

SPECIFICATION FOR APPROVAL**客户承认书**

客户编码 Customer ID: 000001

景荣料号 KRECO P/N No. : KRE-TLBC80

日期 Date: 2023-6-21

设计流水/订单号 Design/PO No. : 230315-000001-860773-1



景荣企业有限公司
中山市景荣电子有限公司

KINGRONG ENTERPRISE LTD. (Since 2008)

ZHONGSHAN KINGRONG ELECTRONICS CO., LTD.

样品承认书**SPECIFICATION FOR APPROVAL**

DESCRIPTION / 产品名称 : 80W Ternary lithium charger

CUSTOMER ID / 客户代码 : 000001

CP.N. / 客户料号 :

Address: 9F, Block 2, Bldg 6, Meicheng Creative Industrial Zone, Mingcheng
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ISO9001:2008



LISTED



日本株式会社



KRECO LTD
intelligent power solutions

Approved by:

罗颖澎

Checked by:

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Prepared by:

陈梓健

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1. 电气规格/Electrical Characteristics:

型号/Model		C80-V420A020
适用电池类型/Matched Battery Type		锂电池/Lithium-Ion Battery
充电方式/Charging Mode		CC/CV
散热方式/Heat Sinking Method		无风扇设计, 自然风冷 Fanless Design, Cooling by Free Air Convection
输入 Input	电压范围/Range of Input Voltage	90~264VAC
	频率范围/Range of Input Frequency	47-63Hz
	功率因数/Power Factor	/
	效率/Efficiency	88% min.@100VAC,90% min.@230VAC
	最大电流/Input AC Current	1.8A/110VAC, 1.2A/230VAC
	浪涌电流/Inrush current	60A@Cold Start 冷启动
输出 Output	额定电压/Rated Voltage	42.0V
	额定电流/Rated Current	2.0A
	额定功率/Rated Power	84.0W
	电压精度/Voltage Precision	±0.3V
	线性调整率/Line Regulation	1%
	负载调整率/Load Regulation	5%
	动态负载调整率/Dynamic Load	当输出电流变化以 0.5A/us 斜率从 25%到 70%再返回到 25%负载且动态响应时间为 20ms 时, 电源输出电压应保持在 5%的范围内。The power supply should keep the output voltage within 5% , when the output current changes from 25% to 70% load and back to 25% load and 0.5A/us slew rate and transient time with 20ms.
	容性负载测试/Capacitive Load Test	100/230Vac 负载为满载且并联 2200uF 电容, 电源先上电再接负载, 或先接好负载再上电, 两种情况下输出电压波形必须是单调上升的, 不能有上下振荡。100/230Vac, Full load, parallel connected with 2200uF capacitor. One way is that power on and connect the load, and the other way is that connect the load firstly and then power on. The output voltage wave by the two ways must be ascending directly without surge up and down.
	转灯电流 /Maximum Current for Fully Charged LED Indicator	≤15%*Rated Current/额定电流。
	纹波与噪音/Ripple and Noise	≤500mV
	空载功耗/Standby Power	≤1.0W
	启动时间/Turn on Time	< 5S/100VAC (满载时 Full Load)。
	上升时间/Rise Time	< 30ms

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	通信协议/Communication Protocol	/
保护 Protection	短路 /Short Circuit	电源/电池正确连接后, 可恢复正常工作。The power / battery is properly connected.
	过流/过载/欠压/Over Current /Over Load /Under voltage	异常条件解除后, 可恢复正常工作。After the abnormal conditions are lifted, the normal operation can be resumed.
	过压保护/Over Voltage	输出电压超过额定电压的 1.15-1.25 倍时, 电源将被保护, 异常条件解除后, 可恢复正常工作。When the output voltage exceeds 1.15-1.25 times of the rated voltage, the power supply will be protected and normal operation after abnormal conditions are lifted.
	过温度/Over Temperature	当环境温度超过 45°C 时, 输出降为一半电流。温度下降后可自行恢复。The output current will be 50%*maximum current, when the environment temperature is higher than 45°C. The charger will be self-recovery and works well when the fault condition is removed.
环境 Environment	工作温度/Operating Temperature	-25°C~+40°C
	工作湿度/ Operating Humidity	10~95%RH, 无冷凝。10~95%RH, no condensation.
	跌落测试/Drop Tests	1 角, 3 棱, 6 面, 跌落高度: 1 米各 1 次, 跌落到水泥面上, 插脚可以弯曲, 外壳可以有刮伤, 但外观不能有结构性损毁, 能正常工作 1 Corner, 3 Edges, 6 Surfaces, Height: 100cm, On the cement plane, the plug can be bend, and scratch, but the structure should not be damaged, and can work normally.
	储存温度、湿度/Storage Temperature、Humidity	-40°C~+80°C, 10~95%RH
	工作海拔高度/ Operating Altitude	2000m
	储存海拔高度/Non-Operating Altitude	10000m
	工作振动/Operating Vibration	振动:1.0G(振幅), 5~20~500Hz(频率), 每个方向各 30 分钟(X,Y,Z). Vibration:1.0G(Amplitude), 5~20~500Hz(Frequency), 30Minutes per cycle for each axis(X,Y,Z).
	储存振动/Non-Operating Vibration	电源装配及包装设计, 均要能承受正常的运输振动, 并符号 MIL-STD-810D 标准中第 514 条和程序 X。The power supply shall be designed to withstand normal transportation vibration per MIL-STD-810D, method 514 and procedures X, as it is mounted in the chassis assembly and packed for shipping.
	安全规范/Safety Standards	EN60335,UL62368



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安规和电磁兼容 Safety and EMI/EMS Standards	耐压 /Dielectric Withstand Voltage(HI-POT)	I/P-O/P:3750VAC, I/P--FG:3750VAC,
	漏电流/Leakage Current	<5mA
	绝缘阻抗/Insulation Resistance	I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH
	电磁兼容标准/Electromagnetic Compatibility(EMC) Standards	FCC Part15,Class B , EN55032
充电 LED 指示灯 2-Color LED Indicator for Charging Status	绿灯长亮/Green LED Blinking Slowly	未接电池, 充电器处于空闲状态, 等待充电 Idle, Waiting for battery connected to.
	红灯常亮/RED LED On	充电中/Charging
	绿灯常亮/GREEN LED On	充满/Fully Charged
可靠性和质量控制 Reliability and Quality Control	认证证书 approval certificate	ETL/cETL/TUV/CB/FCC/PSE/KC/KCC/SAA/RCM/CE
	平均无故障工作时间/Mean Time Between Failure(MTBF)	200,000 小时, 工作在环境温度 25°C与额定电网及负载时。 200,000 hours, operating at ambient temperature 25°C and rated grid and load
	工作寿命/Operating Life	电解电容寿命: 至少 2 years,40°C环境及 60%负载, 输入电压 230Vac/ The Capacitor life shall be at least 2 years at 40°C, 60% load and input voltage 230Vac.
	老化/Burn-In	电源应在 40°C 和 80%负载条件下老化 4 小时测试检查产品 是否正常。The power supply shall undergo burn-in for 4 hours under normal input 80% rated load at 40°C.
	外壳温升/Case Temperature Rise	≤ +70°C
其他 Others	外壳材质/Case Material	塑胶/plastic
	重量/Weight	0.38kg
	颜色/Color	黑色/Black
	尺寸/Dimensions	155.5mm*71.5mm*28mm (L*W*H)
	包装/Package	飞机盒/airplane box: 20.5*12.1*5.5CM/1 台 外箱/ carton:50*25*28.5CM 20 台/1 箱
备注 Remark	AC:国标 DC:空头	

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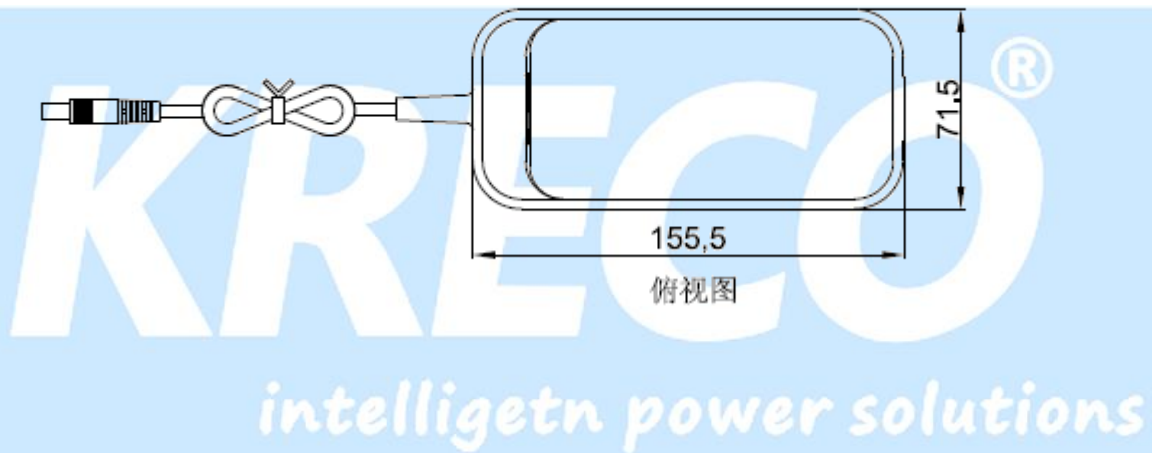
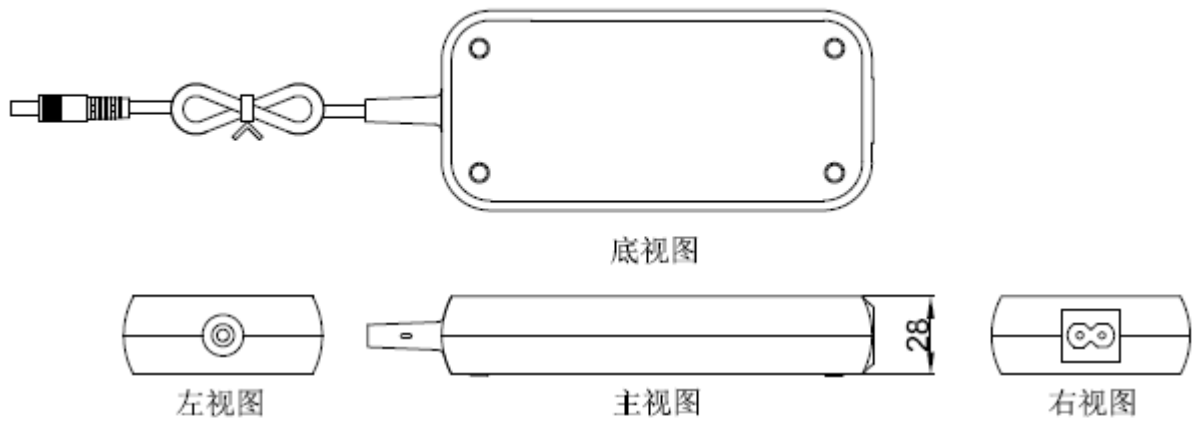
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2. 产品外观结构图/Outline Dimension Drawing



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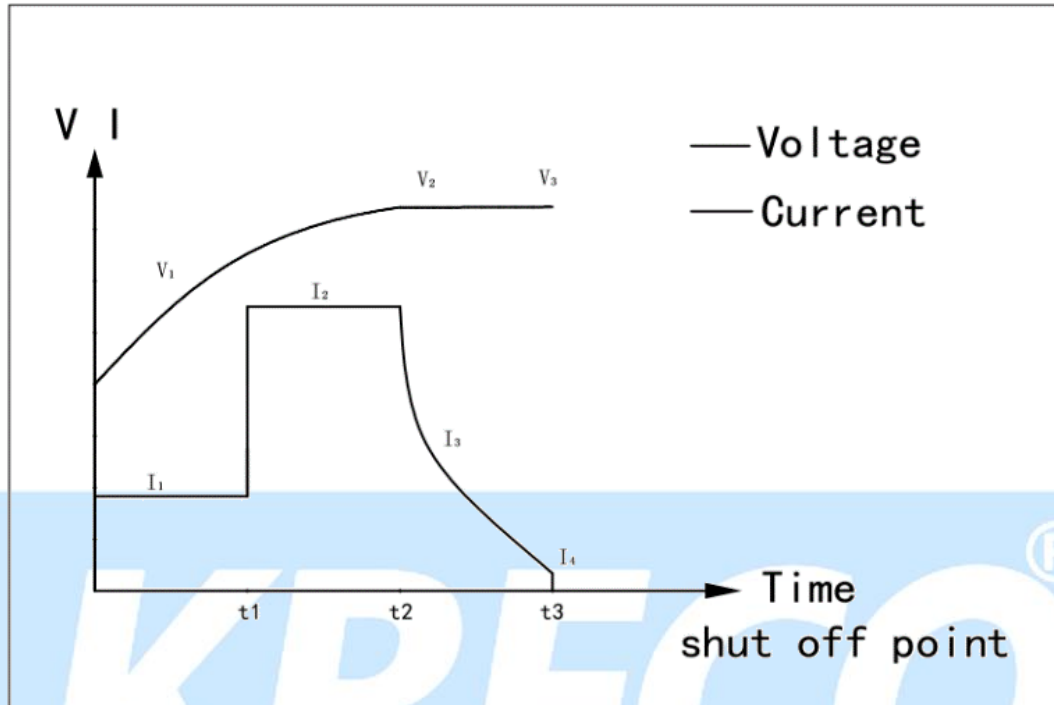
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3. 充电曲线/Charging Curve



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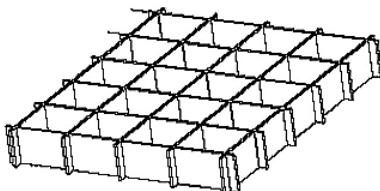
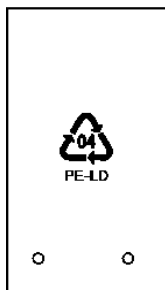
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4. Package Information /包装示意图



☒: (1) PE Bag + ☒: (2) Blade Cardboard **or** ☒: (3) Individual box



☒: (4) Outer Carton

No.	Item 名称	Spec规格	Size (cm)尺寸			Qty	G.W	CBM
			L	W	H	数量	公斤Kgs	(m3)
			长cm	宽cm	高cm	个/箱	毛重/箱	立方米
*	Unit Net Weight 产品净重						0.350	
1	PE Bag 透明袋	PE	17.5	14.5		1		
2	Blade Cardboard 刀卡	A=B						
3	Individual Box 白盒	380g/cm3				1	0.015	
4	Outer Carton 外箱	K=K	50	40	28	50	19.3	0.056
5	Pallet 托盘	Plastic	100	110	16		8	0.176
*	Marking 唛头		KRECO					
*	Part No 条形码	Code 128	As per KRECO P/N Number					
*	Serial No 序列号	Code 128	YYxxxxxx0000001					

The above packing info just for your reference only, the final is **subject to actual production**.

If you need to specify, please ask the salesman in particular.

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5. Operation Caution 操作注意事项

5.1 禁止在室外使用

Prohibited in the outdoor use

5.2 严禁在电源线的损坏的情况下使用产品，否则会导致触电，起火和产品损坏。

It is prohibited to use the product in case of power line damage, otherwise it will result in electric shock, fire damage and product.

5.3 避免在高温和强辐射场使用，置于-10~+40℃的通风处保管。

Avoid the use of high temperature and strong radiation place, keep ventilation in - 10 °C ~ + 40 °C.

6. Statement 声明

6.1 本承认书解释权归中山市景荣电子有限公司。

KRECO reserves the right to interpret this acknowledgement.

6.2 本承认书一式两份，客户一份，供应商一份，自双方确认签字之日起生效。

Two sets of specification for mutual approval. It comes into effect after the content is acknowledge.

6.3 如有更新，需由双方协商解决，另行补充。

Any revision change shall be mutually agreed by customer and provider.

7. Customer Confirmation 客户确认

Thank you for your recognition of KRECO product. Your time and every data tested have great significance and contribution. The name you signed will become a permanent witness of KRECO's future development. We KRECO people thank you!

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CUSTOMER CONFIRMATION

Modification is to update a new with new design number 修改生成新版设计号

CUSTOMER AUTHORIZED SIGNATURE/客户承认签核

Special Notes 特殊要求:

APPROVAL BY:
(Signature & seal & Date)1)
2)
3)

*Sign it means acknowledge our sample(s) performance and we production to samples. In the event of discrepancies between the sample(s) and specification, the sample(s) shall prevail. /客户确认签字, 盖章即视为确认样品性能, 以样品为准生产.



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