Product Specifications

USB Rapid Charger

Model: U421

Revision History

Revision	Date	Initiator	Change description
00	2015-6-9	HanHai Liu	new issue
01	2015-8-5	Andrew Mak	Revise LED indications

Prepared by	Checked by	Approver
RD Engineer	Technical Director	Global Category Marketing Manager
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Date: 2015-6-9	Date: 2015-6-9	Date: 2015-6-9

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1. SCOPE

This specification governs the performance of the following USB Rapid Charger.

Model: **U421**

This is an USB rapid charger with 4 channels, as fast as 40mins for 2000mAh AA NiMH rechargeable batteries, containing user-friendly LED indicators for battery checking.

All data specified are at room temperature 23℃; voltage and current are tested at the point of the input and the batteries contact plates.

With multi protection:

- Over temperature protection (TCO).
- Reverse polarity protection
- Primary battery protection
- Timer cut-off
- -dV=5mv

2. RATINGS

Description	Specification
Input Rating	DC5.0V / 1.0A - 2.1A
Output Rating	Total number of independent channels : 4 Input : DC5.0V 2.1A Per channel charging : 1xAA – DC1.4V 3600mA 2xAA – DC1.4V 1800mA 3xAA – DC1.4V 1200mA 4xAA – DC1.4V 900mA 1xAAA – DC1.4V 1500mA 2xAAA – DC1.4V 770mA 3xAAA – DC1.4V 510mA 4xAAA – DC1.4V 380mA
Charging Time	Input DC5.0V 2.1A, 2000mAh AA or 800mAh AAA 1x(AA or AAA) – approx. 40 min. 2x(AA or AAA) – approx. 80 min. 3x(AA or AAA) – approx. 120 min. 4x(AA or AAA) – approx. 160 min.
Trickle Charge Current	AA size : 1/10 charge current AAA size : 1/10 charge current
Application	- Independent charging channels for 1-4 pcs of Ni-MH AA/AAA rechargeable batteries - Capacity checking for the first 10 seconds after battery insertion. - Bad and primary cells detection during charging

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<table>
<tr><td>LED Indication</td><td>
<table>
<tr><th colspan="2">Condition</th><th>LED Indication</th><th>LED Indicator</th></tr>
<tr><td rowspan="5">Battery Check (First 10 Seconds)</td><td colspan="2">Bad/Primary battery inserted</td><td>RED (Flashing)</td></tr>
<tr><td rowspan="4">Remain battery capacity</td><td>≥90%</td><td>GREEN</td></tr>
<tr><td>50-90%</td><td>AMBER</td></tr>
<tr><td>10-50%</td><td>AMBER (Flashing)</td></tr>
<tr><td><10%</td><td>RED</td></tr>
<tr><td rowspan="3">Battery Charging Stage</td><td colspan="2">No battery inserted</td><td>OFF</td></tr>
<tr><td colspan="2">Charging in progress</td><td>GREEN (Flashing)</td></tr>
<tr><td colspan="2">When charging is finished, then will switch to trickle charge</td><td>GREEN</td></tr>
</table>
</td></tr>
<tr><td>Battery Leakage Current</td><td>0.5mA max.</td></tr>
<tr><td>Termination Method</td><td>● -dV
● Primary & bad battery detection
● Temperature protection : 55±5℃
● Safety timer:
1xCell: 90min.
2xCell: 180min.
3xCell: 270min.
4xCell: 360min.</td></tr>
<tr><td>Operation Temperature</td><td>0~40℃</td></tr>
<tr><td>Storage Temperature</td><td>-25~60℃</td></tr>
<tr><td>MTBF</td><td>30,000 hours at room temperature 25℃</td></tr>
<tr><td>Compliance</td><td>RoHS</td></tr>
</table>

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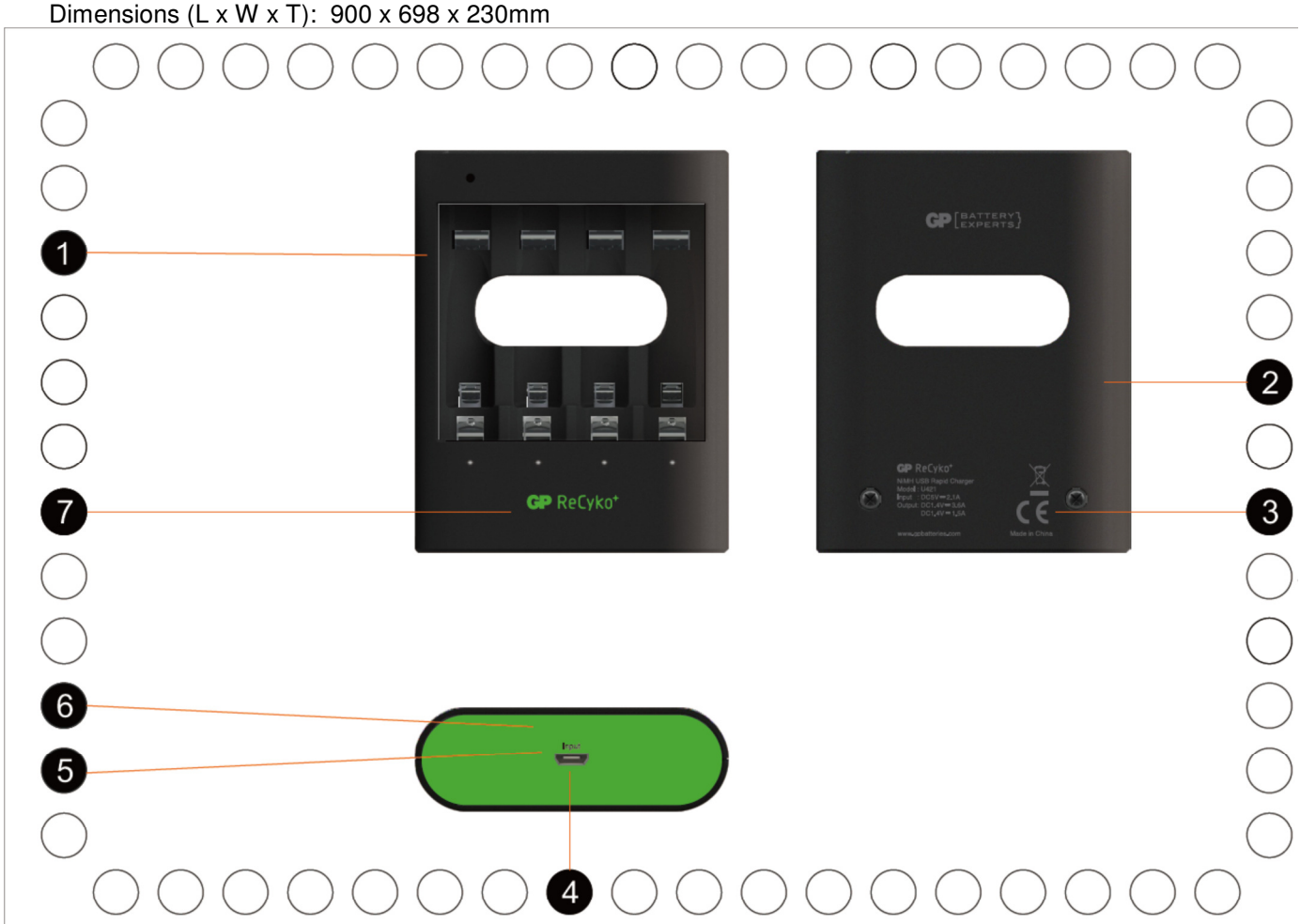
3. CONFIGURATIONS, DIMENSIONS AND MARKING

Dimensions (L x W x T): 900 x 698 x 230mm



No.	Parts	Material	Finish	Substrate Color	Color	Remarks
1	Front Cabinet	Plastic	N/A	N/A	Anodizing Black	Colour refer to Colour Chip #00023
2	Rear Cabinet	Plastic	N/A	N/A	Anodizing Black	Colour refer to Colour Chip #00023
3	Rating Label	N/A	Silkscreen	N/A	Pantone Cool Grey 11C	
4	Micro USB Jack	Standard Parts	N/A	N/A	Black in Colour	
5	Input	N/A	Silkscreen	N/A	Pantone BlackC	
6	Top and Bottom Endcap	Plastic	Matt	N/A	Pantone 369C	
7	GP Logo	N/A	Silkscreen	N/A	Pantone 369C	

4. WARRANTY

One year limited warranty against workmanship and material defects.

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5. CAUTIONS

1. To reduce the risk of injury, it is recommended that GP Ni-MH rechargeable batteries are used.
2. Do not use non-rechargeable batteries.
3. Do not use the charger in humid conditions.
4. Do not use the charger if it has a damaged plug.
5. Do not use the charger after it has been dropped or damaged.
6. Do not open/disassemble the charger.
7. Unplug the charger before maintenance or cleaning.
8. Do not use the charger in direct sunlight.
9. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
10. Children should not play with the appliance.
11. Cleaning and user maintenance should not be made by children without supervision.

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