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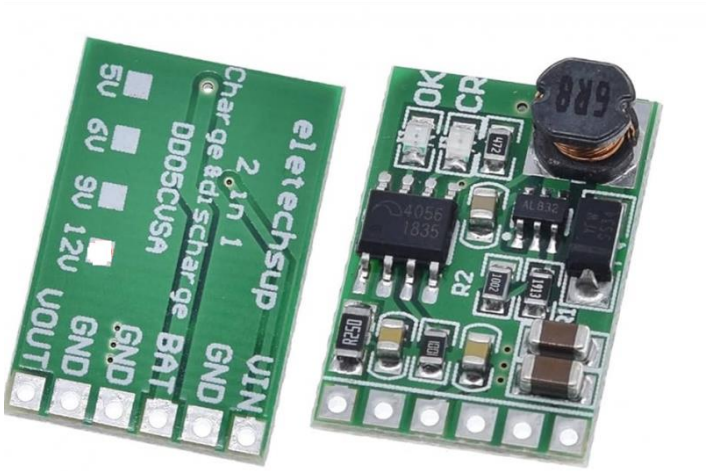
DC-DC Converter Boost Module for Solar Mobile Power Lithium Charger and Discharger 5V12V 2-in-1

Introduction:



The DC-DC Converter Boost Module is a versatile 2-in-1 solution designed for solar mobile power applications. With support for both 5V and 12V output, this module efficiently charges and discharges lithium batteries. Its compact design and robust features make it an ideal choice for powering various devices in solar-powered setups, offering flexibility and reliability in renewable energy scenarios.

Features:

1. Used for battery-powered equipment, not only a charger, but also has a step-up function
2. The product come with high conversion efficiency, saving both time and labor
3. This important DC converter is used for UPS power DIY equipment, very practical
4. Working environment temperature is from -40℃ to +85℃, very wide and convenient
5. Storage temperature is from -65℃ to +125℃, you can store with confidence

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Specs:

- Item Type: UPS Power DIY Board
- Charging Voltage: DC 4.5V-8V (recommended DC 5V)
- Charging Current: 0-1A
- Full Charge Voltage: 4.2V ±2%
- LED Indicator:
- "OK" LED is fully charged or battery failure status indicator;
- "CR" LED indicator is the charging status indicator
- (Boost) Discharge Current: 0-2A
- (Boost Type) Discharge Quiescent Current: 450uA
- (Enhanced) Discharge Conversion Efficiency: 78%-90%
- (Boost) Output Current: 0-1.2A (5V), 0-1A (6V), 0-0.66A (9V), 0-0.5A (12V)
- Working Environment Temperature: -40℃ to +85℃
- Storage temperature -65℃ to +125℃
- Excluding Pin Size: Approx. 23 x 15.4 x 5.7mm / 0.9 x 0.6 x 0.2in

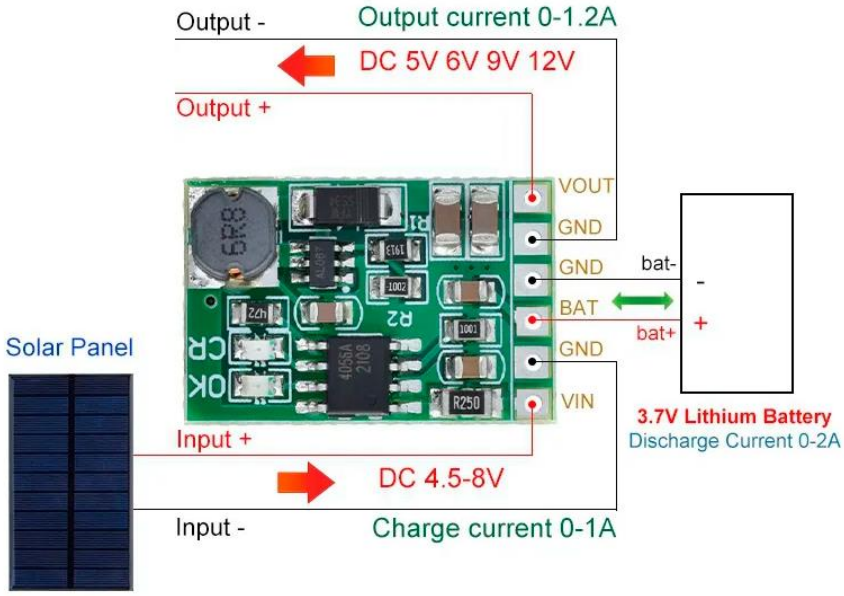
Objective:

The primary objective of the DC-DC Converter Boost Module is to provide a reliable and efficient power management solution for solar mobile power systems. This module aims to enhance the usability of solar energy by efficiently charging lithium batteries and delivering stable 5V and 12V outputs. Its compact design and dual functionality make it an essential component for powering diverse devices, ensuring an optimal balance between energy harvesting and usage in solar applications.

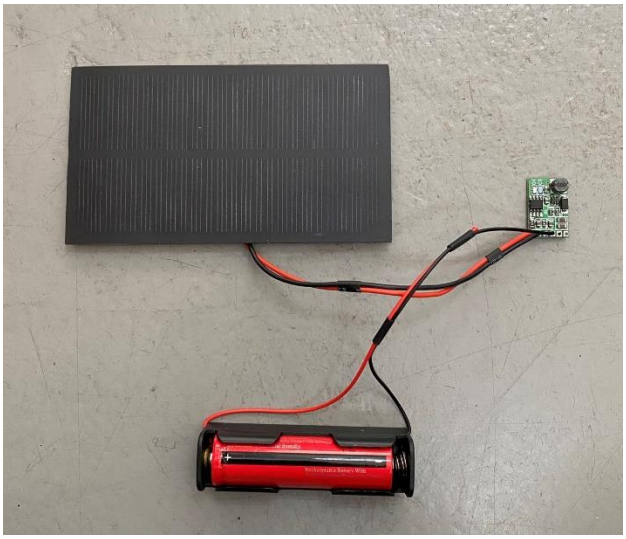
Components Needed:

- Solar panel
- 3.7 Lithium battery
- DC-DC converter boost module
- Wire connector
- Multi meter
- 3V-6V Dc motor

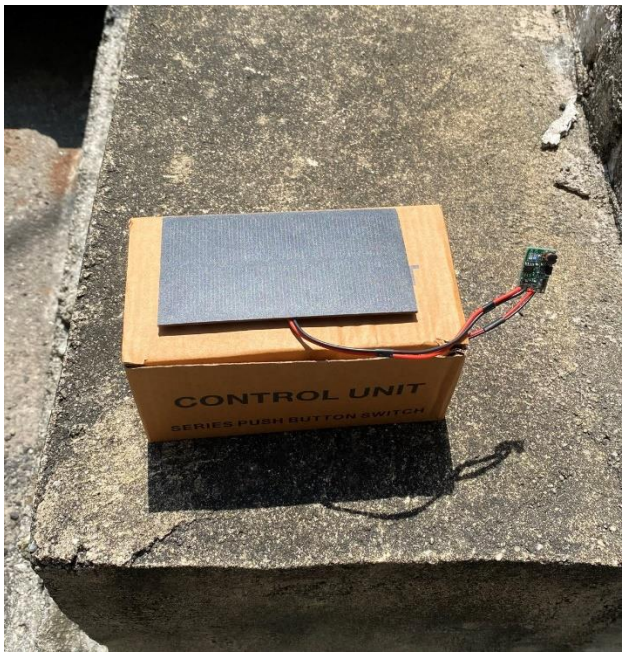
Procedures:



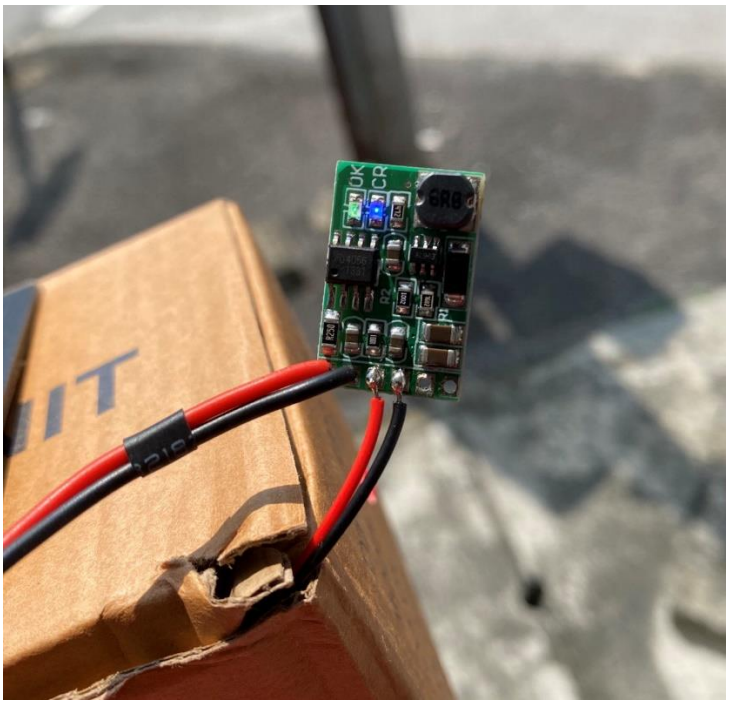
1. Connect the solar panel to the DC-DC Converter Boost Module, then connect the module to the lithium battery.



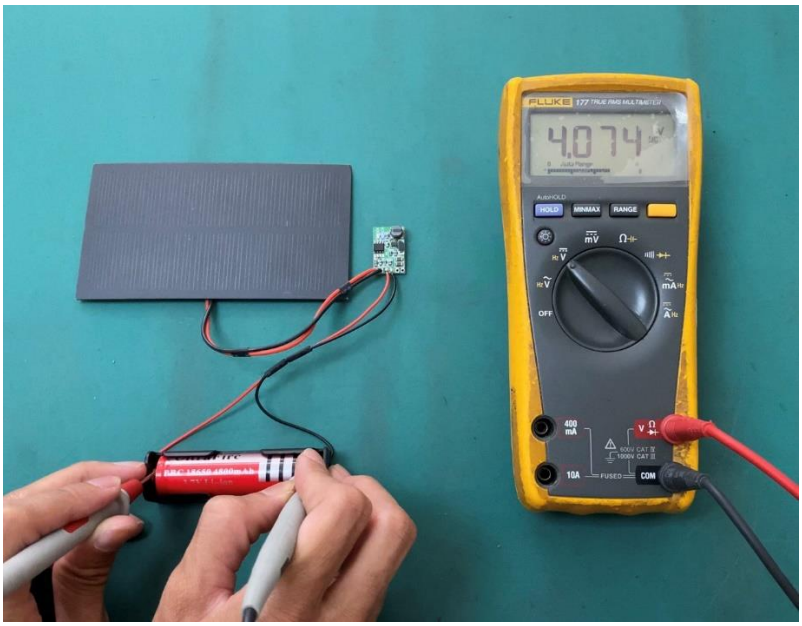
2. Place the solar panel in direct sunlight.



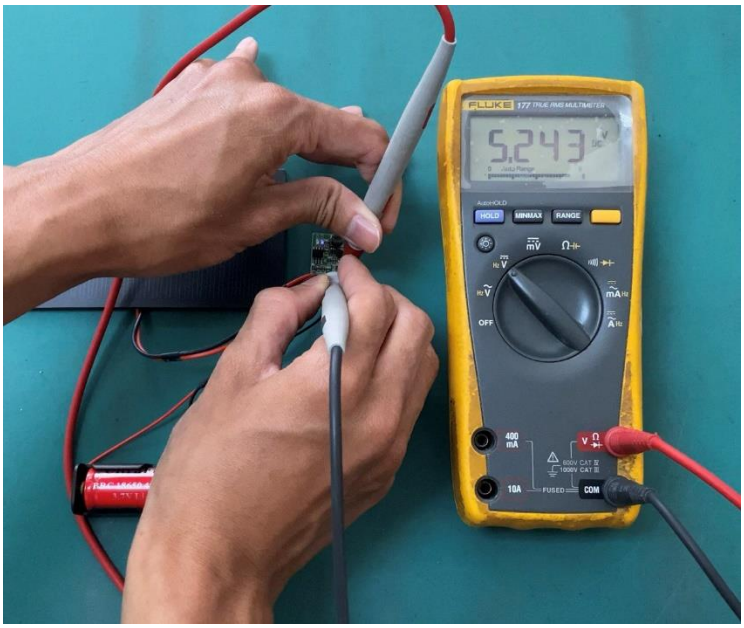
3. "OK" LED Turn ON when the battery is fully charged.
   "CR" LED Turn ON when charging.



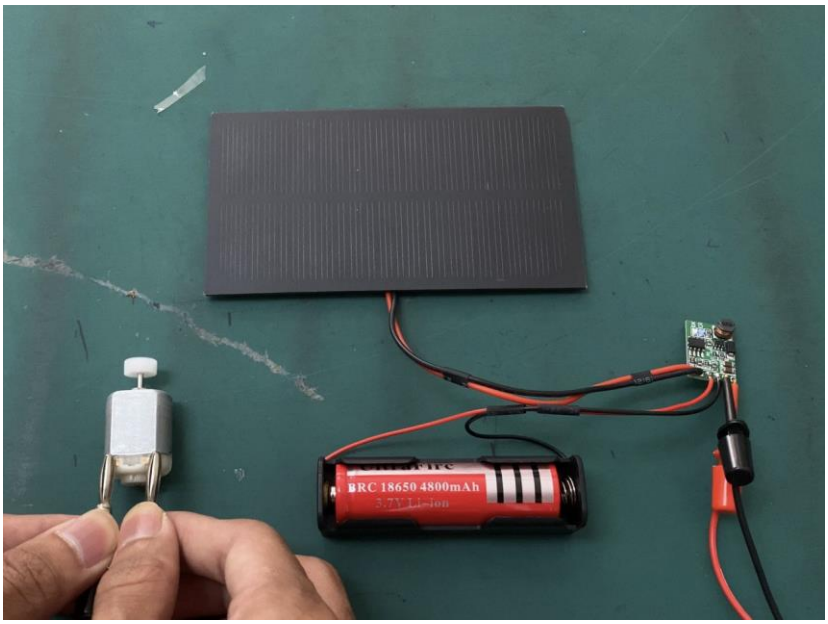
4. The full charge voltage battery can reach 4.2V.



5. The regulated output voltages for this module is **5.243V** when measure using multi meter.



6. The regulated output voltages of the module can be tested by connecting it to DC Motor.



Conclusion:

In conclusion, the DC-DC Converter Boost Module offers a reliable and efficient solution for managing power in solar mobile applications. With its ability to regulate output voltages, support for various electronic devices, and robust performance under different load conditions, this module serves as a crucial component in harnessing solar energy for powering devices on the go. Its versatility, durability, and ease of use make it an essential choice for anyone seeking to maximize the potential of solar power in mobile setups.