



Figure 1. The Physical Photo of ATI15-12VL



Figure 2. The Physical Photo of ATI15-12VL

## DESCRIPTION

The LED Power Supply ATI15-12VL is exclusively designed for the LED (Light Emitting Diode) lamps used indoors. This power supply features low and stable voltage — 12V, and DC constant current, which are required by powering LED.

An electronic protection circuit switches off the power supply in case of short circuit or overload

in the secondary circuit, overheat as well as open circuit. After the removing of the faults, the LED power supply is resetting automatically for operation again.

## APPLICATIONS

This LED power supply is used for providing power to LEDs with low voltage and constant current.

## INSTALLATION INSTRUCTIONS

ATI15-12VL conforms to the UL 1310 for safety regulation and FCCPART 15 for electromagnetic compatibility.

- This LED power supply can only be used with the LED lamps
- This LED power supply is only suitable for indoor use. Protect the LED power supply against excessive heat (permissible operating temperature range is  $-20\text{ }^{\circ}\text{C}$  to  $+45\text{ }^{\circ}\text{C}$ ).
- The loads indicated on the power supply should not exceed or below the default value, 0-15W.
- Connect the LED lamps to the LED power supply with correct polarity according to the schematic drawing.
- The maximum length of the output cable should be less than 2m in order to meet EMC standard.
- If the power supply is used for purposes other than originally intended or it is connected in a wrong way, no liability can be guaranteed.

**STABLE VOLTAGE**

This power supply has a stable output voltage. The experiment shows that the output voltage remains stable under different ambient temperatures, 20 °C, -20 °C, and 45 °C, as shown in Figure 3 below.

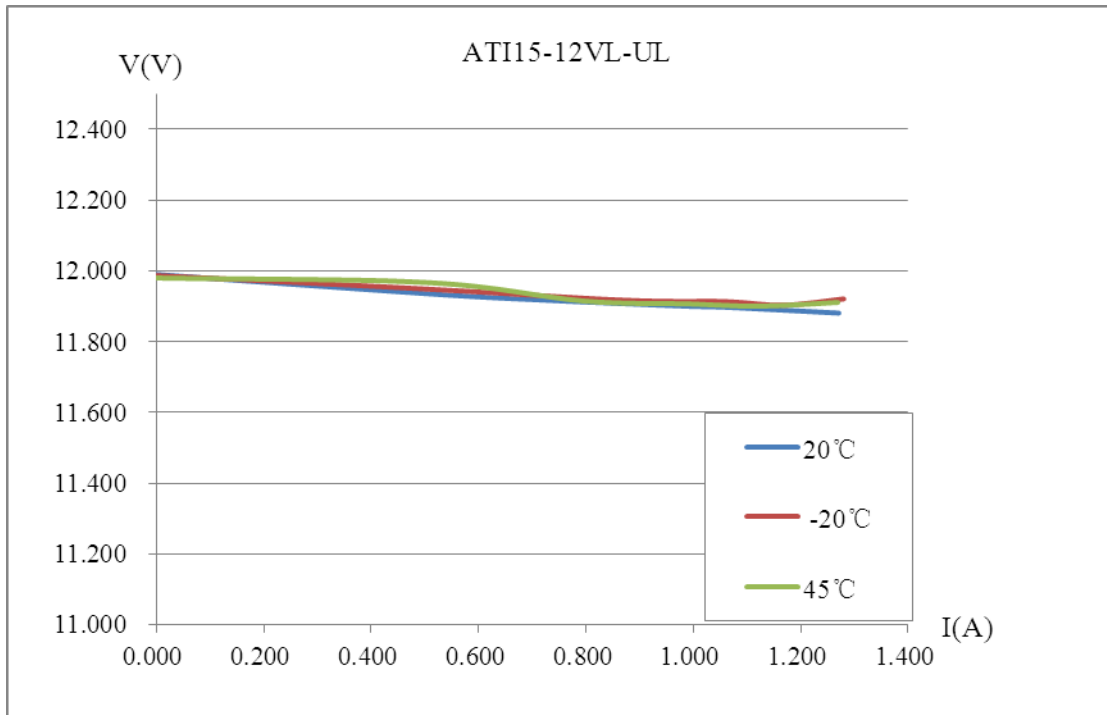


Figure 3. The curve for the output voltage under different temperatures

**SPECIFICATIONS**

Table 1. Characteristics

Parameters	Value
Input Voltage	120V +/- 10% 60Hz
Input Current	<0.25A
Output Voltage	12V DC +/- 0.5V
Rated Power	15W
Protection Degree	IP20
Ambient Temperature (Ta)	Max. 45°C
Case Temperature (Tc)	Max. 85 °C
Primary Cable	SPT-2 18AWG
Secondary Cable	SPT-2 18AWG
Dimension	111×46×21mm

Table 2. Spec.

Parameters	Conditions	Request	Note
<b>Input</b>			
Rated input voltage	Ta	AC120V	
Input voltage scope	Ta	AC108-132V	
Input voltage frequency	Ta	60Hz	
Input current	25°C, input rated voltage, output max rated load	<0.25A	
Input power	25°C, input rated voltage, output max rated load	<18.6W	
Efficiency	25°C, input rated voltage, output max rated load	≥81%	
Power consumption without load	25°C, input rated voltage, output without load	<0.5W	Average
Power factor	25°C, input rated voltage, output max rated load	≥0.60	
Input surge current	25°C, input rated voltage, output max rated load	<70A	Peak
<b>Output</b>			
Startup time	25°C, input rated voltage, output max rated load	<1S	
Constant output current and precision	Ta, input rated voltage, output max rated load	-	
Rated output power/led lights quantity	Ta, input rated voltage	-	VF=3.6V
Output current ripple wave	25°C, input rated voltage, output max rated load	-	Ip-p
Overshoot	25°C, input rated voltage, output for 2 lights connection	-	
Rated output voltage and precision	Ta, input rated voltage, output rated load	12V±5%	
Output voltage ripple wave	25°C, input rated voltage, output max rated load	<600mV	Vp-p
Output open circuit voltage	Ta, input rated voltage, output without load	<13V	
Dimmable mode		-	
dimnable scope		-	
<b>Protection</b>			
Open circuit protection	25°C, input rated voltage, output without load	yes	
Overload protection	Ta, input 0.94-1.06 times rated voltage, output 1.1 times rated load	yes	
Short circuit protection	Ta, input 0.94-1.06 times rated voltage, output short circuit for 1 hour	yes	
Over heat protection	Temperature detected by chips itself	yes	
Automatically re-start	Ta, overload, short circuit, over heat protection retreated	yes	
<b>Temperature and others</b>			
Working temperature		-20°C~45°C	



Comparative humidity		45%~85%	
Max cover temperature		85°C	
Life span	Under max Ta, input rated voltage and output max rated load	30000hr	
Working noise	25°C, under the condition of input rated voltage, output rated load, background noise <30dB, pickup is 10cm far away from product	<35dB	
<b>Mechanical structure, mounting and connection way</b>			
Cover material and sizes	Plastic cover, L124×W46×H20mm		
Mounting mode	Independent		
Anti-electric shock	Second grade		
Protection grade	IP20		
Input connection way	1 way, terminal, to connectH03VVH2-F 2X0.75mm2 SPT-2 18AWG wire		
Output connection way	1 way, terminal, to connectH03VVH2-F 2X0.75mm2 SPT-2 18AWG wire		
Output wires length	2 meter max		
<b>Standard request</b>			
Safety	UL1310 (with light UL8750)		
Harmonic	25°C, input rated voltage, MAX rated load		
EMC--interference	25°C, input rated voltage, load is typical lights	FCC PART15	
EMC--ANTI interference	25°C, input rated voltage, load is lights		

**DIMENSIONS**

The mounting location dimension of ATI15-12VL is shown in Figure 4 below.

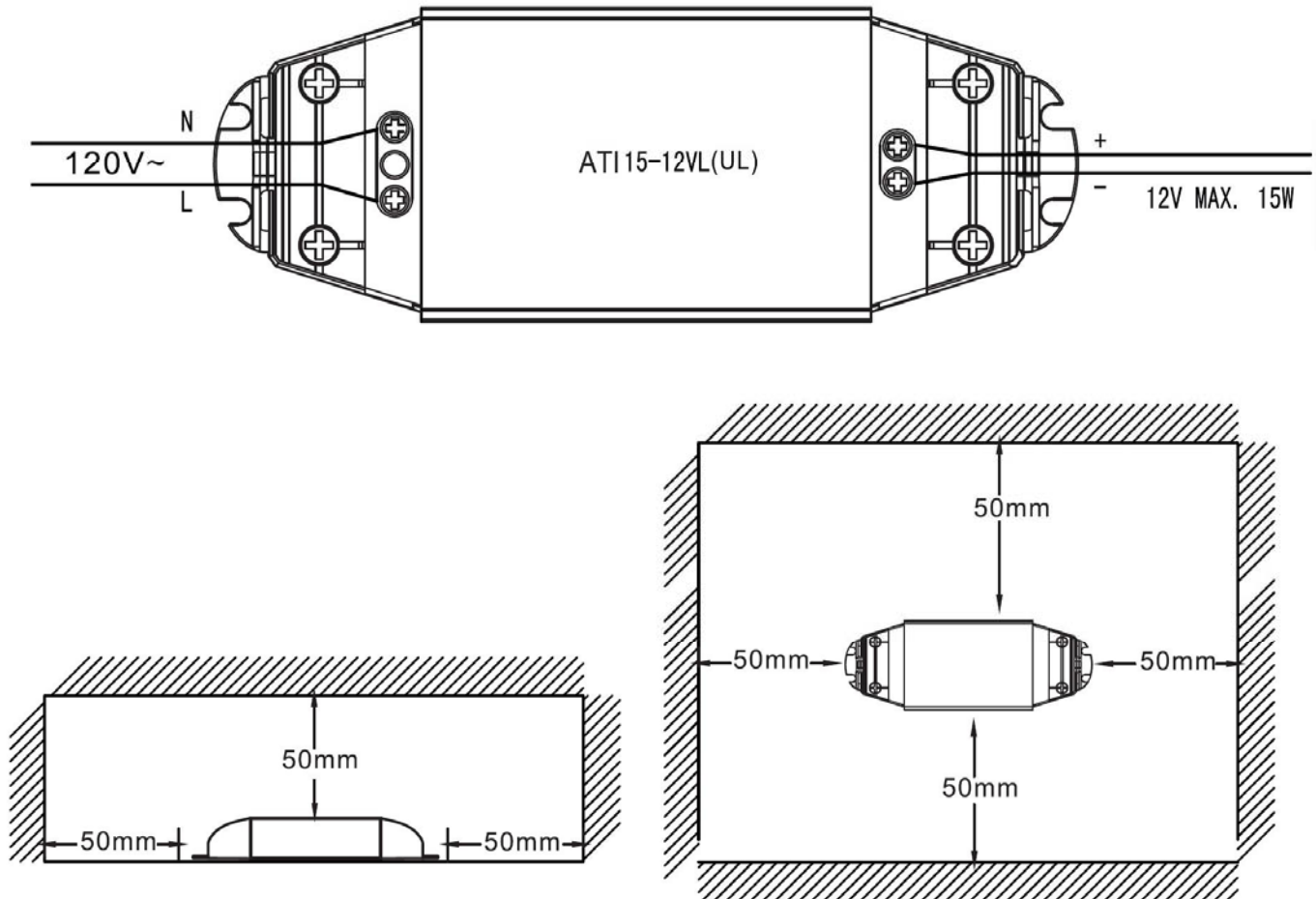


Figure 4. Mounting Location Dimension

**ORDERING INFORMATION**

Table 3. Unit Price

Quantity	1 – 9	10 – 24	25 – 99	100 – 499	500 – 999	≥1000
ATI15-12VL	\$10.9	\$10.0	\$9.5	\$8.9	\$8.5	\$8.0

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