection is triggered, the power needs to be turned on again after the fault is eliminated | |
| 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 | |

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5 in 1 dimming
0-10V
1-10V
10V PWM
TRIAC DIM
Resistance DIM

## Dimensions
Unit:mm



φ3x8
273
43
23
3.3
φ3.3
5

N INPUT L

+ DIM –
+ OUTPUT +

## Wiring diagram

**Dimming diagram**



N

L

TRIAC
0~100% dimming

Input wire:0.75-1.5²

Output wire:1.0-1.5²
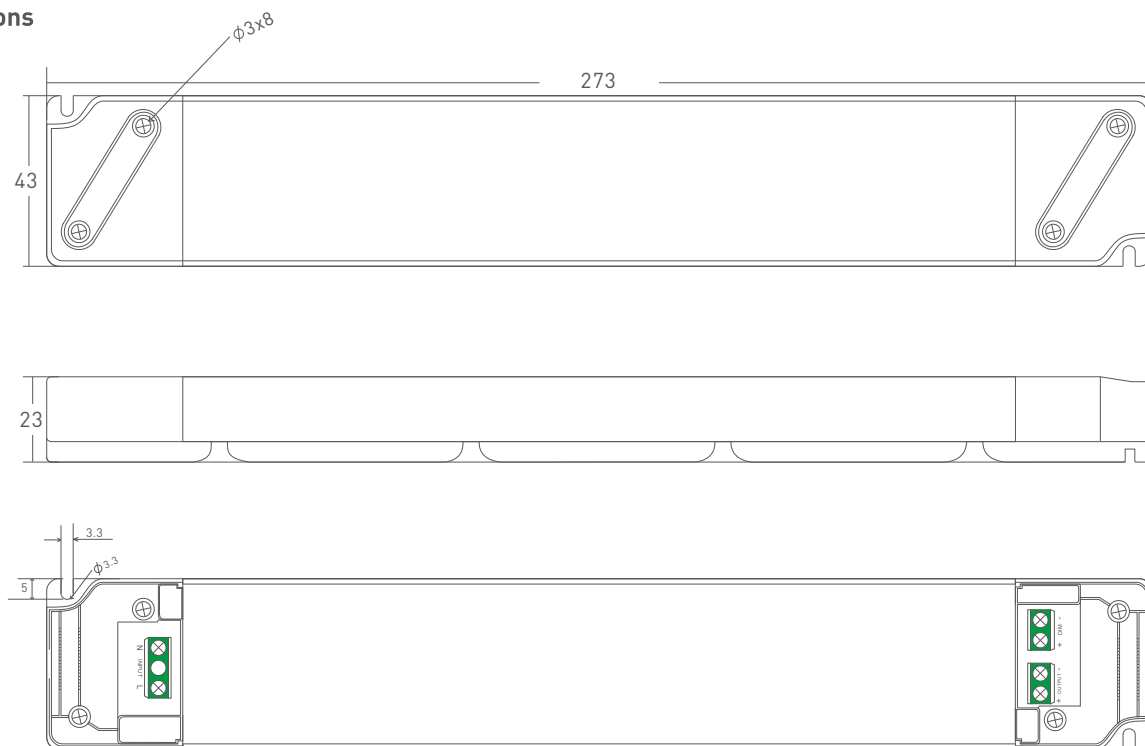
0-10V DIM
1-10V DIM
PWM DIM
Resistance DIM

## Relationship diagrams

### Efficiency vs Load



Efficiency%

95
90
85
80
75
70

50　60　70　80　90　100

Load%

AC230V/50Hz

YSD-100WUGP-12TL

### Efficiency vs Load



Efficiency%

95
90
85
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50　60　70　80　90　100

Load%

AC230V/50Hz

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## Temperature load curve



115Vac
230Vac

## Packaging Information

| DIMENSION | 273x43x23mm(LxWxH) |
|---|---|
| PACKING | 277x47x26mm(LxWxH) |
| CARTON QUANTITY | 45PCS |
| CARTON SIZE | 413x290x170mm(LxWxH) |
| WEIGHT | 350g±10gPCS |
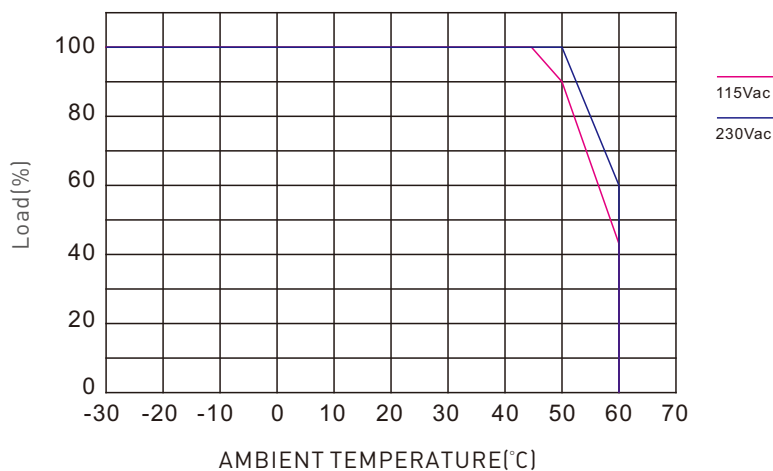
## Flicker Test Form

### 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) |

Exemption assessment
(High frequency exemption)

Brightness

- ✦ 1%
- ▲ 5%
- ♦ 10%
- ⬤ 20%
- ▲ 30%
- ⬤ 40%
- ★ 50%
- ⬤ 60%
- ▢ 70%
- ⬟ 80%
- ✹ 90%
- ◆ 100%

*  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.   www.szysdwps.com

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