

CONTENTS

一、 Overview-----	2
二、 Main SPEC-----	2
三、 Reference standards and norms-----	2-3
四、 Environmental conditions-----	4
五、 Electrical characteristics-----	4-5
六、 Safety features -----	6
七、 Cure-----	6-7
八、 The definition of mechanical properties and connector-----	7
九、 Caution-----	8
十、 Packaging,transport,storage-----	8
十一、 Lable-----	8

一、 Overview

The power supply was designed for LED display ,small size, high efficiency, stability, and reliability. Power supply has input undervoltage, output current limiting, output short circuit protection. Power supply will apply with high rectification which greatly improves the power efficiency,can reach 82.0% above, saving energy consumption, to meet with the European RoHS standard.



二、 Main SPEC.

Output Power (W)	Input Voltage (Vac)	Output voltage (Vdc)	Output Current (A)	Regulation accuracy	Ripple & Noise (mVp-p)
200	200—240	+5.0	0-40	±2%	≤150

三、 Reference standards and norms.

GB / T 2423.1-2001 electric and electronic products, environmental testing, Part 2:

Test methods / test A: low-temperature

GB / T 2423.2-2001 electric and electronic products, environmental testing, Part 2:

Test Methods / Test B: high-temperature

GB / T 2423.3-1993 electric and electronic products environmental testing procedures -

Test Ca: Damp heat test method;

GB / T 2423.4.1993 electric and electronic products environmental testing procedures -

Test Db: Damp heat test method

GB / T 2423.5-1995 electric and electronic products, environmental testing, Part 2:

Test Methods / Test Ea and guidance: Shock

GB / T 2423.6-1995 electric and electronic products, environmental testing, Part 2:

Test Methods / Test Ea and guidance: Bump

GB / T 2423.8-1995 electric and electronic products, environmental testing, Part 2:

Test Methods / Test Ed: Free fall

GB / T 2423.10-1995 electric and electronic products, environmental testing, Part 2:

Test Methods / Test Fc and guidance: Vibration (sinusoidal)

GB / T 2423.11-1997 electric and electronic products, environmental testing, Part 2: Test Methods / Test Fd: Random vibration wide band - General requirements

GB / T 2423.22-2002 electric and electronic products, environmental testing, Part 2: Test N: temperature change

GB / T 14508-93 level environmental conditions for road freight transport machinery

EN55022: 1998 Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement;

EN55024: 1998 Information technology equipment - Immunity characteristics - Limits and methods of measurement;

CEI IEC 61000-4-2 2001 Electromagnetic compatibility testing and measurement techniques Electrostatic discharge immunity test

CEI IEC 61000-4-3 2002 Electromagnetic compatibility testing and measurement techniques radio frequency electromagnetic radiation interference immunity test

CEI IEC 61000-4-4 1998 Electromagnetic compatibility testing and measurement techniques Electrical fast transient burst immunity test

CEI IEC 61000-4-5 1999 Electromagnetic compatibility test and measurement technology surge (the impact) immunity test

CEI IEC 61000-4-6 2001 Electromagnetic compatibility testing and measurement techniques RF Immunity to conducted disturbances, induced by

CEI IEC 61000-4-8 1993 EMC testing and measurement techniques frequency magnetic field immunity test

CEI IEC 61000-4-11 1994 Electromagnetic compatibility testing and measurement techniques Voltage dips, short interruptions and voltage variations immunity tests

CEI IEC 61000-4-29 2000 Electromagnetic compatibility testing and measurement techniques dc input voltage dips, short interruptions and voltage variations immunity tests

IEC 61000-3-2 2001 Electromagnetic compatibility Limits for harmonic current emissions (equipment input current $\leq 16A$)

IEC 61000-3-3 1994 Electromagnetic compatibility limits voltage power supply system voltage fluctuations and flicker (equipment with rated current $\leq 16A$)

GB4943-2001 Safety of information technology equipment

YD / T 282-2000 General methods of test the reliability of communications equipment

GB / T 13722-92 mobile power requirements and test methods

YD/T 732-95 Communications with the DC-DC converter test methods,

YD / T 731-2002 communications frequency switch rectifier

四、 Environmental conditions

NO.	ITEM	Specifications	Units	☒Remarks
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1	Permanent operating temperature	-30-60	°C	
2	Storage temperature	-40-80	°C	
3	Relative Humidity	10-90	%	
4	Cooling mode	Self-cooling		
5	Atmospheric pressure	80-106	Kpa	
6	<input checked="" type="checkbox"/> Altitude	4000	m	

五、Electrical Characteristics

1	Input characteristics			
NO.	ITEM	Specifications	Units	<input checked="" type="checkbox"/> Remarks
1.1	Rated input voltage	220	Vac	
1.2	Input voltage range	200-240	Vac	
1.3	Input frequency range	47-63	Hz	
1.4	<input checked="" type="checkbox"/> Efficiency	≥ 81 ($V_{in}=220V_{ac}$)	%	Full load (room temperature)
1.5	Maximum input current	≤ 5.0	A	
1.6	Inrush current	≤ 60	A	
2	Output Characteristics			
NO.	ITEM	Specifications	Units	<input checked="" type="checkbox"/> Remarks
2.1	Output rating voltage	+5.0	Vdc	
2.2	Output current range	0-40	A	
2.3	Output voltage range	4.9-5.1	Vdc	
2.4	Voltage regulation accuracy	$\pm 1\%$	V_0	
2.5	Load regulation accuracy	$\pm 1\%$	V_0	
2.6	Regulation accuracy	$\pm 2\%$	V_0	

2.7	Ripple and noise	≤ 150	mVp-p	Full load;20MHz, 104+47uF
2.8	Power output delay	≤ 3500	ms	
2.9	Hold up time	≥ 10	ms	Vin=220Vac
2.10	Output voltage rise time	≤ 50	ms	
2.11	Off overshoot	$\pm 5\%$	V _o	
2.12	Output dynamic	Voltage changes less than $\pm 5\%$ VO; dynamic response time $\leq 250\mu s$		LOAD 25%-50% , 50%-75%

3 Protection Features

NO.	ITEM	Specifications	Units	<input checked="" type="checkbox"/> Remarks
3.1	Input undervoltage protection	135-170	VAC	FULL LOAD
3.2	Input voltage recovery point	150-175	VAC	
3.3	Output current limit protection point	44-62	A	Hiccup Model, Auto-recovery
3.4	Output short circuit protection	≥ 44	A	

Remarks: latch can recovery after re-starting.

4 Other features

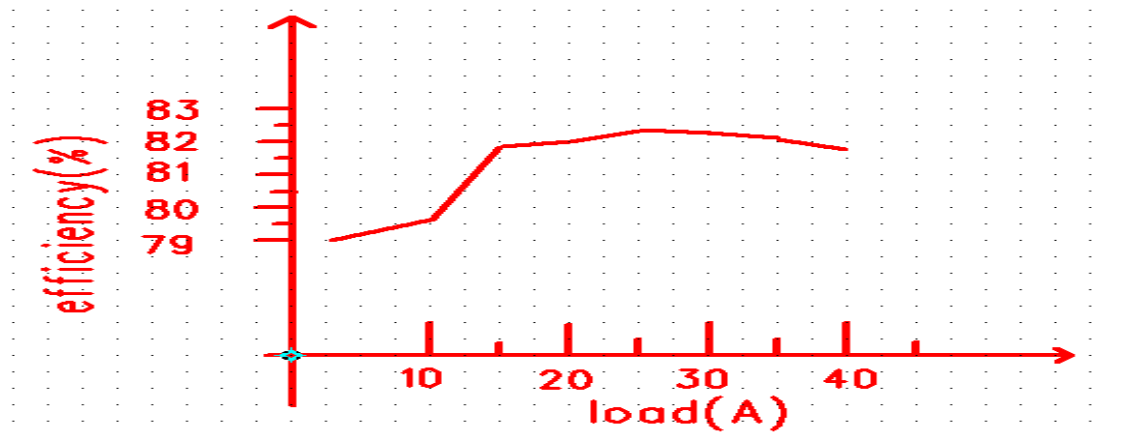
NO.	ITEM	Specifications	Units	<input checked="" type="checkbox"/> Remarks
4.1	MTBF	$\geq 40,000$	H	
4.2	Leakage current	$< 3.0\text{mA}$ (Vin=220Vac)		GB8898-2001 9.1.1

六、 Safety features

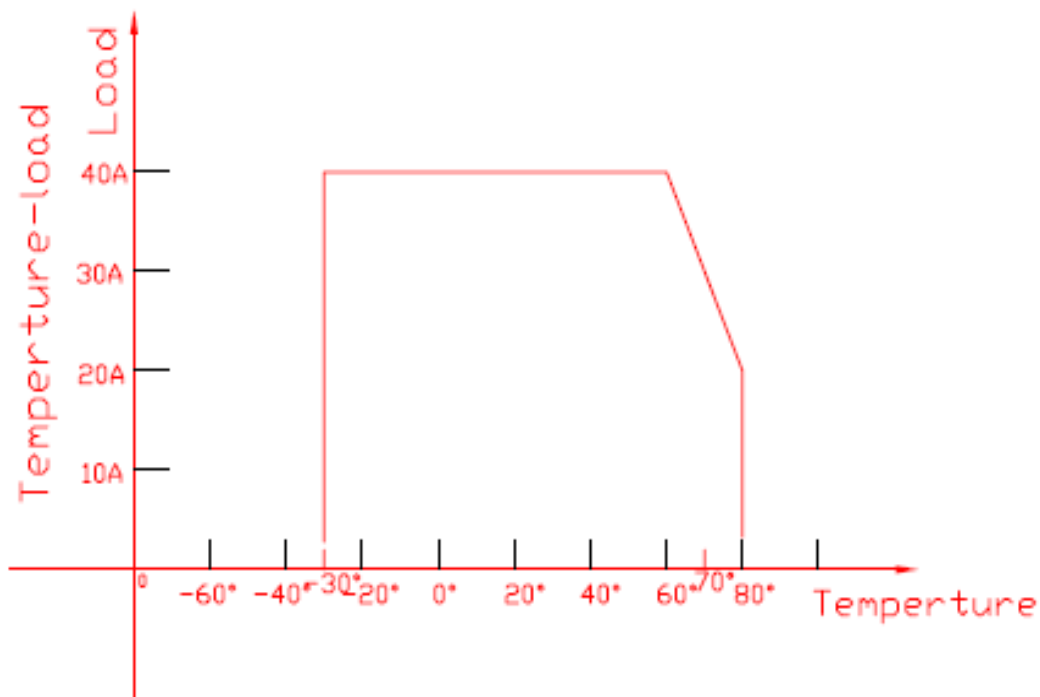
NO.	ITEM	Test conditions	Standard/SPEC.
1	Input-Output	3000Vac/10mA/1min	No flashover, no breakdown
	Input-PE	1500Vac/10mA/1min	No flashover, no breakdown
	Output-PE	500Vac/10mA/1min	No flashover, no breakdown

七、cure

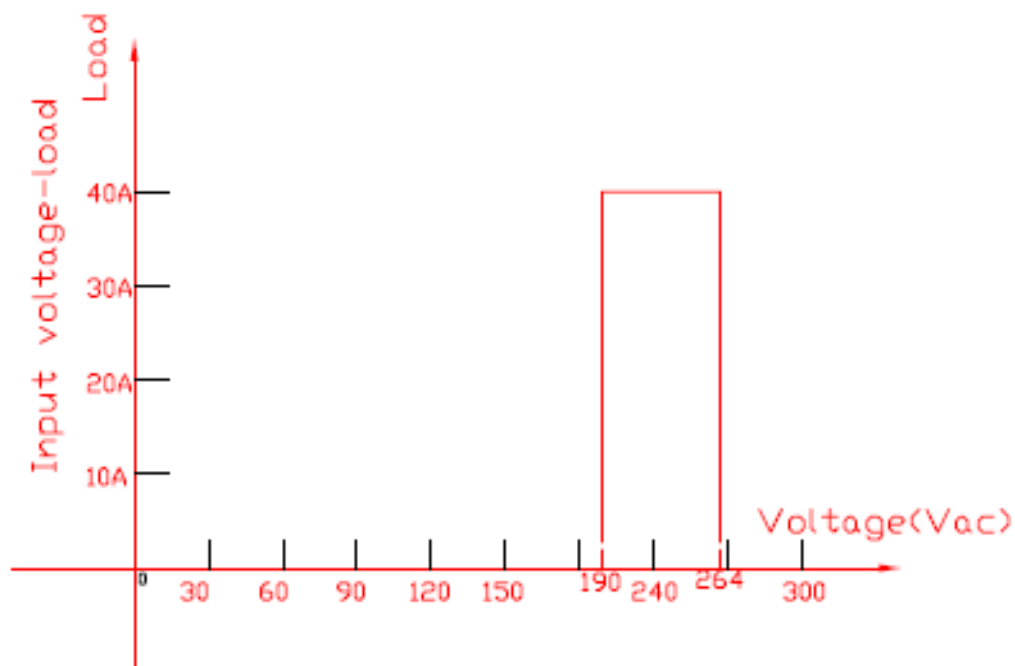
(1)Input voltage & load cure:



(2)Temperature & load cure:

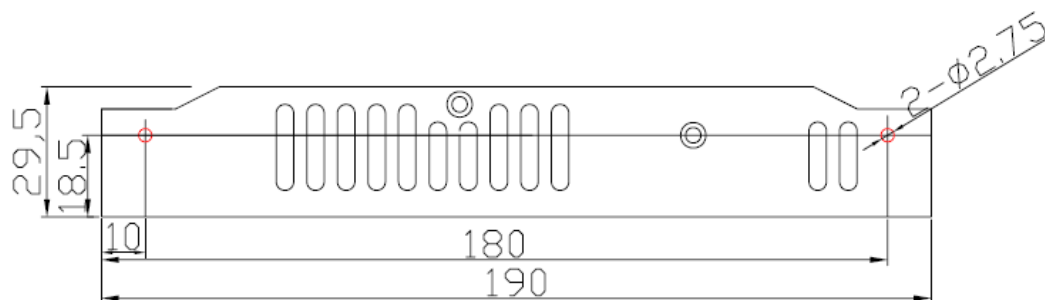


(3)Effi & load cure:

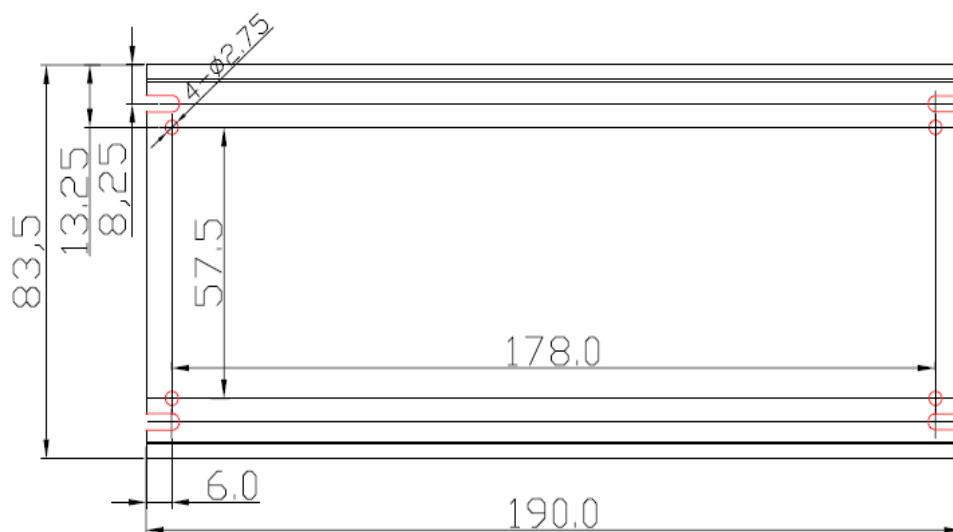


八、 The definition of mechanical properties and connectors (Units: mm)

1、 Dimensions L190 x W83.5 x H30.7



2. Installation hole size:



九、Caution

- 1, the safe use, to avoid hand contact with heat sink, resulting in electric shock.
- 2, PCB board mounting hole stud diameter of not more than 8mm.

十、Packaging, transport, storage

☒1, packaging

Box has the product name, model number, manufacturer ID, the manufacturers certificate of quality inspection department, manufacturing date; the box with an attachment list.

2, Transportation

Suitable for cars, boats, aircraft transport, transport should be awnings, sun protection, loading and unloading of civilization.

3, storage

Product is not used which should be stored in the box, warehouse temperature $-20\text{ }^{\circ}\text{C}$ - $+80\text{ }^{\circ}\text{C}$, relative humidity of 10% -90%, the warehouse does not allow any harmful gases, flammable, explosive and corrosive products of chemicals, and strong mechanical vibration, shock and strong magnetic field, package box should be at least 20cm high from the ground, away from the wall, heat, window or air intake at least 50cm, under specified conditions in the storage period is generally 2 years, more than 2 years should be re-tested.

十一、Lable:

