

产品规格书 Specification

客 户 : _____

Customer : _____

机种名称 : 锂离子电池充电器

Type : Li-ion battery charger

产品型号 : LBC100201

Model : _____

客户料号 : _____

Customer part No. : _____

发行版本 : V10

Reversion : _____

制作日期 : 2022/3/25

Date : _____

基本规格	输 入 Input	: 100-240Vac	
Basic spec	输 出 Output	: 42V2A	
	输入线材 Input cord	: EU 2PIN AC plug power supply cord	
	输出线材 Output cord	: To be confirmed	
	包 装 盒 Individual box	: Kraft box(Maroon)	
	适用电池 Ft for battery of	: 10S(each cell 4.2V)	
	软件编号 Software No.	: A10	

批准Approvalled by	审核Checked by	制作Prepared by
Roven Jiang		He Min
客户承认Customer approval		
批准Approvalled by	审核Checked by	测试Tested by

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一、简介 Introduction

该产品为交流转直流锂离子电池充电器，基本特性如下：

This unit is the AC to DC li-ion battery charger, basic characteristics are as below:

输入电压 Input voltage	输出电压 Output voltage	充电电流 Charge current	总输出功率 Max output power	适配电池 Fit for battery
100-240Vac	42±0.2V	2±0.2A	84W	10S (each cell 4.2V)

二、环境特性 Environmental characteristics

序号 No	项目 Item	规格 Spec	备注 Remark
1	工作温度 Operation temp.	0 - 40 °C	
	存储温度 Storage temp.	-20 - 60 °C	
2	工作湿度 Operation humidity	5 - 65%	
	存储湿度 Storage humidity	5 - 65 %	
3	散热方式 Cooling mode	<input checked="" type="checkbox"/> 全封闭Full closed <input type="checkbox"/> 散热孔Heat dissipation hole <input type="checkbox"/> 内部灌胶 Glue inside <input type="checkbox"/> 带风扇With fan	<input type="checkbox"/> 金属外壳Metal shell <input checked="" type="checkbox"/> 塑胶外壳Plastic shell

三、输入特性 Input characteristics

序号 No.	项目 Item	规格 Spec	备注 Remark
1	输入电压范围 Input voltage range	90-264VAC	额定电压100-240Vac Rated voltage 100-240Vac
2	输入电压频率范围 Input voltage frequency range	47-63HZ	
3	空载功耗 Power consumption (no load)	≤2.0W	
4	满载输入电流 Input current (full load)	≤2.2A	
5	浪涌电流 Inrush current	≤70A	冷启动 Cold start
6	效率 Efficiency	≥85%	额定电压/满负载 Rating input/Full load
7	功率因数 Power factor	≥0.5	满负载 Full load

四、输出特性 Output characteristics

序号 No.	项目 Item	规格 Spec	备注 Remark
1	输出电压 Output voltage	42±0.2V	输出为脉冲电压 output voltage is pulse voltage
2	纹波&噪声 Ripple & noise	≤300 mV	输出端并联一个104瓷片电容和一个10UF 电解电容，示波器带宽设置为20MHZ Connect a 104 ceramic capacitor and a 10UF electrolytic capacitor parallely to the ouput side and set the occilloscope bandwideth 20MHZ..

序号 No.	项目 Item	规格 Spec	备注 Remark
3	充电特性 Charge characteristics	350±150mA	电池电压：16±2V<V<30±2V Battery voltage: 16±2V<V<30±2V
		2.0±0.2A	电池电压：30V<V<41V Battery voltage: 30V<V<41V
		400±150mA	转红灯点 The point turn to red LED
		200±100mA	转绿灯点 The point turn to green LED
		脉冲电流 Pulse current	电池电压：V<0.5V Battery voltage: V<0.5V
		>41V	恒流转恒压点 CC-CV point
4	LED灯指示 LED indicator	不亮灯 No light	AC关断时 Cut off AC
		亮红灯 Red light on	充电中 Charging
		红灯闪 Red light flashing	异常时（短路、反接、过压、过流、过温） Abnormal situation(scpc, reversed polarity, ovp, ocp, otp)
		亮绿灯 Green light	充满 Fully charged

五、保护特性

Protection characteristics

序号 No.	项目 Item	规格 Spec	备注 Remark
1	短路/反接保护 Output short/Reverse connection Protection	充电器保护闪红灯 The charger protect and flashes red light	故障移除后可恢复 Recovery after the fault removed
2	定时保护 Timing protection	30±5分钟 30±5 minutes	电池电压在16-25V之间时启动定时A, 30分钟后电池电压仍低于25V, 则停止充电, 闪红灯 Timing A will start when battery voltage between 16-25V, if battery voltage still below 25V after 30 mins, red LED flashing and charging stop.
		1小时±10分钟 1 hour ±10 minutes	电池电压在25-30V之间时启动定时B, 1小时后电池电压仍低于30V, 则停止充电, 闪红灯 Timing B will start when battery voltage between 25-30V, if battery voltage still below 30V after 1 hour, red LED flashing and charging stop
		12±0.5 小时 12±0.5 hours	充电电流在1.5A以上时启动定时C, 12小时后充电电流仍然高于1.5A, 则停止充电, 闪红灯 Timing C will start when charging current above 1.5A, if charging current still above 1.5A, red LED flashing and charging stop
		4±0.5 小时 4±0.5 hours	充电电流在1.5A以下后启动定时D, 4小时后如仍在充电则停止充电亮绿灯 Timing D will start when charging current below 1.5A, if still charging after 4 hours, charging stop and green LED turn on.
3	过压过流保护 OVP and OCP	停止充电闪红灯 Charging stop and red led flashing	当此故障解除后, 需重新插上AC电才能恢复正常。 When the fault is removed, it can't recover until re-plug the AC power;
4	过温保护 Over temperature protection	充电器保护闪红灯 The charger protect and red LED flashing	异常移除后可恢复 Recovery after the short - circuit removed
5	充饱关断 Shutdown point after charging full	130±100mA	电流达到关断点后停止充电亮绿灯 When the charging current reach to shutdown point, charging stop and green led turn on
6	电池倒灌保护 Reverse current protection	<1.0mA	充电器不接电时, 电池接上充电器不会打火, 且倒灌电流小于1.0mA When the charger is not powered on, the battery is connected to the charger without firing and the reverse current is less than 1.0 mA

六、安规认证&电磁兼容 Safety & EMC

序号 No.	项目 Item	规格 Spec	备注 Remark
1	安规认证 Safety	GS,CE,CB,PSE, RCM, KC, UKCA	GS、CE、UKCA: EN60335 PSE: J60335 CB: IEC60335 SAA: AS/NZS 60335 KC: KC60335
2	电磁兼容 EMC	CE, PSE, C-TICK, KCC	CE: EN55014/EN61000 PSE: J55014/J3000 C-TICK: AS/NZS CISPR 14.1 KCC: KN14-1/2

七、安全、可靠性能 Reliability

序号 No.	项目 Item	规格 Spec	备注 Remark
1	绝缘阻抗 Insulation impedance	$\geq 20M\Omega$	输入端与输出端加500VDC电压,60S Add 500DC voltage from primary to secondary for 60sec.
2	绝缘耐压 Withstand voltage	$\geq 3KVac, \leq 5mA$	输入端与输出端加3KVac电压,60S Add 3KVac voltage from primary to secondary for 60sec.
3	跌落特性 Drop test	80CM高度, 30mm硬木板, 跌三次 Drop onto 30mm thickness hard woodboard from 80cm height, for 3 times	跌落后产品功能无异常, 绝缘特性正常 After the test, the unit performance normal, insulation function normal
4	振动特性 Vibration and Shock	A.打开充电器外壳, 查看零件面和焊点面是否存在不良; B.能对电池组进行正常充电。 A. Open the charger case and check whether is any fault on material appearance or soldering appearance B. Charge battery normally	参考IEC publ.68-2-6: ①振幅0.35mm; ②方向: X、Y、Z; ③频率: 10-55HZ; ④时间: 每方向30分钟; Refer to the standard of IEC publ: ①amplitude 0.35mm; ②direction: X、Y、Z; ③frequency:10-55HZ; ④time:30Mins each direction;
5	温度上升 Temperature rise	温度上升 $\leq 40^{\circ}C$ T rise $\leq 40^{\circ}C$	典型环境温度 $25^{\circ}C$ 满负载时, 人手可触及到的充电器表面 With full load, the unit surface under typical temperature $25^{\circ}C$.

八、机械结构 Mechanical

序号 No.	项目 Item	规格 Spec	备注 Remark
1	输入AC座 Inlet socket	AC 2Pin	输入连接座 Input Connector
2	输入AC线 AC power cord	欧规两插八字尾电源线 L:1.5M EU 2PIN AC plug eight word tail power supply cord L:1.5M	详见图1: AC线 See drawing 1
3	输出DC线 DC power cord	To be confirmed	详见图2: DC线 See drawing 2
4	外观尺寸 Dimension	157x69.2x34.4mm	详见图3: 外观图 See drawing 3
5	摇摆特性 Swing characteristics	摇摆1000次负重200克 Load with 200g swing by 1000cycles	尾卡摇摆角度为 $\pm 60^\circ$,20次/分钟,断线率 低于30%, 且无外观损伤. The swing angle of the DC tail is $\pm 60^\circ$, 20 times per minute, and the disconnection rate is less than 30%, and no appearance damage
			DC头摇摆角度为 $\pm 60^\circ$,20次/分钟,断线率 低于30%, 且无外观损伤. The swing angle of the DC head is $\pm 60^\circ$, 20 times per minute, and the disconnection rate is less than 30%, and no appearance damage
6	线材拉力特性 Cord pulling strength	承重6千克维持60S Load with 6kg for 60secs	目测无外观损坏 No appearance damage

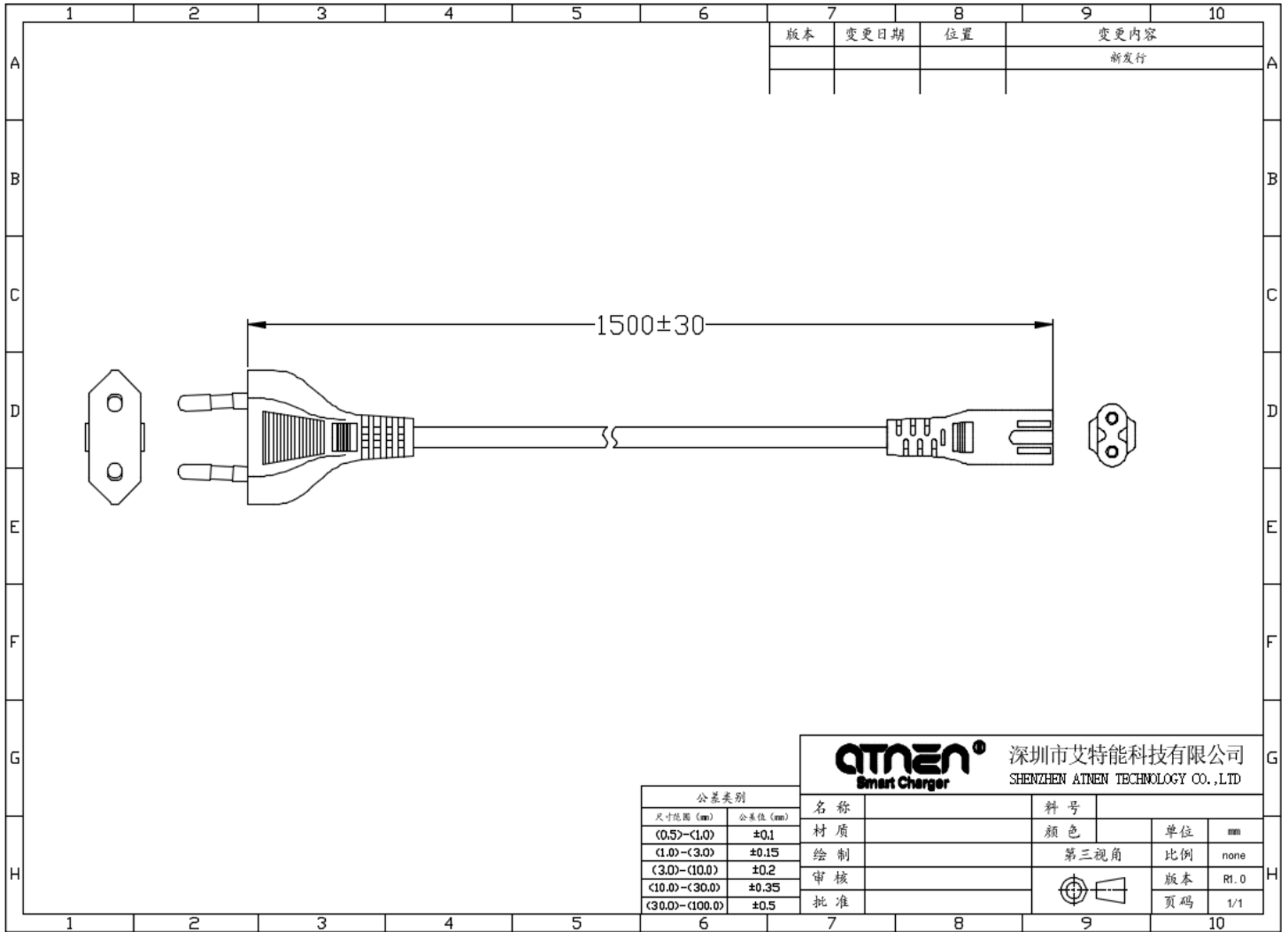


图1：AC线

Drawing 1: AC power cord

待确认/To be confirmed

图2：DC线
Drawing 2: DC power cord

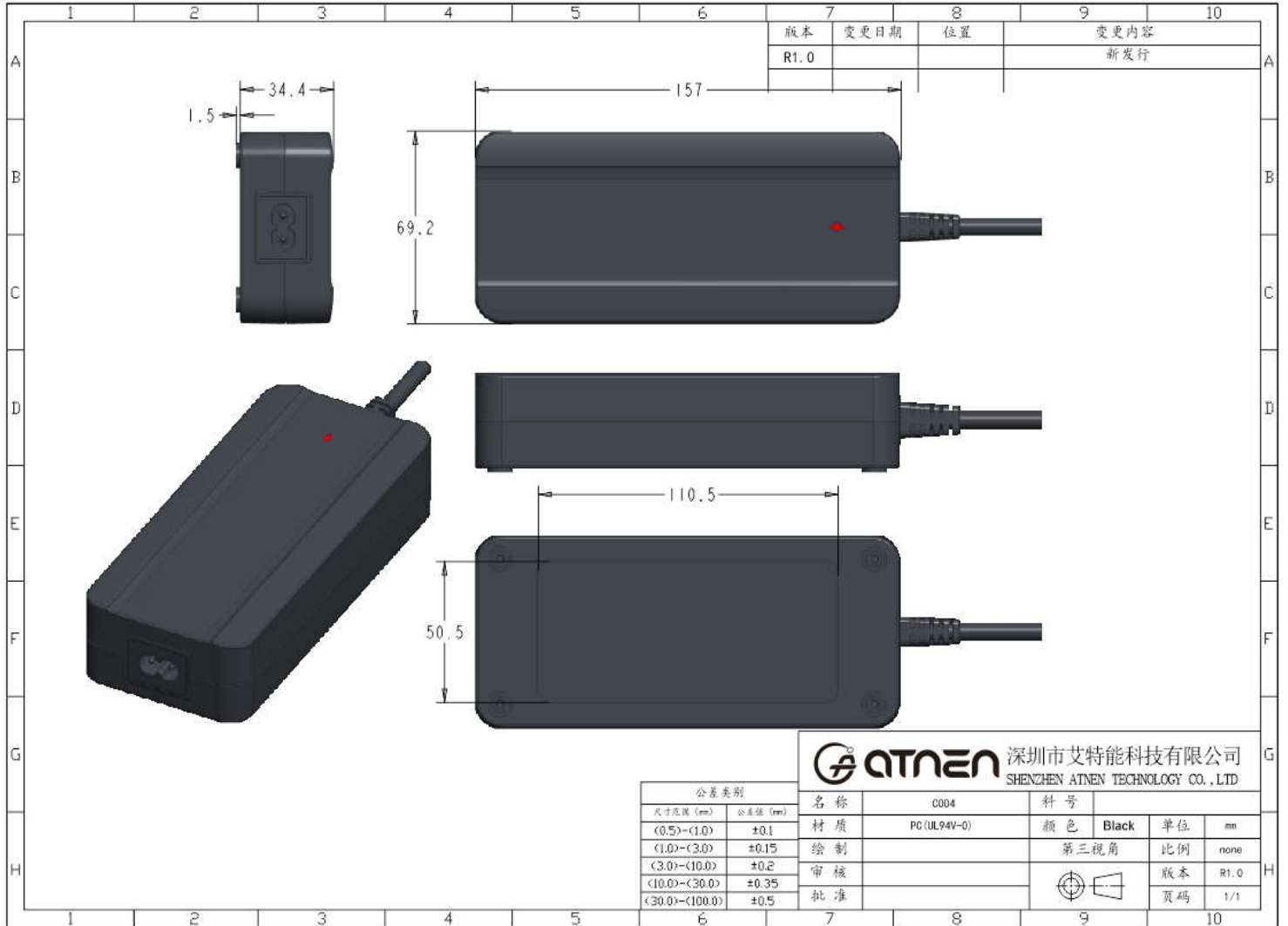
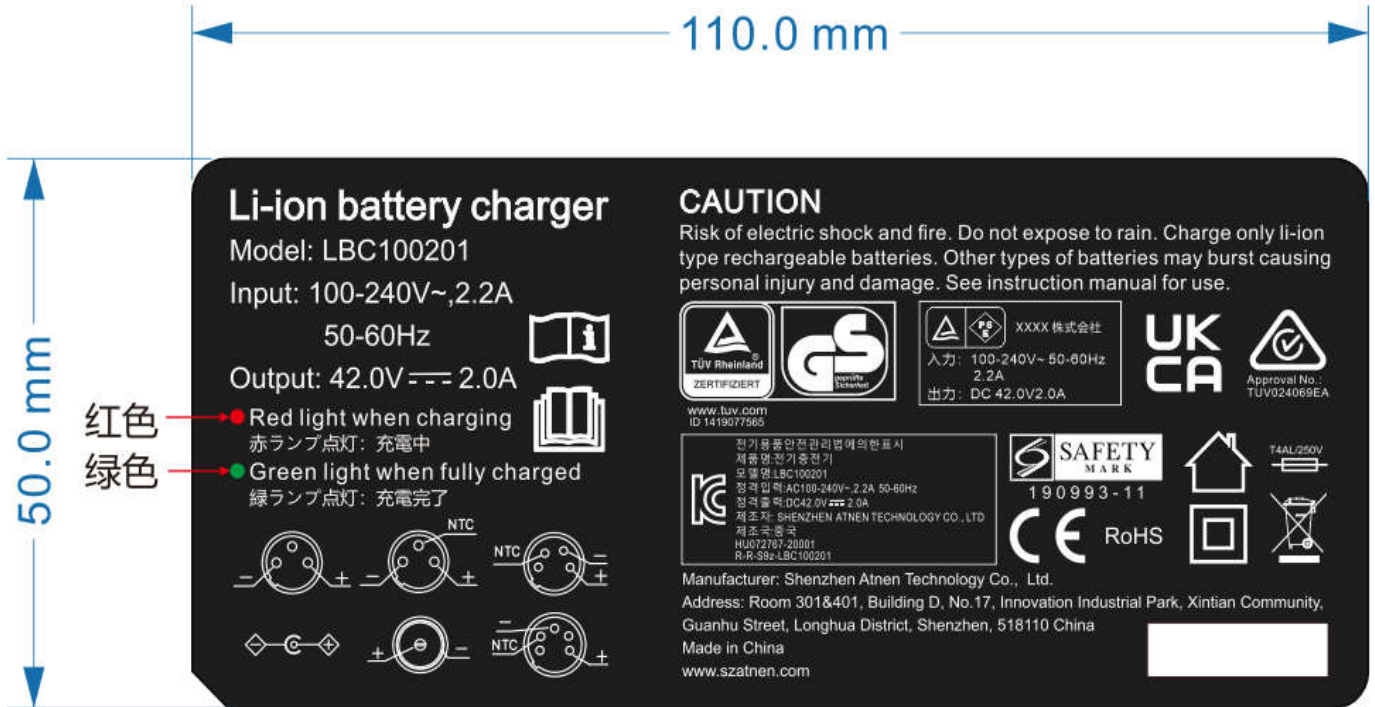


图3：外观图



Drawing 3: Dimension

九、外包装

1、标签 Label

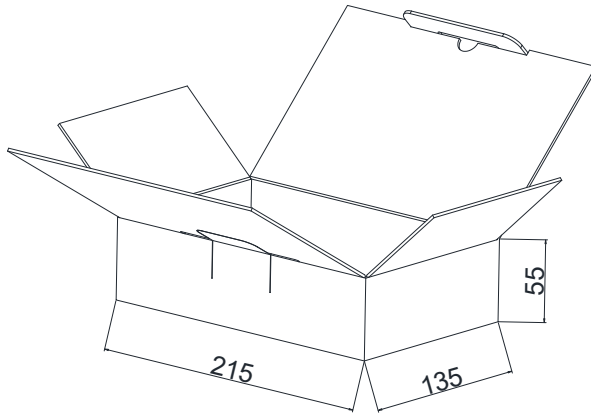


2、说明书 Instructions

115.0 mm	150 mm	<p>WARNING: explosive Gase . Vor Feuer und Funken schützen . Eine gute Belüftung während der Aufladung gewährleisten.</p> <p>7. Während des Ladens muss sich die Batterie an einem gut belüfteten Ort befinden.</p> <p>8. Kinder können Gefahren, die von elektrischen Geräten ausgehen, nicht richtig einschätzen. Lassen Sie Kinder oder gebrechliche Personen nicht ohne Aufsicht elektrische Geräte benutzen.</p> <p>9. Das Gerät ist nicht für den Gebrauch von Kindern und gebrechliche Personen, oder Personen mit ungenügenden Kenntnissen bestimmt. Es sei denn sie werden beaufsichtigt oder es werden ihnen genügend Anweisungen mitgeteilt. Kinder müssen beaufsichtigt werden, damit sie nicht mit dem Gerät spielen.</p> <p>- Dieses Produkt darf nicht zusammen mit dem normalen Hausmüll entsorgt werden. Sie müssen dieses Produkt an einer ausgewiesenen Sammelstelle zum Recycling von elektrischen oder elektronischen Geräten abliefern.</p> <p>- Durch das separate Sammeln und Recyceln von Abfallprodukten helfen Sie mit, die natürlichen Ressourcen zu schonen und stellen sicher, dass das Produkt in gesundheits- und umweltverträglicher Weise entsorgt wird.</p> <p>- Dieses Gerät kann von Kindern ab 8 Jahren und darüber und Personen mit eingeschränkten physischen, sensorischen oder geistigen Fähigkeiten oder mangelnder Erfahrung und Wissen benutzt werden, wenn sie unter Aufsicht der Anleitung zur Benutzung des Geräts in einer sicheren Weise und zu verstehen, die Gefahren beteiligt.</p> <p>- Kinder dürfen nicht mit dem Gerät spielen.</p> <p>- Reinigung und Wartung durch den Benutzer wird nicht von Kindern ohne Aufsicht durchgeführt werden.</p> <div style="text-align: center;">  </div> <p>www.szatnen.com 4</p>
		<h3 style="color: orange;">USER MANUAL</h3> <h4>Li-ion Battery Charger</h4> <p style="text-align: right;">To reduce the risk of fire or electric shock, See instruction manual for use. </p>

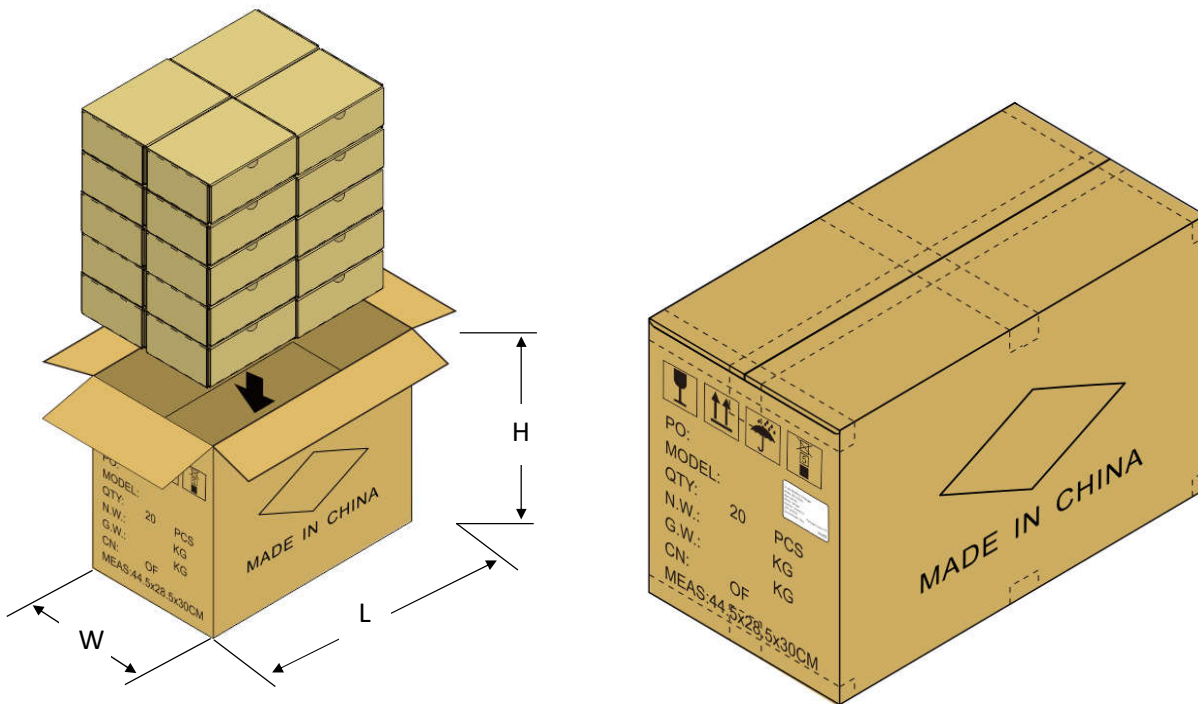
<p>Charging Instructions</p> <ol style="list-style-type: none"> 1. Connect the charger directly to a power source. Never use extension cords. 2. Avoid reverse charging. 3. Do not use for non-rechargeable batteries, as they can overheat and break. 4. The chargers are not intended to charge automobile batteries. 5. Charge only LI-ION type rechargeable batteries. Other types of batteries may burst and causing injury to persons and damage. <p>Important</p> <ol style="list-style-type: none"> 1. The charger is designed for indoor use only. Do not expose it to rain or snow. 2. Misuse other types of batteries may burst causing personal injury and damage. 3. Do not incinerate, disassemble or short circuit batteries. 4. If the performance of the batteries decrease substantially, it is time to replace the batteries. 5. Store the charger in a cool and dry place when not in use. 6. Disconnect the supply before making or breaking the connections to the battery; <p>WARNING: Explosive gases. Prevent flames and sparks. Provide adequate ventilation during charging.</p> <ol style="list-style-type: none"> 7. During charging, the battery must be placed in a Well Ventilated area. 8. Keep electrical appliances out of reach from Children or infirm persons. Do not let them use the appliances without supervision. 9. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance. 10. The outlet jack of this battery charger is corrected connected to the intended used appliance. 11. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard. <p style="text-align: center;">2</p>	<p>- This product must not be disposed together with the domestic waste. This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.</p> <p>- By collecting and recycling waste, you help save natural resources, and make sure the product is disposed in an environmental friendly and healthy way.</p> <p>- 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 involve.</p> <p>- Children shall not play with the appliance.</p> <p>- Cleaning and user maintenance shall not be made by children without supervision.</p> <hr style="border-top: 1px dashed black;"/> <p>Anweisung zum Aufladen</p> <ol style="list-style-type: none"> 1. Das Gerät sollte direkt an eine Spannungsversorgung angeschlossen werden, es sollte niemals ein Verlängerungskabel benutzt werden. 2. Legen Sie die Batterien nicht falsch ein. 3. Laden Sie keine nicht-wiederaufladbare Batterie auf, da diese überhitzen und aufbrechen können. 4. Das Gerät darf keine Fahrzeugbatterien aufladen. <p>Wichtig</p> <ol style="list-style-type: none"> 1. Das Gerät ist nur für den Gebrauch in Innenräumen bestimmt, es sollte niemals Regen ausgesetzt werden. 2. Andere Typen von Batterien könnten explodieren, dies könnte zu Verletzungen bei Personen und zu Sachbeschädigungen führen. 3. Die Batterien dürfen niemals verbrannt, auseinandergebaut und kurz angeschlossen werden. 4. Wenn sich die Leistung der Batterien wesentlich verringert, ist es die Zeit, die Batterien zu ersetzen. 5. Bewahren Sie das Ladegerät an einem kühlen und trockenen Ort auf, wenn es nicht benötigt wird. 6. Trennen Sie das Gerät vom Netz, bevor Sie die Batterien ins Gerät setzen oder aus dem Gerät entfernen. <p style="text-align: center;">3</p>
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3、主体盒 Individual box



Kraft box(Maroon)

4、主体箱 Carton box



5、包装方式 Packing way

	长 Length	宽 Width	高 Height
尺寸 Size (cm)	44.5cm	28.5cm	30cm
公差 Tolerance	±5mm	±5mm	±5mm
数量 QTY(pcs)	20		
毛重 G.W.(Kg)			