PowerBank Universal Batteries Charger
Specification
GP version

1 Scope:

This is a universal Ni-MH battery charger with 2 channels (AAA/ AA/ C/ D) and 2 channels for 9V.

If no other specified on the test condition, all of the data specified are at room temperature - 25℃, voltage and current are tested at the point of the input and the batteries contact plates

2 Rated input voltage/current: DC 5.0V/2A min.

Remark: 5V/1A input compatibility
When input rating is below requirement 5V/2A and unable to delivery enough power for charging, then charger will have 1sec alternative cycle charge channel 1 & channel 3 with below electrical spec.

3 Rated charging current for C/D/AA/AAA batteries with 2x1.4V and 9V size with 9.8V

C/D size : 550mA +/- 15%
AA size : 370mA +/- 15%
AAA size : 290mA +/- 15%
9V size : 40mA +/- 20% (for one cell charge only)
20mA +/- 20% (for two cells charge)

4 Charge time:

4000mAh C/D battery, about 520 min.
2000mAh AA battery, about 390 min.
800mAh AAA battery, about 200 min.
200mAh 9V battery, about 360 min. for 1-cell or 720 min. for 2-cell.

5 Trickle charge current

C/D size : about 28mA
AA size : about 18mA
AAA size : about 15mA
9V size : no trickle charge.

6 Application: Two charging channels can charge 2 or 4 pcs Ni-MH AA/AAA/C/D batteries, additional 2 charging channels for 1 or 2 pcs Ni-MH 9V batteries.

7 Indication (4pcs green color LED):

Condition	LED Indication
	Green
No battery inserted	OFF
Power on	Four LEDs ON for 0.5s & then all OFF

Condition	LED Indication
	Green
Charging in progress	LED flashes at 0.5 Hz
Charging is finished and into trickle charge	ON
Bad/ Primary battery inserted	Flashes at 3.3 Hz

8 Battery leakage current: 0.2mA max.

9 Termination mode

9.1 Safety timer: 14hr. +/-10%

9.2 –dv

10 Protection

Reverse polarity protection

Primary battery protection

11 ENVIRONMENTAL COMPLIANCE

11.1 Operating temperature range : 0-33 degC

11.2 Storage temperature range : -25-60 degC

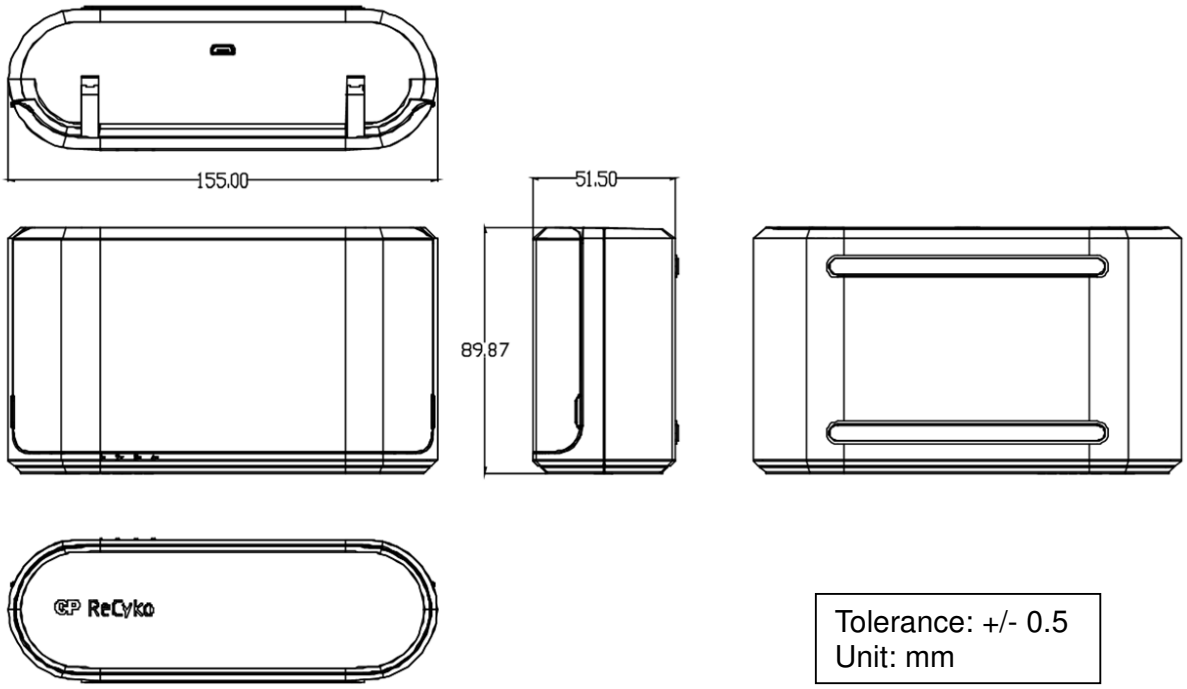
11.3 ROHS/REACH compliance

12 SAFETY & EMC COMPLIANCE

12.1 EMC: EN55032, EN55035, EN61000-3-2, EN61000-3-3

12.2 FCC: FCC Part 15 Subpart B, ICES003

13 Outline dimension



Tolerance: +/- 0.5
Unit: mm

14 MECHANICAL CHARACTERISTICS

14.1 Drop resistance (with 4pcs AA-size batteries) : No visibly damaged at 1m & 6 times, on wood floor. No defects that would impair normal operations.

14.2 Protection from reverse insertion of battery : No positive terminal electrical contact

14.3 Pull force with cathode plate <25N

14.4 USB Connectors

14.4.1 Durability for insertion and withdrawal : 1000 cycles, cycle rate of 500 cycles per hour if using auto tester, 200 cycles per hour if manual

14.4.2 No visibly damaged, No defects that would impair normal operations

14.4.3 Meet the insertion & withdrawal force requirement after 1000 cycles at a maximum rate of 12.5mm/min. (refer to USB requirements)

14.4.3.1 MicroB insertion force < 35N

14.4.3.2 MicroB withdrawal force > 8N

14.4.4 Good visible alignment

14.5 Cosmetic & Graphics : Detail requirement defined by ID Design Team

14.5.1 No visible scratch & dirt & flashes & chromatic aberration on surface.

14.5.2 Assembly gap of all mating parts : no movable gap

14.5.3 Graphic & printing robustness & endurance : refer GP – PQ