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產 品 確 認 書

PRODUCT FOR APPROVAL

客 戶
CUSTOMER: _____

發 行 日 期
ISSUE DATE: _____

品 名
ARTICLE: BATTERY CHARGER

規 格
SIZE: AC 100-240V / DC 14.6V 20A

標 準
STANDARD: PSE UL GS CE SAA 3C

標 準 編 號
DESCRIPTION: FY14620000

客 戶 料 號
CUSTOMER NO: _____

本 廠 型 號
OUR MODEL NO: _____

顏 色
COLOR: 黑色 BLACK

製 作 PREPARED BY	審 核 APPROVED BY	確 認 APPROVAL BY

請將產品確認書簽回本公司
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SPECIFICATION 規格

1.0 THIS SPECIFICATION SUBJECT TO APPLICATION SAFETY STANDARD : UL1012 EN60335

CONDUCTED OF EMI CISPR22 CLASS OF INSULATION B

本規格追溯至安全標準 UL1012 EN60335 電磁兼容 CISPR22 絕緣等級 B

2.0 MECHANICAL CHARACTERISTICS 機械特性：

2.1 STRAIN RELIEF TEST : EACH TERMINAL OF THE PRODUCT SHALL BE CAPABLE OF

WITHSTANDING AN AXIAL PULL OF 2 KG APPLIED GRADUALLY AND MAINTAINED FOR ,
60 SECONDS , WITHOUT LOOSENING , BREAKING OR OTHER DAMAGE .

應力測試：產品每個引線端子可以承受的軸向拉力為 2 千克，持續時間 60 秒，
無松脫，阻斷，或其它損壞現象。

2.2 DROP TEST : PRODUCTS SHALL BY DROPPED FORM A HEIGHT OF 90 CM , ONTO A DRY

WOOD SURFACE , ITS THICKNESS IS 1 CM , AFTER SHALL NO ABNORMAL CONDITION
HAPPEN , AND INSULATION TEST 10 MΩ MIN .

跌落試驗：產品自高度為 90 CM，跌落在厚度為 1 CM 松木板面后，無異常，絕緣電阻測試，最小 10M 歐姆。

2.3 CORD BENDING TEST: THE CORD SHALL WITHSTAND A WEIGHT OF 200 GM , IT SWINGS FROM

LEFT TO RIGHT AT AN ANGLE OF 120 DEGREE (TOTAL) 300 TIMES , CORD BE CONDUCTIBLE

電線搖擺試驗：電線吊重 200 克，左右擺動角度 120 度，300 回合后仍須導通。

3.0 GENERAL APPEARANCE : THE GENERAL APPEARANCE OF THE PRODUCT SHALL BY ACCEPTABLE

WITHOUT DEFORMATION ,CRACKS OR CORROSION .

外觀：產品一般外觀為，摺受沒有變形，裂縫和鏽蝕。

4.0 INPUT VOLTAGE 輸入電壓：

PLUG	MINIMUM	NORMAL	MAXIMUM
	100VAC 50/60Hz	120VAC 50/60Hz	264VAC 50/60Hz

4.1 OUTPUT VOLTAGE 輸出電壓：

PLUG	CHARGING CHARACTERISTICS	RATING
<p>狀態指示燈 紅 RED 綠 GREEN</p> <p>VOLTAGE</p> <p>20A 15A 10A 5A 2A 0.1A 0A</p> <p>CHARGING MODE CURRENT FULL MODE</p>	14.6V	1. CHARGING VOLTAGE MAX. 最高充電電壓 :14.6±0.1VDC
	14V	2. CHARGING HOLD VOLTAGE 充電保持電壓 :14.6±0.1VDC
	12.8V	3. CHARGING VOLTAGE MIN. 最低充電電壓 : 8VDC
	8V	4. CHARGING CURRENT 充電電流 :20A±2A
		5. LOADING 負載:3.65VX4S LiFePO4 BATTERY
		6.WHEN CHARGING CURRENT ≤ 2A, THE LED LIGHT TURN TO GREEN. 綠色狀態發光二極管點亮充電電流 ≤2A.
		7.WHEN A SINGLE COMPONENT FAILS, THE CHARGING VOLTAGE <15.7V. 單一零件故障時，充電電壓小於 15.7V.

4.2. INPUT CURRENT 輸入電流：

NO LOAD	AC 100V 50/60Hz	AC 120V 50/60Hz	AC 264V 50/60Hz
		50mA Max	
LOADING		5A Max	

4.3 INPUT POWER :NO LOAD 0.5 W MAX , AT INPUT 100-240 VAC 50/60 Hz .
LOADING 350 W MAX , AT RATED OUTPUT .

輸入功率：空載 0.5 W 最大，在輸入電壓 100-240 VAC 50/60 Hz.
負載(I L) 350 W 最大

4.4 EFFICIENCY 效率： 92 % MIN. AT RATED INPUT AND OUTPUT

4.5 TEMPERATURE 溫升： CASE 75 °C MAX . FOR RATED OUTPUT

4.6 INSULATION RESISTANCE 絕緣電阻： 500 VDC 10 MΩ MIN .

4.7 DIELECTRIC WITHSTAND TEST： 5mA 3000 VAC FOR 2 SECOND BETWEEN INPUT AND OUTPUT
INPUT AND CASE, AT AN ALTERNATIVE POTENTIALS 5% HIGHER MAY BE APPLIED FOR 1 SECOND .

耐壓測試： 5mA 3000 VAC 時間 1 分鐘，在輸入和輸出，輸入和外殼之間，時間 1 分鐘，
在選擇提高耐壓 5% 時，應用時間為 1 秒。

4.8 INRUSH CURRENT 沖擊電流: PEAK INRUSH CURRENT SHALL BE LIMITED 15A FOR A COLD START

4.9 POWER FACTOR 功率因數： 0.95 MIN.

5.0 ENVIRONMENTAL環境：

5.1 OPERATING TEMPERATURE RANGE：THE OPERATING TEMPERATURE OF THE PRODUCT SHALL BE
FROM -29 °C TO +45.5 °C .

工作環境溫度範圍：-29 °C TO +45.5 °C .

5.2 STORAGE TEMPERATURE RANGE：THE STORAGE TEMPERATURE OF THE PRODUCT SHALL BE
FROM -40 °C TO +75 °C .

儲存環境溫度範圍：-40 °C TO +75 °C .

5.3 RESISTANCE TO HEAT: WHEN TESTED WITHIN 10 MINUTES AFTER PRODUCT HAS BEEN PLACED IN
A TEST CHAMBER MAINTAINED AT 105 °C ±3 °C FOR 16 HOURS , THE PRODUCT SHALL COMPLY
WITH THE REQUIREMENTS OF 4.7 , DIELECTRIC WITHSTAND TEST , SHALL HAVE INSULATION
RESISTANCES NOT LESS THAN STATED BELOW AS MEASURED AT 500VDC 10 MEGOHMS MINIMUM
BETWEEN THE INPUT AND THE OUTPUT, INPUT AND CASE TOGETHER , 10 MEGOHMS MINIMUM .

耐熱：經測試后的產品，放置在 105 °C ±3 °C 高溫箱內，經過16小時后，進行測試，產品必須符合 4.7項耐壓
測試要求，絕緣電阻：500VDC不少於 10 M 歐姆，在輸入和輸出，輸入和外殼之間。

5.4 RESISTANCE TO MOISTURE : THE PRODUCT SHALL BY PLACED IN A TEST CHAMBER MAINTAINED AT 40 °C ±2 °C AT 90% ~ 95% RELATIVE HUMIDITY FOR 6 HOURS . THEN , WHEN TESTING 10 MINUTES SAFTER THE PRODUCT IS TAKEN OUT FROM THE TEST CHAMBER AND WIPED DRY , THE PRODUCT SHALL COMPLY WITH THE REQUIREMENTS OF 4.7 , DIELECTRIC WITHSTAND TEST , AND SHALL HAVE INSULATION RESISTANCE NOTLESS THAN STATED BELOW AS MEASURED AT 500VDC 10 MEGOHMS MINIMUM BETWEEN THE INPUT AND THE OUTPUT TOGETHER ; 10 MEGOHMS MINIMUM BETWEEN A SECONDRY THER SECONDRY AND TOGETHER

耐濕性: 在環境溫度為 40 °C ± 2 °C 相對濕度為 90% ~ 95% 條件下放置 6 小時,取出 10 分鐘后進行測試, 產品需滿足 4.7項耐壓要求, 絕緣電阻:輸入對輸出, 在500VDC 條件下, 最小 10M歐姆.

6.0 RELIABILITY:THEVDESIGN AND CONSTRUCTION OF THIS PRODUCT EXHIBIT A MINIMUM MEAN TIME BETWEEN FAILURE OF 30000 HOURS FULL RATED LOAD OPERATION AT 25 °C .

可靠性: 額定全負載, 操作溫度 25 °C . 產品壽命在 30000 小時內 .

7.0 PROTECTION 保護 :

7.1THE PRODCT INCLUDES CURRENT FUSE TYPE 250V 10A LOCATED WITHIN INPUT CIRCUIT.

電流保護: 產品內置一個電流保險絲, 類型為 250V 10A , 固定在輸入回路中 .

7.2 SHORT CIRCUIT: CAPABLE OF WITHSTANDING CONTINUOUS SHORT CIRCUIT AND RECOVER AUTOMATICALLY

短路保護: 具有耐持續短路和自動恢復能力.

8.0 INSPECTION 檢查 :

8.1 100% INSPECTION ITEMS : THE ITEMS OF 100% INSPECTION SHALL BE : NO-LOAD VOLTAGE ;LOAD VOLTAGE ; RIPPLE VOLTAGE; INPUT CURRENT ; DIELECTRIC WITHSTAND TEST; AND GENERAL APPEARANCE .

100%檢查項目: 空載電壓, 負載電壓, 紋波電壓, 輸入電流, 耐壓測試和普通外觀檢查.

8.2 THE SAMPLING INSPECTION ITEMS :THE ITEMS OF SAMPLING INSPECTION SHALL IN ADDITION TO THE 100% INSPECTION ITEMS , INCLUDE : INSULATION RESISTANCE ; AND AUDIBLE SOUND CHECK .

抽樣檢查除100%檢查項目外, 還包括絕緣電阻和听得見的聲音檢查 .

8.3 THE SAMPLING INSPECTION DATA ACCORDING TO 8.2 AND 100% DIELECTRIC WITHSTAND TEST DATA SHALL BE SUBMITTED FOR EACH LOT .

遞交每批抽樣檢查報告和100%耐壓測試報告 .

8.4 THE SAMPLING INSPECTION ITEMS LEVEL : MIL-STD-105E II AQL : CRI 0 ; MAJ 0.25 ; MIN 2.5

抽樣檢查項目水平 : MIL-STD-105E 致命缺點 0 , 主要缺點 0.25 , 次要缺點 2.5 .

MECHANICAL DIMENSIONS

UNIT:MM

