

## **POWERLD** LED Display Power Supply



#### Features:

- Universal AC input (90~264Vac)
- ➤ With Active PFC, PF>0.95
- ➤ High Efficiency, long life and High reliability
- Output protections: OCP/OVP/SCP/OTP
- $\triangleright$  Wide operating ambient temperature (-30  $^{\circ}$ C ~65  $^{\circ}$ C)
- ➤ All using 105°C long life electrolytic capacitors.
- > 100% full load burn-in test
- Fanless, quiet working
- > PCB with conformal coating
- ➤ Low profile, 24mm
- > 3 years warranty

### **SPECIFICATION**

MODEL			VAT260UP4.2AA
ОИТРИТ	DC Output		4.2V
	Rated Current		50A
	Current Range Note 1		0~50A
	Peak load		61.9A (50mS, 220Vac input)
	Ripple and Noise	0~65°C	≤250MV
	Note 2	-30~0°C	≤400MV
	Voltage Accuracy		±3%
	Set-up Time @ 25°C		≤4S (220Vac input, 50A)
	Temperature Coefficient		±0.03%/°C
	Overshoot		≤5.0%
INPUT	Voltage Range Note 3		90Vac~264Vac
	Rated input voltage range		100~240Vac
	Frequency Range		47Hz~63Hz
	Efficiency ( Typical)		88% @220Vac input, 50A (max 91% @220Vac, 60% load)
	AC Current (max.)		<3.5A
	Inrush Current (Typical)		<80A@220Vac Cold start
	Power Factor @ 25 °C		>0.95 (input 220Vac, 50A)
	Leakage Current		Input—output:<0.25mA Input—PG:<3.5mA (input 264Vac, 63Hz)
PROTECTION	Over Current		≥55A, auto recovery
	Over Voltage		4.6~6.5V, auto recovery
		Ambient temp.	Protection when ambient temp. is over 70 °C; auto recovery when ambient temp. is lower than 55 °C
	Over Temperature	Aluminum baseplate temp.	Protection when baseplate temp. is over 95°C; auto recovery when baseplate temp. is less than 80°C
	Short Circuit		Long-term mode, auto recovery
ENVIRONMENT	Operating amb. Temp. & Hum.		-30°C~65°C; 20%~90%RH No condensing (refer to the derating curve)
	Storage Temp. & Hum.		-40°C~85°C; 10%~95%RH No condensing
SAFETY &EMC (Note 4)	Safety Standards		Meet IEC 62368-1, UL62368-1, EN62368-1
	Withstand Voltage		Primary-Secondary: 3.0KVac/10mA .Primary-PG:1.5KVac/10mA. Secondary-PG: 0.5KVdc/10mA.
	Isolation Resistance		10M ohms
	EMI Conduction & Radiation		Compliance to EN55032 Class A
	EMS Immunity		Compliance to EN61000-4-2,4,5,11;
OTHERS	MTBF (MIL-HDBK-217F)		>100000h (25℃, Full load)
	Dimension (L*W*H)		165*55*24mm
	Packing		TBD
	Cooling method		Power supply fixed on the aluminum plate of 450*450*3mm.

<u>www.powerld.com</u> Tel:+86-755-86051514 Fax:+86-755-86051389 Email: <u>tom@powerld.com</u> Date: 2020-4-28



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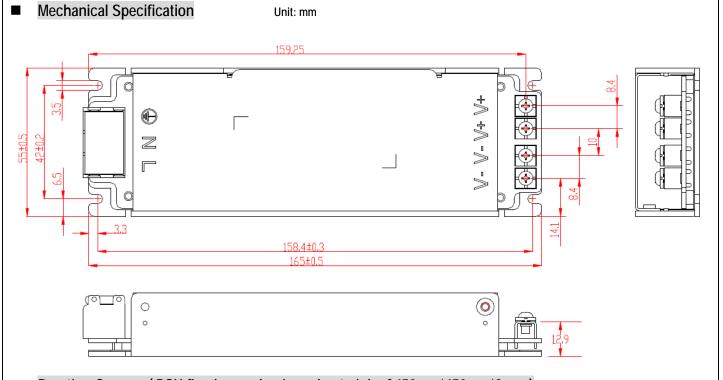
VAT260UP4.2AA

NOTE

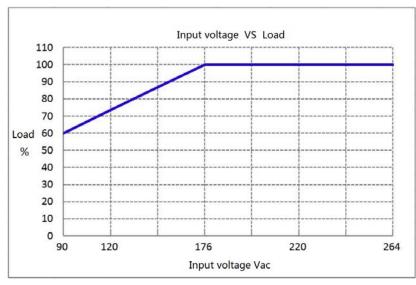
- 1. All parameters NOT specially mentioned are measured at rated input, rated load and 25°C of ambient temperature.
- 2. Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF & 47uF parallel capacitor.
- 3. The power supply is considered as a component which will be installed into a final equipment. 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" on <a href="http://www.powerld.com.cn">http://www.powerld.com.cn</a>.

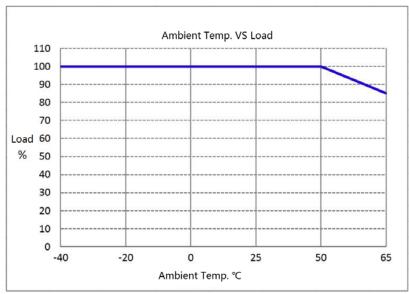
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## ■ Derating Curve (PSU fixed on a aluminum heat-sink of 450mm\*450mm\*3mm)





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