



Flexible GaAs Solar Cells

柔性 GaAs 太阳电池 | High efficiency | Ultra-thin | Lightweight

1 Product Overview / 产品定位

Lightweight power solutions for constrained spaces / 面向轻量化与受限空间供电场景

Flexible GaAs solar cells use an ultra-thin structure to deliver high photoelectric conversion at low mass density.

柔性 GaAs 太阳电池采用超薄结构设计，在较低质量密度下提供高效光电转换表现。

>34%

AM1.5G efficiency / 光电转换效率

Product family data / 系列参数

<30 μm

Cell thickness / 电池厚度

Product family data / 系列参数

200 g/m²

Mass density / 质量密度

Product family data / 系列参数

2 Product Family / 产品系列

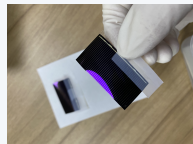
AM1.5G spectrum / AM1.5G 光谱条件

Standard Cell / 标准芯片

40 × 20 mm

270 mW

Rated power Pmax / 额定功率



Micro-energy Cell / 微能源芯片

10 × 10 mm

33 mW

Rated power Pmax / 额定功率

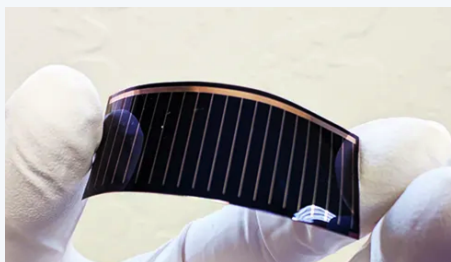


AM1.5G product-family information. Final delivery specifications are subject to the confirmed order and product specification.

说明：本页参数为 AM1.5G 光谱条件下的系列信息；具体交付规格以确认订单及最终产品规格书为准。

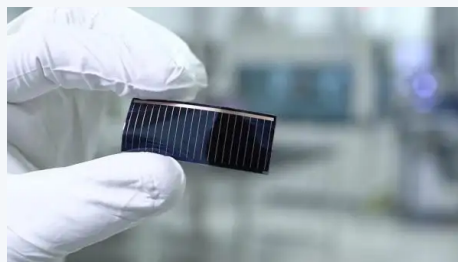
1 Flexible Cell Form / 超薄柔性电池

Physical form and conformability / 实物形态与曲面适配展示



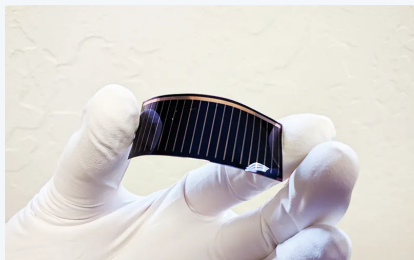
Flexible Bending / 柔性弯折

Single-cell form / 单片电池弯曲实物展示



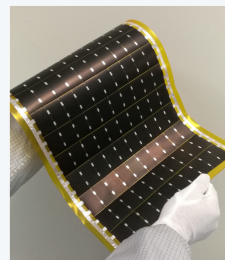
Lightweight Form / 轻薄形态

Hand-held appearance / 手持实物外观



Conformal Form / 曲面贴合

Curved cell appearance / 柔性电池弯曲外观



Flexible Module / 柔性组件

Large-area flexible form / 大面积组件实物形态

Photographs illustrate form and appearance only. Bend radius, cycle life, packaging and installation requirements are subject to confirmed specifications.

实物图用于说明产品的柔性形态与外观特征；弯折半径、循环寿命、封装与安装要求须按确认规格执行。

Thinned Ge-Substrate Triple-Junction

减薄正置 Ge 衬底三结柔性砷化镓太阳电池

1 Product 01 / 产品 01

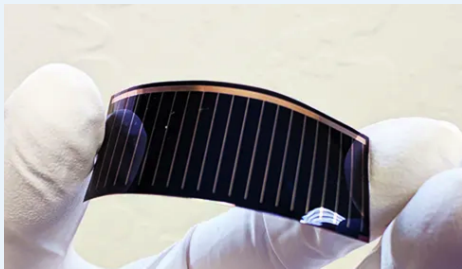
InGaP / GaAs / Ge triple-junction technology / InGaP / GaAs / Ge 三结技术体系

A lightweight flexible cell concept based on the InGaP / GaAs / Ge triple-junction GaAs technology system.

基于 InGaP / GaAs / Ge 三结砷化镓技术体系的轻量化柔性电池方案。

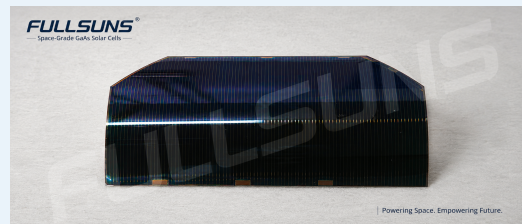
2 Product Form Comparison / 产品形态对比

Flexible cell family vs. Product 01 / 柔性芯片系列与产品 01 对比



Flexible Cell Family / 柔性芯片系列

Ultra-thin small-cell form / 超薄小尺寸芯片形态



Product 01 / 减薄正置 Ge 衬底三结

Thinned upright Ge-substrate form / 减薄正置 Ge 衬底结构

3 Key Differences / 核心差异

Architecture, product framing and specification mapping / 架构、定位与规格归属

Architecture / 产品架构

Flexible cell family / 柔性芯片系列

vs. / 对比

Thinned upright Ge-substrate
triple-junction / 减薄正置 Ge 衬底三结

Product Framing / 产品定位

Family-level flexible cells / 系列化柔性芯片

vs. / 对比

Project-oriented structure
solution / 面向项目的结构方案

Specification Mapping / 规格归属

See pages 4-5 / 见第 4-5 页

vs. / 对比

Product 01 requires a separate
confirmed specification / 产品 01 须单独确认规格

The electrical parameters on pages 4-5 apply only to the flexible cell family and do not represent Product 01.

第 4-5 页电性能参数仅对应柔性芯片系列，不代表产品 01；产品性能、鉴定与交付配置以最终确认规格为准。

1 Typical Electrical Parameters / 典型电性能参数

Selection reference / 提供规格选型参考

Item / 内容	Unit / 单位	Standard Cell / 标准芯片	Micro-energy Cell / 微能源芯片
Size / 尺寸	mm	40 × 20	10 × 10
Thickness / 厚度	μ m	<30	<30
Mass Density / 重量密度	g/m2	200	200
Efficiency Eff / 光电转换效率	%	>34	>34
Rated Power Pmax / 额定功率	mW	270	33
Open-circuit Voltage Voc / 开路电压	V	3	3
Operating Voltage Vmp / 工作电压	V	2.7	2.7
Short-circuit Current Isc / 短路电流	mA	103	12.6
Operating Current Imp / 工作电流	mA	100	12.3

Parameters on this page are for AM1.5G spectrum. Refer to the next page for AM0 requirements.

本页电性能参数对应 AM1.5G 光谱条件。AM0 条件下的最低效率、开路电压与最大功率点电压指标请参见下一页。

Note / 注: Data points not differentiated by cell type are listed as the same value.

1

Minimum Electrical Requirements / 最低电气性能要求

AM0 spectrum / AM0 光谱条件

No. / 序号	Parameter / 参数	Requirement / 指标
1	Minimum Efficiency (EI) / 最低效率	$\geq 30.5\%$
2	Open-circuit Voltage (Voc) / 开路电压	$\geq 2.97\text{ V}$
3	Maximum Power Point Voltage (Vmax) / 最大功率点电压	$\geq 2.65\text{ V}$

2

Test Conditions / 测试条件

Calculation basis / 计算口径

Test Temperature / 测试温度	$25^{\circ}\text{ C} \pm 2^{\circ}\text{ C}$
Spectrum / 光谱条件	AM0
Irradiance / 辐照度	1353 W/m2
Cell Area / 电池面积	Calculated excluding insulating adhesive / 按去除绝缘胶所占面积计算

Important: AM0 and AM1.5G spectra differ. Values on pages 4 and 5 shall be used only under their stated conditions.

重要提示: AM0 与 AM1.5G 的测试光谱不同。第四页与本页参数应按各自测试条件使用, 不应直接横向比较。

Final technical requirements and acceptance criteria are subject to the confirmed specification, drawings and purchase order.

最终技术要求与验收标准以双方确认的产品规格书、图纸及订单为准。