HS0005 LM2596 DC-DC Step-down Adjustable CC/CV Power Supply Module Converter LED driver

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Features:

- Fixed turn the lamp current to 0.1 times the value of the constant current (charge when used to identify whether the battery is full)
- Increased input reverse polarity protection diode
- Using dedicated reference IC, and high-precision sampling resistor, so that the constant current is more stable, (20 degrees to 100 degrees, the constant current 1A, when the temperature drift of less than 1%).

Particularly suitable for LED driver

- High-power LED constant current drive
- Lithium battery charger (including ferroelectric)
- 4V, 6V, 12V, 14V, 24V battery charger
- Nickel cadmium, nickel metal hydride battery pack charger
- Solar panels and wind turbines

Specifications:

- Module Properties: non-isolated constant current and voltage module
- Rectification: non-synchronous rectification
- Input voltage: 7V-35V
- Output voltage: 1.25V-30V
- Output current: adjustable maximum 3A
- Conversion efficiency: 92% (the highest)
- Switching frequency: 150KHz
- Output ripple: 50mV (max) 20M bandwidth
- Load Regulation: ± 0.5%
- Voltage Regulation: ± 2.5%
- Operating Temperature: -40 ℃ to +85 ℃

Battery use:

- Make sure of the voltage and current of the battery you need to charge
- Adjust the constant voltage potentiometer to make the output voltage same to the charge voltage
- Potentiometer Adjustment Direction: Clockwise (increase), counterclockwise (decrease)
- Use the multimeter in 10A current scale to measure output short-circuit current, and adjust the current potentiometer to make sure the output current to the expected charging current value
- The charge current of transfer lamp is default 0.1 times of the charging current (constant current value)
- Connected to the battery and try to charging (for previous 5 steps,module input terminal is connected to power source, output load is NOT connected to batteries).

LED Constant Current Driver Use:

- Make sure operating current and Max operating Voltage of the LED you need to drive.

- Adjust the constant voltage potentiometer to make sure the output Voltage is up to LED Max operating Voltage.
- Use the multimeter in 10A current scale to measure output short-circuit current, and adjust the current potentiometer. To make sure the output current to the expected LED operating current.
- Join LED, test (For the above 3 steps, module input terminal is connected to power source, output load is NOT connected to LED).

The scope of application:

Charging for lithium ion batteries: when the lithium ion battery voltage is low.If use the constant voltage charging directly. Due to pressure is too large, leading to the battery damage. So from the beginning to use the constant current charging. When charging to a certain, automatic switch back to the constant voltage charging. Charging curve as shown below: red is current, blue is voltage.