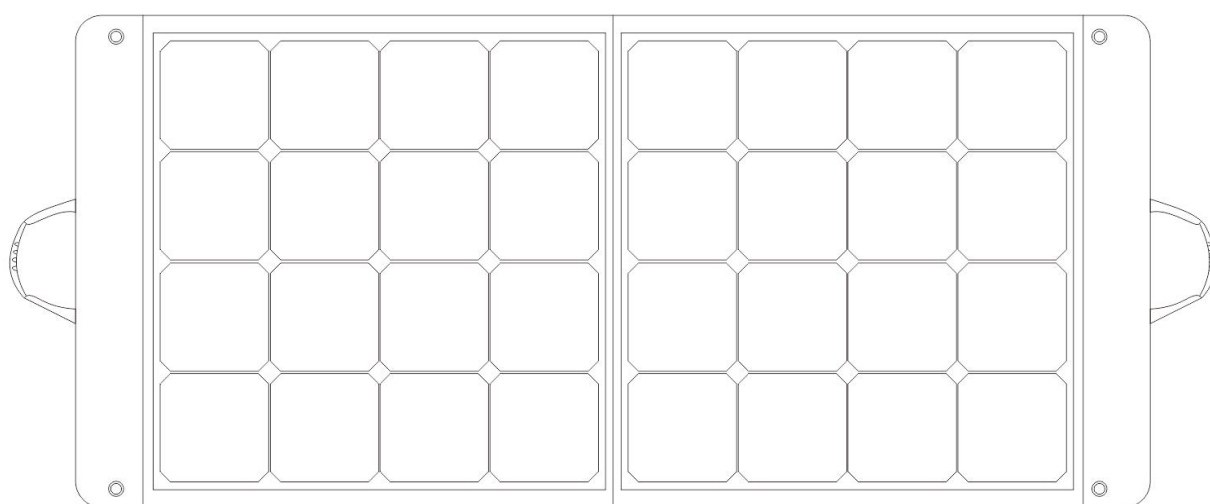


50W太阳能板产品规格书

50W Solar panel Technical Specification



太阳能板规格 Solar panel specifications

Item: MD-H50

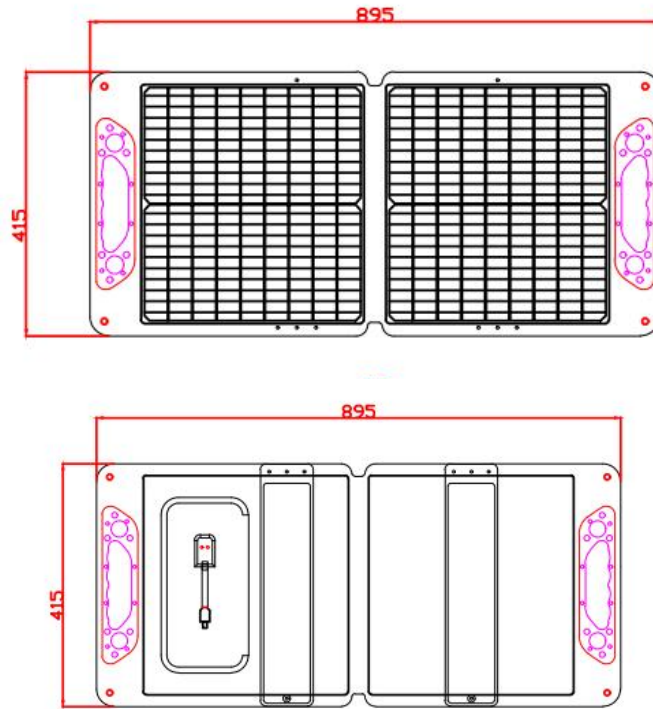
Voltage:18V

Power:50W

Dimension: 895*415MM

1. 尺寸规格 Dimensions

1.1、 组件尺寸规格图纸 Component size specification drawing

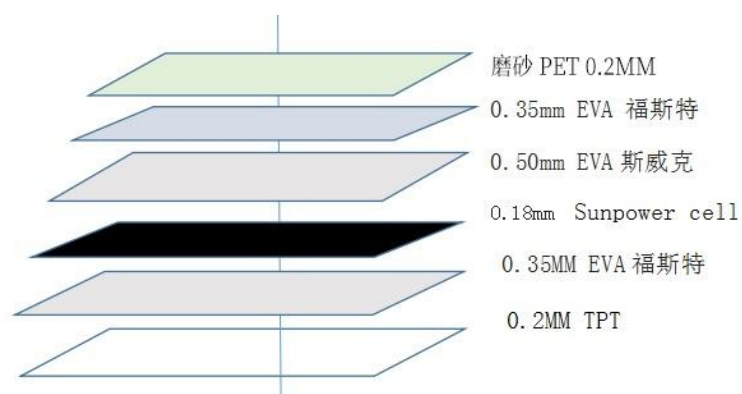


1.2 组件实物图 Component physical map



图 1 展开 (Figure 1 Expand)

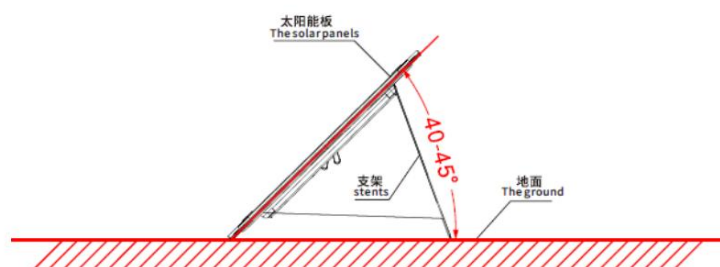
1.3、组件分解图 Component exploded view



1.5、外观 Exterior



太阳能板支撑角度示意图
Schematic diagram of solar panel support Angle



太阳能板与地面之间形成的角度需控制在40°-45°之间。
The Angle between the solar panel and the ground
needs to be controlled between 40 and 45°

主要参数 General Specification:



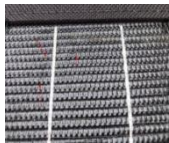
产品型号 Product Model NO.	PETC-H50	
峰值功率 Peak Power	50W(25W*2)	
公差 Tolerance	±10%	
太阳能电池片类型 Cell Type	SUNPOWER (125*125mm)	
转化效率 Conversion efficiency	23%	
最大工作电压最大工作电压 Vmp	DC 16V~18V	USB-A 4.75-5.5V
最大工作电流 Imp	2.52A	0~2A
开路电压 Voc	18~21.6V	
短路电流 Isc	DC:2.67A	USB-A: 2.3~2.5A
最大系统电压 Maximum System Voltage	1000V	
输出接口 Output Port	DC	USB-A
工作温度 Working temperature	-10℃~65℃	
储存环境温度 storage ambient temperature	-10℃~65℃	
最大功率温度系数 Maximum power temperature Coefficient	-0.45%/℃	
开路电压温度系数 Open circuit voltage temperature coefficient	-0.35%/℃	
短路电流温度系数 Temperature coefficient of short circuit current	+0.05%/℃	
透光率 Total transmittance	97%	
水分渗透 Moisture permeability	40℃/90%RH g/M ² .Day	
吸水率 Water absorption rate	2.5%(24H)	
测试标准条件 Test standard conditions	Am1.5 25℃ 1000W/m ²	
折叠尺寸 Folded Size	447.5*415MM	
展开尺寸 Unfolded Size	895*415MM	
净重 Net Weight	2.26KG	
备注 Remarks	Testing environment (STC)测试环境: Spectral energy 光谱能量: 1KW/m ² . Air pressure 气压 AM=1.5 The light conditions are 38000W Lux (Lighting unit) Electronic load test.光照条件为 38000W Lux 电 子负载测试	

3. 外观标准 Appearance standard

3.1. 外观检验 Visual inspection

(备注: 若是客户定制品, 产品丝印及标贴内容须按客户要求, 参见订单评审表及包装图纸资料)

(Remarks: If the product is customized by the customer, the content of the product silk screen and label must be in accordance with the customer's requirements, please refer to the order review form and packaging drawings)

类别 category	图示及状态描述 Icon and status description	判定标准 judgement standard	产品不合格分类 Product unqualified classification
清洁度 Cleanliness	NA	组件表面不允许存在任何可见的EVA、硅胶、胶带等异物的残留。 No visible residues of EVA, silicone, tape, etc. are allowed on the surface of the module.	MI
电池片的片/串间距 Cell/string spacing	NA	$2\text{mm} \pm 0.5\text{mm}$	MI
电池片距边框距离 Distance between cell and frame	NA	每一片电池片距边框的距离应均匀、美观, 无大小边, 尺寸应符合设计规格书要求。同时, 电池片不被边框遮挡。 The distance between each cell and the frame should be uniform and beautiful, without large or small edges, and the size should meet the requirements of the design specification. At the same time, the cell is not blocked by the frame.	MI
电池片的色差 (阴阳色) Chromatic aberration of cell (Yin and yang color)		太阳能板允许有两种色阶存在同一组件上, 需为相邻色阶; 组件存在色差时, 电池颜色应呈过渡状, 且1米处目视颜色差异不明显。 Solar panels are allowed to have two color scales on the same module, and they must be adjacent color scales; when the modules have color differences, the color of the battery should be transitional, and the visual color difference at 1 meter is not obvious.	MI
可视裂纹 Visible crack		不允许存在。 Not allowed to exist.	MA
划痕 Scratches		长度 $\leq 20\text{mm}$, 深度未露基材, 单片电池允许2条, 同一组件最多允许2片电池存在此类缺陷。 The length is $\leq 20\text{mm}$, and the depth does not expose the base material. Two single-cell batteries are allowed. A maximum of two batteries in the same component are allowed to have such defects.	MI
异物 foreign body		表面不可以有异物。 There must be no foreign objects on the surface.	MA
黑点 Black spot		允许单个黑点面积 $\leq 3\text{mm}^2$, 每片组件最多存在2处黑点。 The area of a single black spot is allowed to be $\leq 3\text{mm}^2$, and each module has at most 2 black spots.	MI
凹痕 dent		凹坑深度 $\leq 0.2\text{mm}$, 面积 $\leq 3\text{mm}^2$, 数量不超过3处。 The pit depth is less than or equal to 0.2mm , the area is less than or equal to 3mm^2 , and the number does not exceed 3.	MI

凹坑（有损伤） Pits (damaged)		带有明显损伤痕迹的凹坑不可以接受。无任何损伤的情况下按凹痕的要求判定。 Dimples with obvious signs of damage are not acceptable. If there is no damage, it is judged according to the requirements of the dent.	MI
异色（反光下目视可见，正面目视不可见，亦称为云朵） Heterochromatic (visible under reflection, invisible from front view, also known as cloud)		允许单个异色面积 $\leq 10\text{mm}^2$ ，数量 ≤ 5 个/板，纤维状异物任何方向长度 $\leq 30\text{mm}$ ，数量 ≤ 5 个/板，导电性异物不可与内部有源器件搭接。 Allow single heterochromatic area $\leq 10\text{mm}^2$, quantity $\leq 5\text{pcs/board}$, fibrous foreign body length $\leq 30\text{mm}$ in any direction, quantity $\leq 5\text{pcs/board}$, conductive foreign bodies cannot overlap with internal active devices.	MI
元件/零部件脱落或松动 Components/parts fall off or become loose		不允许存在元件/零部件脱落或松动的现象。 No falling off or loosening of components/parts is allowed.	MA
拆线后留下的针孔 Pinholes left after stitch removal		不允许存在 Not allowed to exist	MA
条形码 Bar code	NA	打印内容正确，字迹清晰，无断帧，能正常扫描且条形码序列号无重复，不被电池片遮挡。 The printed content is correct, the handwriting is clear, there is no broken frame, it can be scanned normally and the barcode serial number is not repeated, and it is not blocked by the battery.	MA
铭牌 Nameplate	NA	标签字体内容清晰，电性能参数值符合要求；标签内容与实物一致；位置居中无明显倾斜，无气泡、褶皱、刮痕。 The label font content is clear, and the electrical performance parameter values meet the requirements; the label content is consistent with the actual product; the position is centered without obvious tilt, no bubbles, wrinkles, or scratches.	MA
包装 Package	NA	包材无发霉、开裂、破损、脏污等现象。纸箱不可移位，须平均、对称放置在托盘内。打包带符合位置要求，无翻转、歪斜、断裂。外箱标识与实物相符且一致。 The packaging material is free from mildew, cracking, damage, or dirt. The cartons cannot be moved and must be placed evenly and symmetrically in the pallet. The packing belt conforms to the position requirements, without turning, skewing, or breaking. The label of the outer box is consistent and consistent with the actual product.	MA

3.2 说明 instruction

3.2.1 对单个组件而言，最终判定以最严重的缺陷种类为准。

3.2.1 For a single component, the final judgment is based on the most serious defect type.

3.2.2 失效面积以单片电池中出现的各种类型缺陷的累计失效面积为准。

3.2.2 The failure area is based on the cumulative failure area of various types of defects in a single cell.

3.2.3 I-V曲线平滑、无台阶、功率满足公差要求。所有产品均无安全隐患。

3.2.3 The I-V curve is smooth, without steps, and the power meets the tolerance requirements. All products have no safety hazards.

3.3 包装检验 Packaging Inspection

3.3.1 包装箱：完好，物料无损

3.3.1 Packing box: intact, no damage to materials

3.3.2 包装标签：外箱标签上有写明：厂家、物料名称、物料编码、来料数量、生产日期

3.3.2 Packing label: The label on the outer box has: manufacturer, material name, material code, quantity of incoming materials, production date

3.3.3 出厂检验合格标识：有 QC 印章或出厂检验报告

3.3.3 Factory inspection qualified mark: with QC seal or factory inspection report

3.4 外观尺寸检验 Appearance size inspection

3.3.1 后面接线处不能有铜带漏出；不允许有布料穿孔现象。

3.3.1 There should be no leakage of copper tape at the rear wiring; no perforation of the fabric is allowed.

3.3.2 电池片不能有明显色差。

3.3.2 The cell shall not have obvious color difference.

3.3.3 电池板表面无污迹及刮痕，层压透明度高，不可有脱层现象，切边须平整无毛边，电池板整体无开裂，需平整，电池片排列整齐及无明显的损伤，上下边缘间距均匀。

3.3.3 The surface of the battery panel is free of stains and scratches, the laminating transparency is high, there must be no delamination, the trimming must be smooth and free of burrs, the battery panel should be flat without cracking, and the battery sheets should be arranged neatly and without obvious damage. The upper and lower edges are evenly spaced.

3.3.4 焊点光滑度好，无拉尖及虚焊。

3.3.4 The smoothness of the solder joints is good, and there is no tipping and false soldering.

3.3.5 正负极引出线要正确、牢固。

3.3.5 The positive and negative lead wires must be correct and firm.

3.3.6 太阳能板无明显变形。

3.3.6 The solar panel has no obvious deformation.

4. 材料及生产 **Materials and production**

- (1) SUNPOWER规格: 125*125mm 转换效率22.5%~23%
- (1) SUNPOWER specifications: 125*125mm conversion efficiency 22.5%~23%
- (2) 布料材质: 雪尼尔舞龙皮膜
- (3) Fabric material: Chenille dragon film
- (3) 拉链要求: 哑光拉链 (颜色跟布料接近)
- (3) Zipper requirements: matte zipper (color close to fabric)
- (4) 封装方式: ETFE/PET层压
- (4) Packaging method: ETFE/PET laminated
- (5) 特殊要求: 所有材料选用环保材料
- (5) Special requirements: environmentally friendly materials are selected for all materials

5. 质保期 **Warranty**

质保期: 1 年(正常使用和存储情况下)。

Warranty period: 1 year (under normal use and storage conditions).

6. 存放及使用环境条件 **Environmental conditions for storage and use:**

- 1) 储存条件: 常温, 湿度不大于60%;
- 1) Storage conditions: normal temperature, humidity not more than 60%;
- 2) 阳光下无遮挡之户外环境使用;
- 2) Use in an unobstructed outdoor environment under the sun;
- 3) 工作环境温度: $-10^{\circ}\text{C}\sim 65^{\circ}\text{C}$;
- 3) Working environment temperature: $-10^{\circ}\text{C}\sim 65^{\circ}\text{C}$;

7. 运输、使用及存放环境条件注意事项 **Precautions for environmental conditions of transportation, use and storage:**

- 1) 本产品不能与强腐蚀性物质接触;
- 1) This product should not be in contact with strong corrosive substances;
- 2) 使用过程中避免硬物撞击、刮伤表面;
- 2) Avoid hard objects hitting and scratching the surface during use;
- 3) 运输和装配时不能承受弯曲应力;
- 3) Cannot withstand bending stress during transportation and assembly;
- 4) 使用和存放温度条件需在 $-10^{\circ}\text{C}\sim 65^{\circ}\text{C}$ 。
- 4) The use and storage temperature conditions should be between -10°C and 65°C .

8. 注意事项 **Precautions**

- 1) 本产品不能与强腐蚀性物质接触
- 1) This product should not be in contact with strong corrosive substances
- 2) 在操作过程中，避免硬物划伤表面
- 2) During operation, avoid hard objects scratching the surface
- 3) 在组装过程、运输过程和使用过程中，不能弯折本产品
- 3) Do not bend this product during assembly, transportation and use