

Figure 1. The physical photo

FEATURES

- High efficiency: $\geq 75\%$
- Constant output current: $350\text{mA} \pm 1\text{mA}$
- Current accuracy: $\pm 0.3\%$
- Wide input voltage range: $80\text{VAC} \sim 265\text{VAC}$
- Wide output voltage range: $16\text{V} \sim 50\text{V}$
- High reliability and stability
- Material: aluminum alloy and PVC
- Good heat sink
- Compact hexahedron package
- Dustproof and waterproof level: IP67
- Meet CE and ROHS standards
- Short circuit & over current & over voltage protections
- Low cost

DESCRIPTION

The AAS50V0P35A1 is an electronic module designed for driving a series of LEDs with a 350mA constant current. Its physical photo is shown in the Figure 1, and terminal introduction is shown in the Table 2.

The output current of the power supply is constant 350mA when powered by an AC power supply from 80VAC to 265VAC voltage. The output voltage is automatically set from 16V to 50V while keeping output current constant.

The AAS50V0P35A1 is highly efficient, its efficiency is $\geq 75\%$. It saves energy and has low temperature rise. The module also conducts all its heat to its external chassis which serves as the heat-sink and heat conducting plate, therefore, no auxiliary heat sink is needed. Leaving the module in a free air environment is ok.

In case there is a short circuit or over current at the output, the internal protection circuit will cut off the output. The power supply will be auto recovered when short circuit or over current faults are removed.

APPLICATIONS

Driving high power LEDs with low noise and high stability:

- Solar and landscape lighting
- Architectural lighting
- Track lighting
- Theatrical/production lighting systems
- Point of sale lighting
- Desk and reading lamps
- Signal and marker lighting
- Flashing and strobe lighting
- Cabinet and display case lighting
- Signs and channel letters
- Various fixtures and systems
- Etc...

In case there is an over voltage at the output, the internal over voltage protection circuit will lock the power supply. It will not be auto recovered when faults are removed. In condition, please turn off and restart it.

In Figure 1, on the left, two white AC wires: 20AWG 1617, VW-1, 105°C, their length are 16.5cm. On the right, a red DC wire and a black wire: 18AWG 1015, VW-1, 105°C, their length are also 16.5cm. Please make sure that polarity of the LEDs matches the polarity of the power supply's output.

The AAS50V0P35A1 is packaged in a 3 sided aluminum alloy and 3 sided PVC enclosure, all these form a waterproof enclosure for the LED power supply, preventing water from coming into the internal chamber and conducting the heat to the ambient. Its actual size is 120mm (L) × 28mm (W) × 22mm (H).

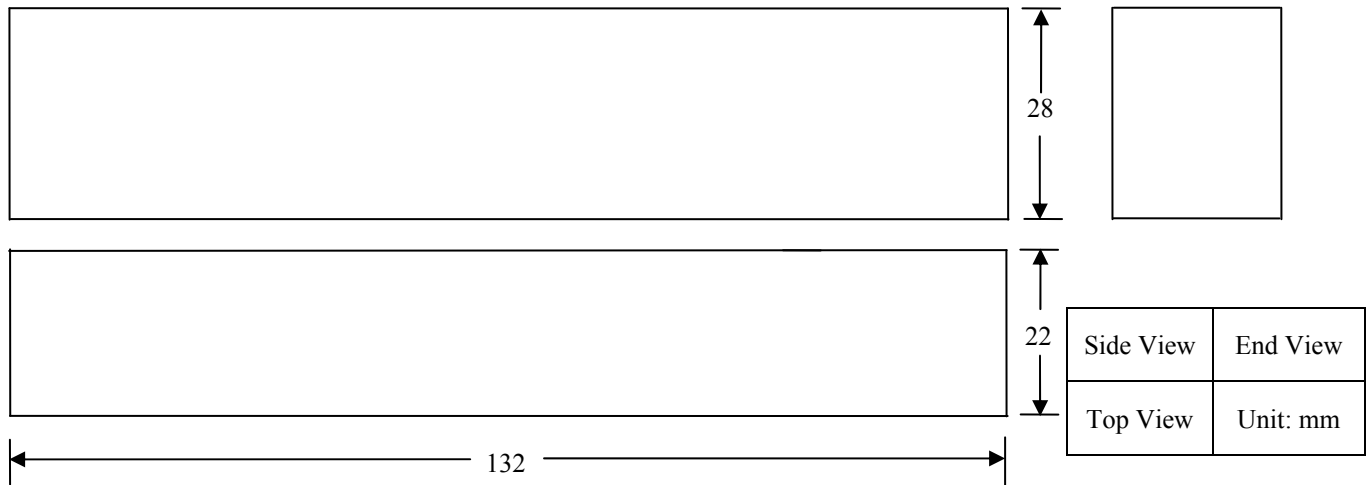


SPECIFICATIONS

Table 1. Characteristics ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Efficiency	η	$V_{in} = 240\text{VAC}, V_{out} = 50\text{V}, I_{out} = 350\text{mA}$.	75	80	-	%
Input voltage	V_{in}		80	110/220	265	VAC
Input frequency	f		47	50/60	63	Hz
Input current	I_{in}	Measured with multi-meter	62		455	mA
Output current	I_{out}		-	350	-	mA
Current accuracy	ΔI	$-10^\circ\text{C} \sim 60^\circ\text{C}$	-	± 0.3	-	%
Output voltage	V_{out}	Depending on the numbers of load LEDs	16	Adaptive	50	V
Maximum output power	P_{out_max}	$V_{out} = 50\text{V}, I_{out} = 350\text{mA}$.		17.5	18	W
Turn on delay time	t_d	115VAC input and output Max. load			2	s
Rise time	t_r	115VAC input and output Max. load			40	ms
Hold up time	t_h	115VAC input and output Max. load		5		ms
Operating Temperature	T_A		-10	25	60	$^\circ\text{C}$
Storage Temperature	T_S		-20	25	85	$^\circ\text{C}$

MECHANICAL DIMENSIONS



TERMINAL DESCRIPTIONS

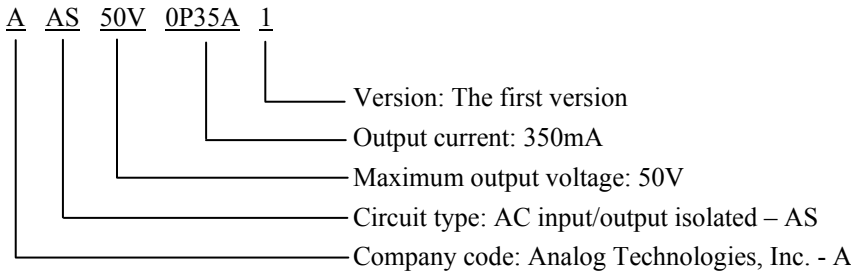
Table 2. Terminal Introduction

#	Color	Name	Meaning	Type	Description
1	White	ACL	Live wire	AC input	Connect it to AC power supply.
2	White	ACN	Neutral wire	AC input	Connect it to AC power supply.
3	Red	LDA	Laser diode anode	Power output	Connect it to the anode of the LED.



4	Black	LDC	Laser diode cathode	Power output	Connect it to the cathode of the laser LED.
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NAMING



ORDERING INFORMATION

Table 3. Part Number

Part #	Description
AAS50V0P35A1	The AC input water proof LED power supply outputs 350mA constant current.

NOTICE

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