



# Youton Electronic Technology Co., Ltd.

## SPECIFICATION FOR APPROVAL

**CUSTOMER :** \_\_\_\_\_

**MODEL NO. :** YTCP-192W-240DDSM

**EDITOR :** STEVEN YAN

**VERSION :** V1.0

| CUSTOMER AUTHORIZED SIGNATURE |  |  |
|-------------------------------|--|--|
|                               |  |  |

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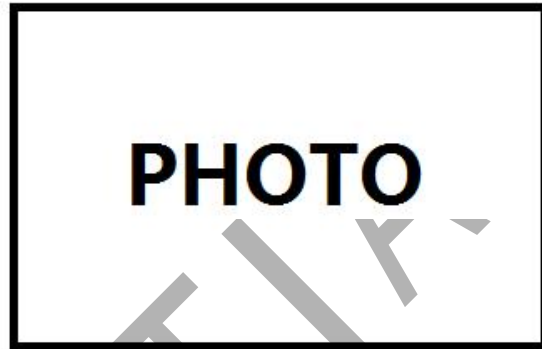
**Tel:** +86-21-37698212

## 1. GENERAL

This specification describes the performance characteristics of a two-channel 192W(2\*96W), versatile power supply for LED Lighting.

The model features in:

- Two channel independent outputs
- 700-2400mA output programmable
- High efficiency: 90% typical @277Vac, full load.
- High power factor: 0.99 typical. @ 120Vac, full load.
- Universal 0-10V Dimmer compatible
- Dimming range 0 to 100%
- No flicker design
- With Lighting Protection & all-round protections (SCP, OTP Protection)
- Comply with UL8750 Class 2



- SMPS Adaptor (Wall-Mount)
- SMPS Adaptor (Desktop)
- Open Frame
- SMPS Unit (With Case)
- Others

## 2. ELECTRICAL PERFORMANCE

### 2.1. Input Characteristics

#### 2.1.1. Input Voltage and Frequency

The range of input voltage is from 108Vac to 305Vac single phase

| Input           | Min.   | Typ.       | Max.   |
|-----------------|--------|------------|--------|
| Input Voltage   | 108Vac | 120/277Vac | 305Vac |
| Input Frequency | 47Hz   | 50/60Hz    | 63Hz   |

#### 2.1.2. Input Current

2.0A max. @ 25°C 120Vac input & Full load

### 2.1.3. Power Factor

| Items        | Min. | Typ. | Test Condition          |
|--------------|------|------|-------------------------|
| Power Factor | 0.97 | 0.99 | 120Vac, 25°C, full load |
|              | 0.95 | 0.97 | 277Vac, 25°C, full load |

### 2.1.4. THD

THD: < 15% @ 25°C 120Vac & 277Vac, full load

### 2.1.5. Efficiency

| Items                | Min. | Typ. | Test Condition          |
|----------------------|------|------|-------------------------|
| Low Line Efficiency  | 88%  | 89%  | 120Vac, 25°C, full load |
| High Line Efficiency | 89%  | 90%  | 277Vac, 25°C, full load |

## 2.2. Output Characteristics

### 2.2.1. Static Output Characteristics

| <b>LED1 Output</b>          | Min.  | Typ.   | Max.   |
|-----------------------------|-------|--------|--------|
| Output Current Programmable | 700mA | 2400mA | 2400mA |
| Output Voltage Range        | 10V   |        | 54V    |
| Maximum Output Power        |       |        | 96W    |
|                             |       |        |        |
| <b>LED2 Output</b>          | Min.  | Typ.   | Max.   |
| Output Current Programmable | 700mA | 2400mA | 2400mA |
| Output Voltage Range        | 10V   |        | 54V    |
| Maximum Output Power        |       |        | 96W    |
|                             |       |        |        |
| <b>Auxiliary Output</b>     |       |        |        |
| Aux Power Output Voltage    | +11V  | +12V   | +13V   |
| Aux Power Output Current    |       |        | 100mA  |
| Maximum Output Power        |       |        | 1.2W   |

**2.2.2. Ripple & Noise**

LED1&LED2 Output:

No flicker design

Current Ripple:  $< \pm 5\%$  of  $I_o$  rating for frequencies of 200Hz or below , at 120Vac&277Vac with full load at 25°C , measured at 20MHz bandwidth.

**2.2.3. Output Current Precision**

LED1&LED2 Output:

Output current :  $\pm 5\%$  @ 120Vac & 277Vac 25°C, full load

Load & Line Regulation :  $\pm 5\%$  @ 120Vac & 277Vac 25°C, full load

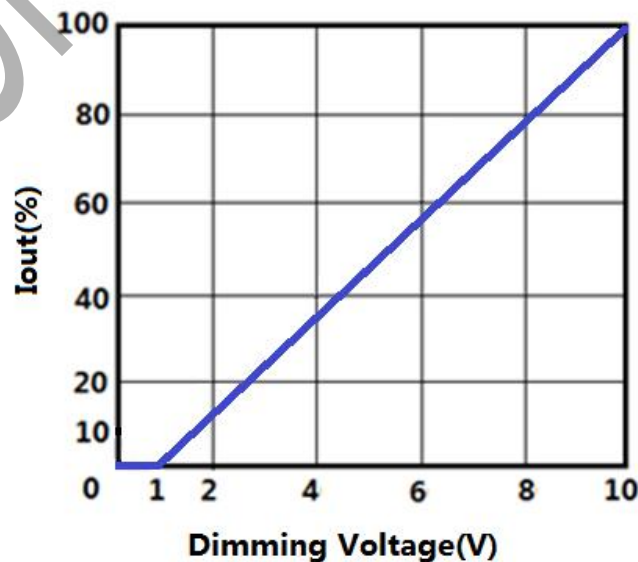
**2.2.4. Turn-on Delay Time**

0.5s max. @ 120Vac, 25°C, Full Load

0.5s max. @ 277Vac, 25°C, Full Load

**2.3. Dimming Function****0-10V Dimming**

It can support down to 0% Dimming (DIM-OFF function)when dimming voltage reduces less than 1V.

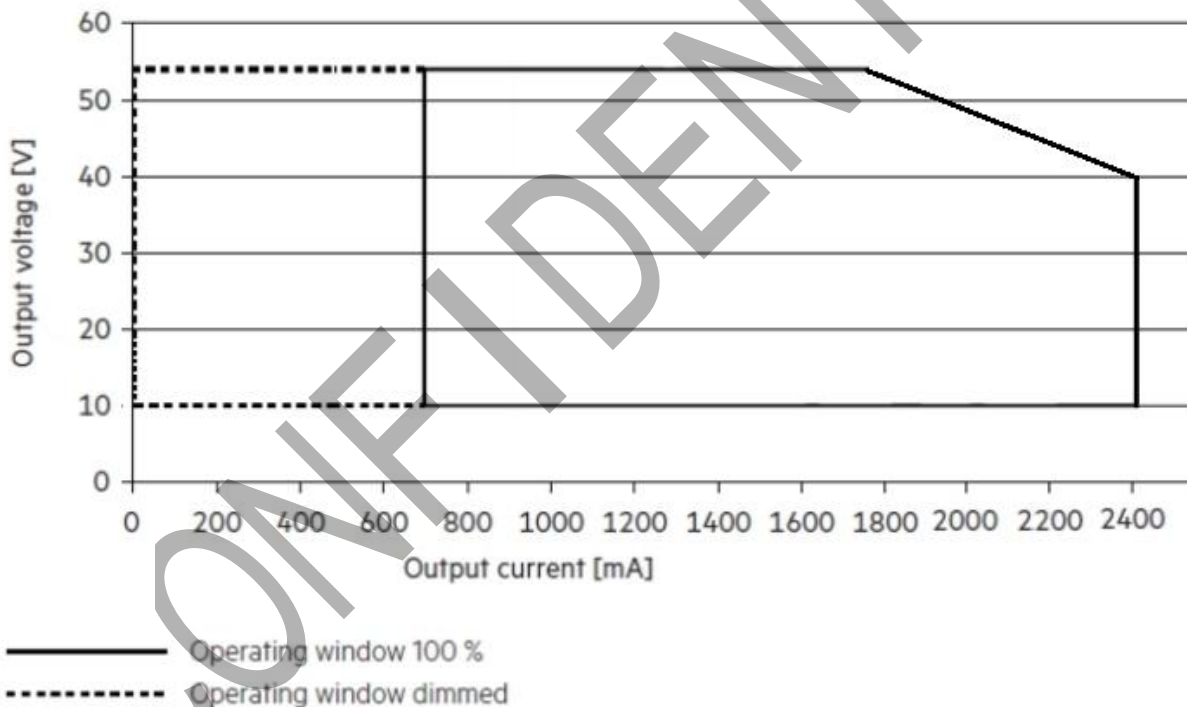


## Dimmer List

| Dimmer Brand | Dimmer Mode | Dimmer Name |
|--------------|-------------|-------------|
| LUTRON       | 0-10V       | DVTV 0-10V  |
| LUTRON       | 0-10V       | DVSTV 0-10V |

## 2.4. Operating Window

Make sure that the LED driver is operated within the given window under all the operation conditions. Special attention needs to be paid at dimming as the forward voltage of the connected LED modules varies with the dimming level.



## 2.5. Protection Circuits

### 2.5.1. Short Circuit Protection

When LED1 or LED2 output is being shorted, LED1 channel or LED2 channel will enter hiccup mode, and shall self-recover when the fault condition is removed. Since LED1 and LED2 are two independent outputs, they will not influence each other.

## 2.5.2. Over Temperature Protection

When ambient temp is more than about 70°C, two channel outputs will reduce to about 50mA output current on each channel and recover after the power supply restarts.

## 3. MECHANICAL

### 3.1. Dimension and Outline Drawing

The outside dimension is 300 x 43 x 30mm (LxWxH).

#### Input :

L : Black ; N : White ; UL1015, 18AWG, 300±10mm, 10mm tin plating at the wire end.

#### Output :

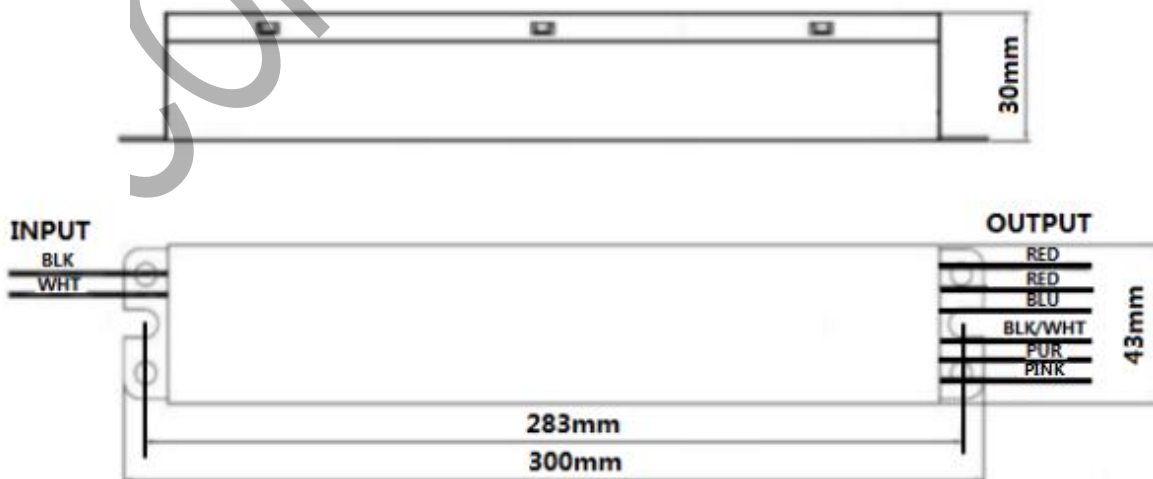
LED1+ : Red ; LED2+ : Red ; LED- : Blue ;

UL1015, 18AWG, 300±10mm, 10mm tin plating at the wire end.

#### Aux+12V & Dim:

Aux+12V: Black&White; Dim+: Purple ; Dim-: Pink ;

UL1569, 22AWG, 270±10mm, 10mm tin plating at the wire end.



## 4. ENVIRONMENTAL

The power supply shall operate normally, and sustain no damage as a result of the environmental conditions listed in this section.

### 4.1. Operating Temperature and Relative Humidity

-30°C to +55°C

10% RH to 85% RH

### 4.2. Storage Temperature and Relative Humidity

-40°C to +85°C

5% RH to 95% RH

### 4.3. Waterproof Grade

IP20

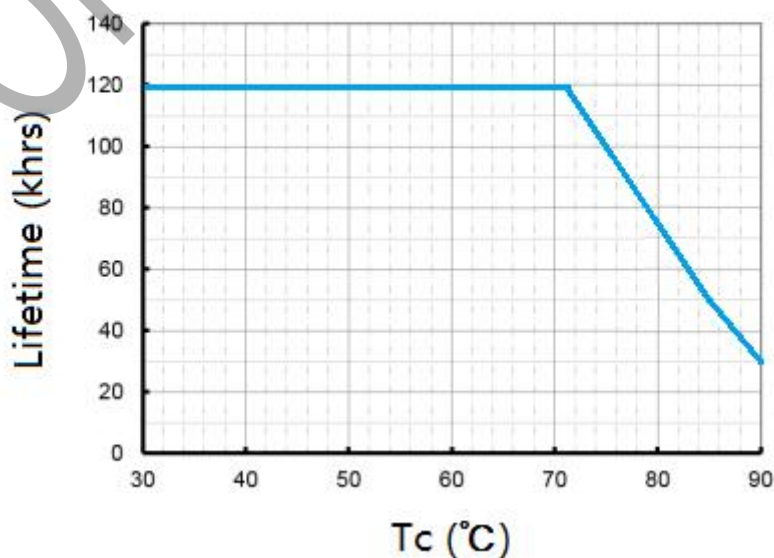
### 4.4. MTBF/Life Time

The MTBF shall be at least 500,000 hours at 25°C, Full load and nominal input condition:

The life time shall be at least 45,000 hours below 85 °C TC temperature, Full load and nominal input condition;

***5 years warranty can be offered in the condition that TC temperature is no more than 85°C.***

Lifetime vs. Case Temperature



**4.5. Burn-in**

The power supply samples shall go a minimum of 4 hours burn-in test at  $40\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$  under full load condition.

**5. REGULATORY****6.1 Agency Requirements**

A) Meet UL8750 CLASS 2

B) Dielectric Strength(Hi-pot)

Primary to Secondary: 2500Vac / 10mAMax / 60seconds (3second for production)

C) Leakage Current

0.5mA max. @277Vac / 60Hz

D) Insulation Resistance

50Mohm min. @primary to secondary add 500Vdc test voltage

**6.2 Electromagnetic Compatibility****6.2.1 EMI/EMC Requirements**

A) EMI:

Comply with FCC PART15 CLASS A






B) IMMUNITY:

EN61000-4-2: ESD 8kV air discharge, 4kV contact discharge, Criteria A

EN61000-4-4: Electrical Fast Transient/ Burst-EFT 2kV/5KHz

EN61000-4-5: Surge Immunity Test, differential and common mode, 4.0kV, combination wave.

## 6. LABEL DRAWING

|              |   |  |  |   |   |   |  |  |  |                                       |
|--------------|---|--|--|---|---|---|--|--|--|---------------------------------------|
| <b>INPUT</b> |  <b>LED DRIVER</b><br><b>YTCP-192W-240DDSM</b>   | <br><b>LISTED</b><br><small>E517067</small><br><b>CLASS P</b> |  |  |  | <b>OUTPUT</b>                                 |  |  |  |                                       |
| L(BLK)       | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Input</td> <td style="padding: 2px;">120-277V~50/60Hz, 2.5Amax</td> </tr> <tr> <td style="padding: 2px;">Output</td> <td style="padding: 2px;">700-2400mA, 10-54V, 2*96Wmax</td> </tr> </table> | Input  | 120-277V~50/60Hz, 2.5Amax  | Output  | 700-2400mA, 10-54V, 2*96Wmax  | • Tc: 90°C                                    |  |  |  | LED1+(RED)<br>LED2+(RED)<br>LED-(BLU) |
| Input        | 120-277V~50/60Hz, 2.5Amax   |  |  |   |   |   |  |  |  |                                       |
| Output       | 700-2400mA, 10-54V, 2*96Wmax  |  |  |   |   |   |  |  |  |                                       |
| N(WHT)       | <small>YOUTON ELECTRONIC TECHNOLOGY CO.,LTD. MADE IN CHINA</small>  |  |  |   |   | Vaux+12V(BK/WH)<br>DIM+(PUR)<br>DIM-/RTN(GRY) |  |  |  |                                       |

## 7. PACKAGE DRAWING

TBD

## 8. REVISION LOG

This section contains the release history of this document:

| Date      | Revision | Remarks        |      |    |
|-----------|----------|----------------|------|----|
|           |          | Section        | From | To |
| 2021-6-18 | V1.0     | First Released |      |    |
|           |          |                |      |    |
|           |          |                |      |    |

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