Youton Electronic Technology Co., Ltd.

SPECIFICATION FOR APPROVAL

CUSTOMER: _____

MODEL NO.: YTCP-400W-200SDSM

EDITOR: STEVEN YAN

VERSION: V1.0

CUSTOMER AUTHORIZED SIGNATURE		

Please return us one copy of the document with your approval signature.

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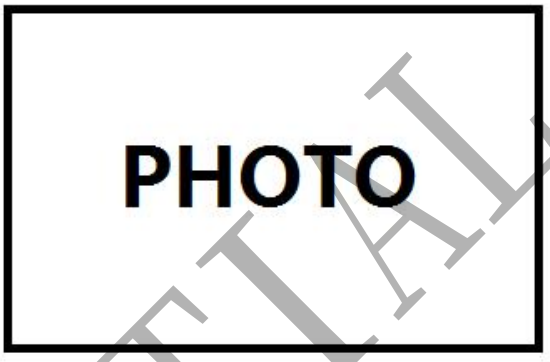
1. GENERAL

This specification describes the performance characteristics of a 400W, non-isolated power supply for LED Lighting.

The model features in:

- 1000-2000mA output programmable
- High efficiency: 96% typical @277Vac, full load.
- High power factor: 0.99 typical. @ 120Vac, full load.
- Universal 0-10V Dimmer compatible
- 12V/0.3A auxiliary power supply
- Dimming range 0 to 100%
- With Lighting Protection & all-round protections (SCP, OTP Protection)
- No flicker design and Tc(max)=90℃
- Comply with UL8750



☐ 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

4.0A 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	93%	94%	120Vac, 25°C, full load
High Line Efficiency	95%	96%	277Vac, 25°C, full load

2.2. Output Characteristics

2.2.1. Static Output Characteristics

Main Output	Min.	Typ.	Max.
Output Current Programmable	1000mA	2000mA	2000mA
Output Voltage Range	180V	200V	280V
Maximum Output Power			400W
Aux. Output (optional)			
Aux Power Output Voltage	+11V	+12V	+13V
Aux Power Output Current			300mA
Maximum Output Power			3.6W

2.2.2. Ripple & Noise

Output:

No flicker design

Current Ripple: < ±5% of Io 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

Output:

Output current: ±5% @ 120Vac & 277Vac 25℃, full load

Load & Line Regulation : ±5% @ 120Vac & 277Vac 25℃, full load

2.2.4. Turn-on Delay Time

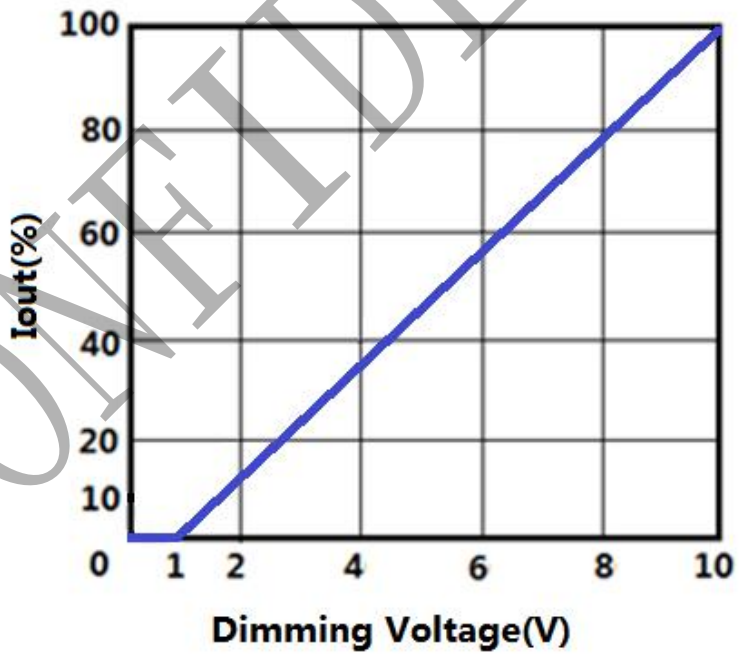
0.5s max. @ 120Vac, 25°C, Full Load

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.

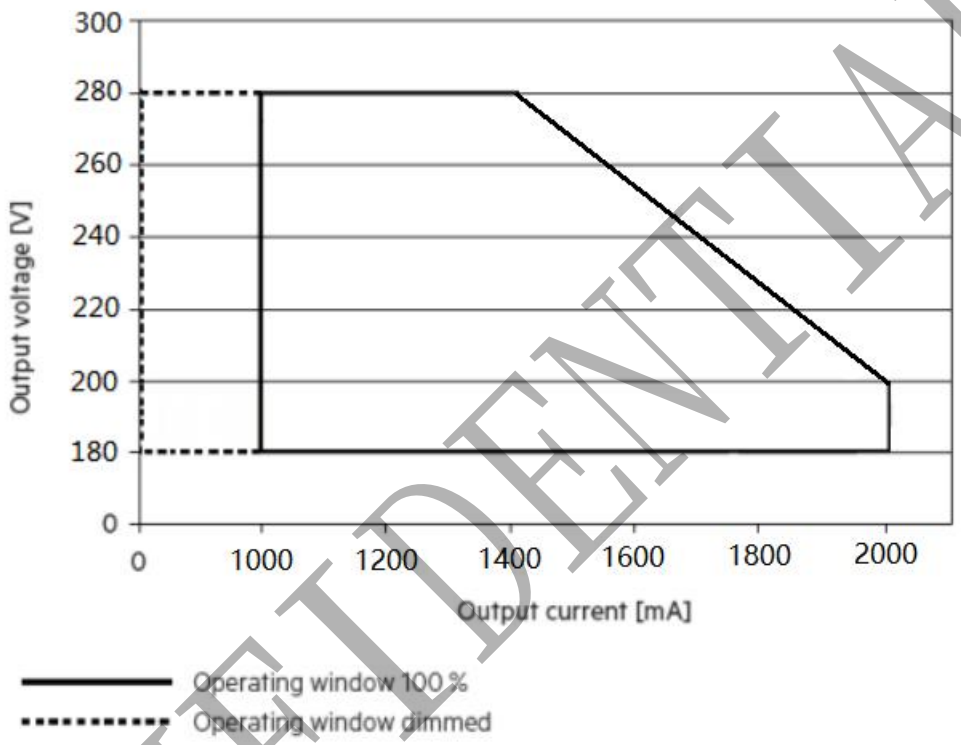


Dimmer List

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 its output is being shorted, the power supply will enter hiccup mode, and shall self-recover when the fault condition is removed.

2.5.2. Over Temperature Protection

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

3. MECHANICAL

3.1. Dimension and Outline Drawing

The outside dimension is 426 x 43.5 x 30mm (LxWxH).

Input:

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

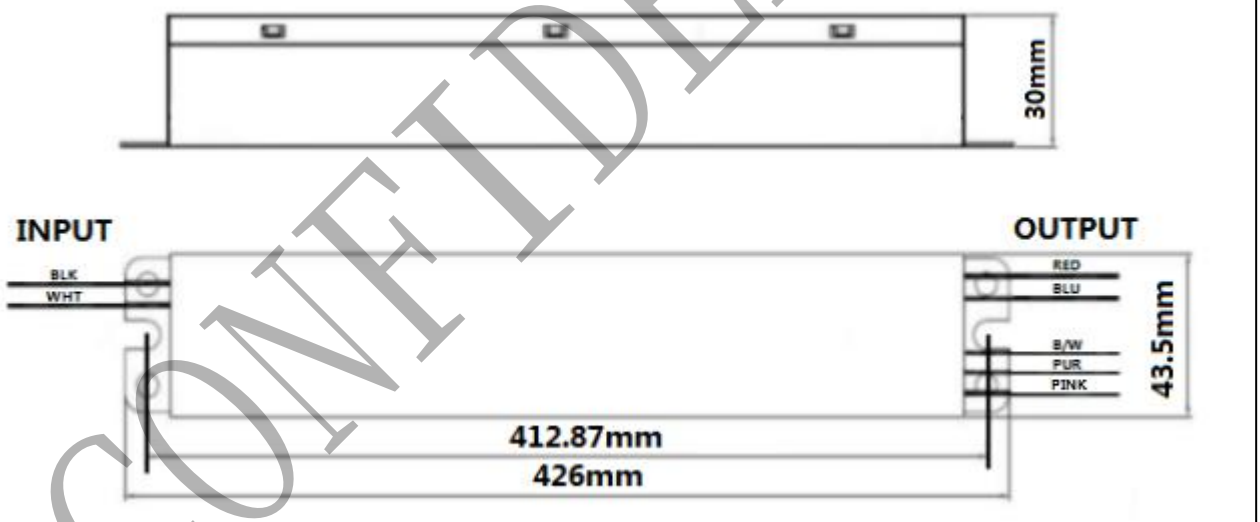
Output:

LED+ : Red ; LED- : Blue ; UL1015, 18AWG, 300±10mm, 10mm tin plating at the wire end.

Aux+12V & Dim:

Aux+12V: Black&White; UL1569, 22AWG, 270±10mm, 10mm tin plating at the wire end.

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

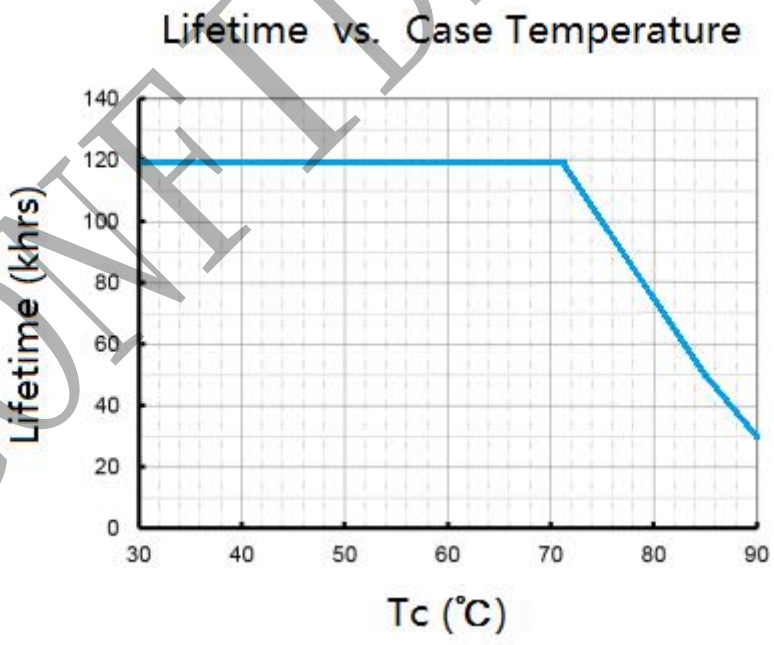
IP20

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 50,000 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 .



4.5. Burn-in

The power supply samples shall go a minimum of 4 hours burn-in test at 40 °C ±5 °C under full load condition.

5. REGULATORY

6.1 Agency Requirements

A) Meet UL8750

B) Dielectric Strength(Hi-pot)

Primary to Aux/Dim+/Dim-: 1500Vac / 10mAMax / 60seconds (3second for production)

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/common mode, 6kV/10kV, combination wave.

6. LABEL DRAWING

TBD

7. PACKAGE DRAWING

TBD

8. REVISION LOG

This section contains the release history of this document:

Date	Revision	Remarks		
		Section	From	To
2022-6-18	V1.0	First Released		