





#### ■ Features

- Universal AC input / Full range
- Withstand 300VAC surge input for 5 seconds
- · Low profile:26mm
- Built-in active PFC function
- Fanless design, cooling by free air convection
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Low leakage current<1.0mA
- LED indicator for power on
- 3 years warranty

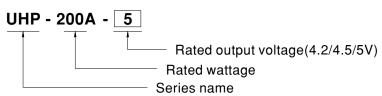
# Applications

- LED signage display
- Moving sign
- · LED channel letter
- · LED TV wall

## Description

UHP-200A series is a 200W LED display power solution. The ultra low profile design that allows the height and weight of the sign module to be slim. It greatly simplifies the delivery and installation process. Accounting for high efficiency and energy saving, the series effectively achieves electricity reduction. It is suitable for LED signage display, moving sign, LED channel letter and LED TV wall etc.

## ■ Model Encoding



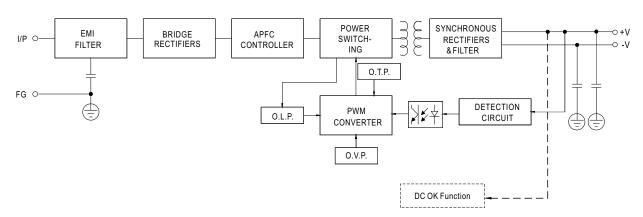
## **SPECIFICATION**

MODEL		UHP-200A-4.2	UHP-200A-4.5	UHP-200A-5		
	DC VOLTAGE	4.2V	4.5V	5V		
	RATED CURRENT	40A	40A	40A		
	CURRENT RANGE	0~40A	0 ~ 40A	0 ~ 40A		
	RATED POWER(convection)	168W	180W	200W		
	RIPPLE & NOISE (max.) Note.2	200mVp-p	200mVp-p	200mVp-p		
OUTPUT	VOLTAGE ADJ. RANGE	4.0~4.4V	4.3~4.7V	4.7~5.3V		
	VOLTAGE TOLERANCE Note.3	±4.0%	±4.0%	±4.0%		
	LINE REGULATION	±0.5%	±0.5%	±0.5%		
	LOAD REGULATION	±2.5%	±2.5%	±2.5%		
	SETUP, RISE TIME	2000ms, 200ms/230VAC at full load, 3000ms, 200ms/115VAC at 80% load				
	HOLD UP TIME (Typ.)	10ms/230VAC 10ms/115VAC				
	DC OK FUNCTION	PSU Turns on:DC ok; PSU turns off:DC fail				
		90 ~ 264VAC 127 ~ 370VDC				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF≥0.97/115VAC PF≥0.95/230VAC at full load				
INPUT	EFFICIENCY (Typ.)	88%	88%	88.5%		
	AC CURRENT (Typ.)	2.4A/115VAC 1.2A/230VAC				
	INRUSH CURRENT (Typ.)	Cold start 85A/230VAC				
	LEAKAGE CURRENT	<1.0mA / 240VAC				
	ELMINOL COMMENT	110~140% rated output power				
	OVERLOAD	Protection type: Hiccup mode, recovers automatically after fault condition is removed				
	SHORT CIRCUIT	Protection type: Hiccup mode, recovers automatically after fault condition is removed  Protection type: Hiccup mode, recovers automatically after fault condition is removed				
PROTECTION	OHORT OIROUT	4.6 ~ 6V	5 ~ 6.4V	5.6 ~ 7.1V		
	OVER VOLTAGE		T			
	OVER TEMPERATURE	Protection type: Hiccup mode, recovers automatically after fault condition is removed  Protection type: Shut down O/P voltage, recovers automatically after fault condition is removed				
	WORKING TEMP.	-30 ~ +70°C (Refer to "OUTPUT LOAD vs TEMPERATURE")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
ENVIRONMENT	STORAGE TEMP., HUMIDITY	20 ~ 90% KH nion-condensing -40 ~ +85°C, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%°C (0~50°C)				
		10~500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes				
	VIBRATION SAFETY STANDARDS	•				
	WITHSTAND VOLTAGE	UL60950-1,TUV EN60950-1,CCC GB4943 approved				
SAFETY &		I/P-O/P:3.0KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC				
EMC	ISOLATION RESISTANCE EMC EMISSION Note.8	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC/25°C / 70%RH				
(Note 5)	EMC IMMUNITY	Compliance to EN55032 (CISPR32),GB9254,Class A, EN61000-3-2,-3,GB17625.1  Compliance to EN61000-4-2,3,4,5,6,8,11;EN55024, light industry level (surge 4KV)				
	MTBF					
OTHERS		204K hrs min. MIL-HDBK-217F (25°C) 167*55*26mm (L*W*H)				
OTHERS	DIMENSION PACKING	0.42kg; 20pcs/11.4kg/0.76CUFT				
NOTE	<ol> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>Tolerance: line regulation and load regulation.</li> <li>Derating may be needed under low input voltages. Please check the static characteristics for more details.</li> <li>Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.</li> <li>Transient response meansure shall be made with 10% load at least.</li> <li>The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com)</li> <li>Warnning: This equipment is compliant with Class A of CISPR 32. In a residential environment may cause radio interference.</li> </ol>					

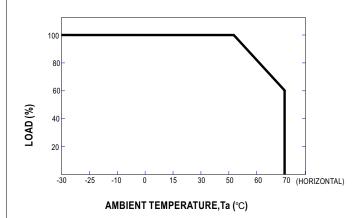


## **■** Block Diagram

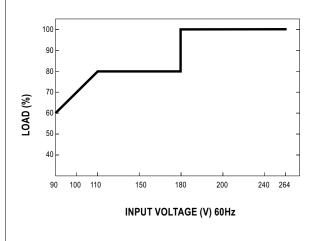
PFC fosc: 65KHz PWM fosc: 75~200KHz



#### ■ OUTPUT LOAD vs TEMPERATURE



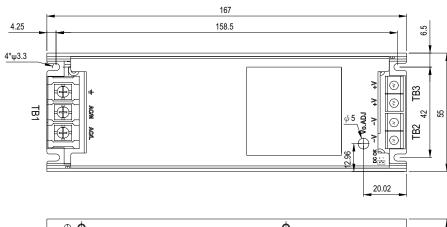
#### ■ STATIC CHARACTERISTIC





## ■ Mechanical Specification

CASE NO.: 249A Unit:mm





#### AC Input Terminal (TB1) pin NO. Assignment

Pin No.	Assignment	Terminal	Max mounting torque
1	AC/L	(DECA)	
2	AC/N	T14-EM11033703	13Kgf-cm
3	<u></u>	114 EWIT1000700	

## DC Output Terminal (TB2, TB3) pin NO. Assignment

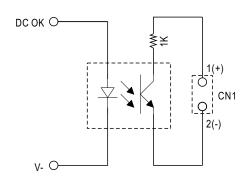
Pin No.	Assignment	Terminal	Max mounting torque
1,2	-V	(MW)	
3,4	+V	TB-HTP-200-40A	8Kgf-cm

#### DC OK Connector(CN1):JST B2B-PH-K-S or requivalent

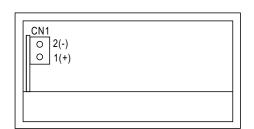
	, ,			
Pin No.	Assignment	Mating Housing	Terminal	
1	DC OK +V	JST PHR-2	JST SPH-002T-P0.5S	
2	DC COM	or requivalent	or requivalent	

## ■ Function manual

1.Internal circuit of DC ok



Contact Close	PSU turns on	DC ok
Contact Open	PSU turns off	DC fail
Contact Rating(max.)	10Vdc/1mA	

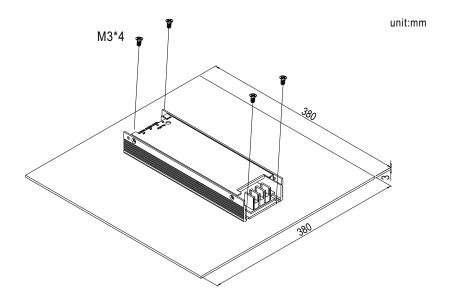




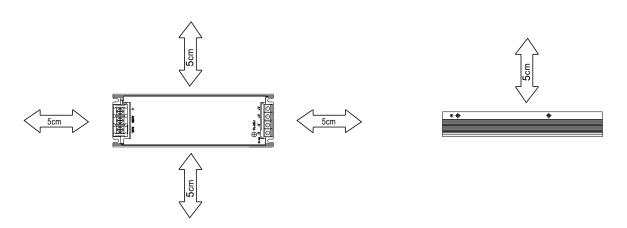
## ■ Installation

#### 1. Operate with additional aluminum plate

In order to meet the "Derating Curve" and the "Static Characteristics", UHP-200A series must be installed onto an aluminum plate (or the cabinet of the same size) on the bottom. The size of the suggested aluminum plate is shown as below. And for optimizing thermal performance, the aluminum plate must have an even and smooth surface (or coated with thermal grease), and UHP-200A series must be firmly mounted at the center of the aluminum plate.



2.For heat dissipation, at least 5cm installation distance around the PSU should be kept, shown as below:



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