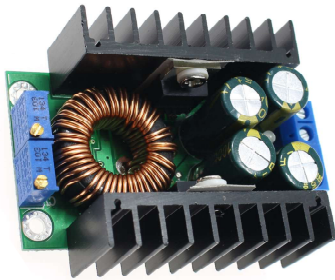


الحمادي للإلكترونيات
ALHAMMADI FOR ELECTRONICS

The maximum current is 8-9A, the input voltage is up to 40V, and the output voltage is up to 35V)

Size: 65 (length) * 47 (width) * 23.5 (height) mm



Module parameters

Module nature: non-isolated step-down constant current, constant voltage module (CC CV) charging module

Scope of application: high-power LED constant current drive, lithium battery charging (including ferroelectric), 4V, 6V, 12V, 14V, 24V battery charging, nickel-cadmium nickel-metal hydride battery (battery pack) charging, solar panels, wind turbines

Input voltage: 7-32V (without constant current 5-32V)

Output Voltage: (1) Continuously adjustable (0.8-28V)

(2) Fixed output (choose between 0.8-28V)

Output current: maximum 12A (the temperature of the power tube exceeds 65 degrees, please add a fan to dissipate heat, 24V to 12V within 6A, and the fan can generally be added in an open environment)

Constant current range: 0.2-12A (adjustable)

Lamp current: constant current value * (0.1), lamp current and constant current value linkage, for example, the constant current value is 3A, the lamp current is set to 0.1 times of the constant current (0.1 * 3A)

= 0.3A), when the constant current value is adjusted to 2A, the lamp current is 0.1 times of the constant current ($0.1 * 2A = 0.2A$).

The secondary version is fixed at 0.1 times (the actual lamp current is an approximate value, not very accurate) for the indication of whether the charge is full or not.

Minimum dropout voltage: 1V

Output power: The maximum power is about 300W, and the temperature of the power tube is more than 65 degrees, please add a fan.

Conversion efficiency: up to about 9500 (the higher the output voltage, the higher the efficiency)

WORKING FREQUENCY: 300KHZ

Output Ripple: 20M bandwidth (for reference only)

Input: 24V, Output: 12V, 5A, Ripple: 50mV (without noise)

Operating temperature: industrial grade (-40°C to $+85^{\circ}\text{C}$) (please pay attention to the temperature of the power tube for actual use, please strengthen heat dissipation if the temperature is too high)

No-Load Current: 20mA Typical (24V to 12V)

Load regulation: ± 100 (constant voltage)

Voltage regulation: ± 100

Constant current accuracy and temperature: In the actual test, the temperature on the module changes from 25 degrees to 60 degrees, and the constant current value changes less than 500 (constant current value 5A)

Dynamic response speed: 5 hundred 200uS

Potentiometer Adjustment Direction: Clockwise (Increasing), Counterclockwise (Decreasing) Voltage regulation (CV) for potentiometers near the input, current regulation (CC) for potentiometers near the output

Indicator: two-color indicator, red indicator during charging, green indicator after charging (green when not loaded) Red indicator without constant current.

Output Short Circuit Protection: Yes, Constant Current (Current Value Currently Set)

Input Reverse Polarity Protection: None,

Output protection against backflow: None.

Wiring method: terminal block

Battery Charging How to use:

1. Determine the float charge voltage and charging current of the rechargeable battery you need, and the input voltage of the module;
2. Adjust the constant voltage potentiometer to adjust the output voltage to about 5V.
3. Use the 10A current block of the multimeter to measure the output short-circuit current, and adjust the constant current potentiometer at the same time to make the output current reach the predetermined charging current value;
4. Adjust the constant voltage potentiometer to make the output voltage reach the floating charge voltage;
5. Connect the battery and test charge.

(Steps 1, 2, 3, and 4 are connected to the power supply for the module input, and the output is not connected to the battery without load.))

LED constant current driver How to use:

1. Determine the working current and maximum working voltage you need to drive the LED;
2. Adjust the constant voltage potentiometer to adjust the output voltage to about 5V.
3. Use the 10A current block of the multimeter to measure the output short-circuit current, and adjust the constant current potentiometer at the same time to make the output current reach the predetermined LED working current;
4. Adjust the constant voltage potentiometer to make the output voltage reach the maximum working voltage of the LED;
5. Connect the LED and test the machine.

(Steps 1, 2, 3, and 4 are connected to the power supply for the module input, and the output is not connected to the LED light at no load.))

Typical Applications:

Adjustable power supply (12A power is large enough), high-power LED driver, LED display driver, lead-acid battery charging, lithium battery charging, on-board power supply, on-board notebook power supply (step-down), stabilized power supply, low-voltage system power supply, (such as children's toy car with 12V battery step-down to 6V), 24V to 12V 12V \12V \12V to 5V 12A \24V to 5V 12A \24V to 19V20V, etc., the application range is very wide.

1. The fixed lamp current is 0.1 times of the constant current value (used to identify whether the battery is full when charging);
2. The use of a special reference IC, and high-precision sampling resistor, so that the constant current is more stable, (20 degrees to 60 degrees Celsius constant current 5A temperature drift less than 500). Ideal for LED drivers
3. The output current is large, and the maximum output current can reach 12A, which can meet most of the needs.
4. 4 high-frequency capacitors, effectively reduce the output ripple and improve the working stability
5. Double heat sink design, MOS tube Schottky diode independent heat sink, good heat dissipation, no mutual influence
6. Adopt large-size iron-silicon-aluminum magnetic rings at any cost to improve work efficiency, and use pure copper double-wire to reduce heat and improve efficiency.
7. 3296 multiturn potentiometer, high precision and good stability of voltage and current adjustment.
8. Special current sampling resistor: high current sampling accuracy, good stability, and small temperature drift. LEDs are a must-have.
9. Two-color indicator light, the working status is clear at a glance. Charging essentials.
10. The voltage and current can be adjusted, and the effect of the adjustable power supply is good, and the current of 12A is large and the power is sufficient.

