

云上新能源开发(杭州) 有限公司



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公司介绍

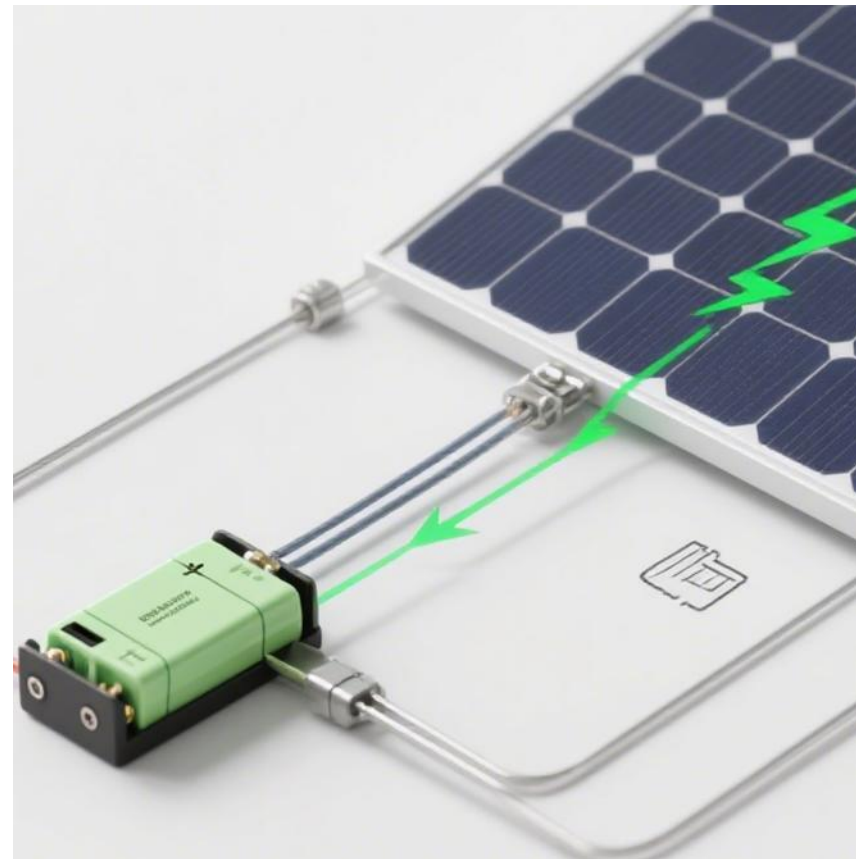


云上新能源成立于2021年，总部位于中国杭州，致力于高效光伏技术及高效光伏产品的研发、生产、销售与应用。

公司依托自主研发的分步式互联技术DSI (Dual-step Interconnection)、柔性背面电路技术FBC (Flexible Back Circuit) 及超低温热斑技术SLT (Super Low Working Temperature in Shaded Cell)，成功开发出全新高效高功率组件封装技术DFL (DSI & FBC & SLT)。

目前，公司已申请发明专利（含国际发明专利）20余项，涵盖新产品结构、新封装工艺、新电路结构、新封装材料及新型互联装备等领域，构建了完善的光伏产品新技术体系。

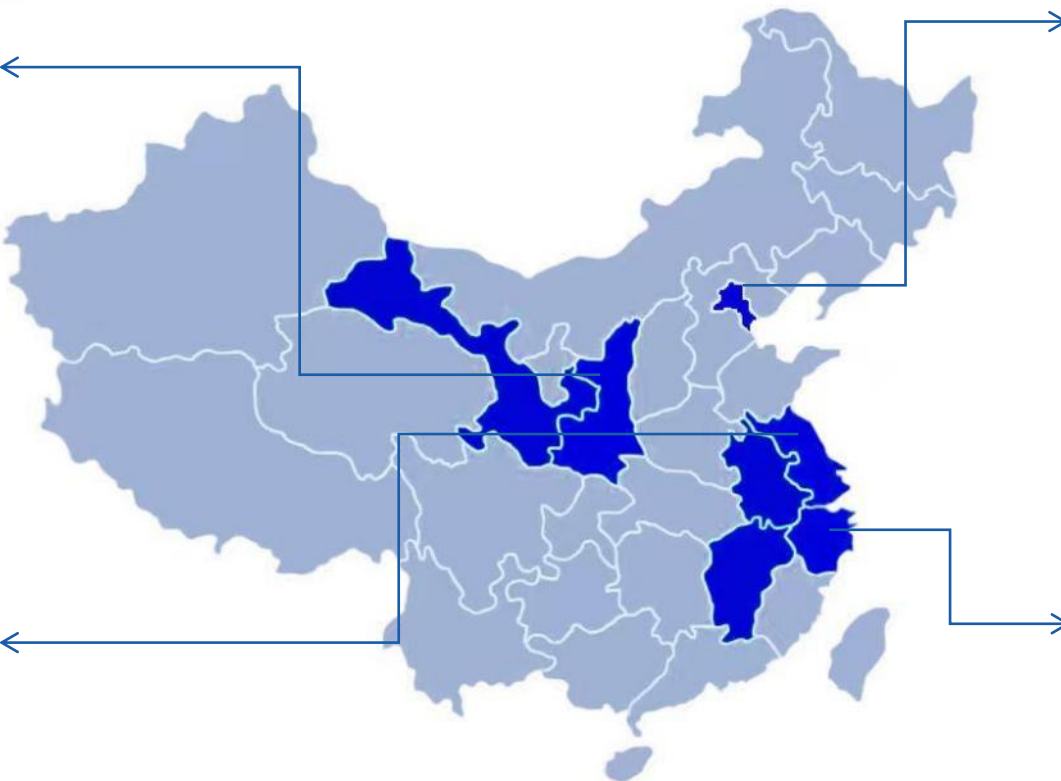
公司全新光伏组件DFL（DSI & FBC & SLT）具备高效率、高功率、高发电量及高可靠性等特点，能显著提升光伏电站发电量，同时彻底消除因光伏板局部过热引发的火灾安全隐患，适用于各类光伏应用场景。



公司区位



陕西渭南1GW示范工厂



天津装备制造基地



江苏宿迁2GW示范工厂



浙江杭州总部



PART 02

技术介绍

专利介绍

分步式互联技术

柔性背面电路技术

超低温热斑技术

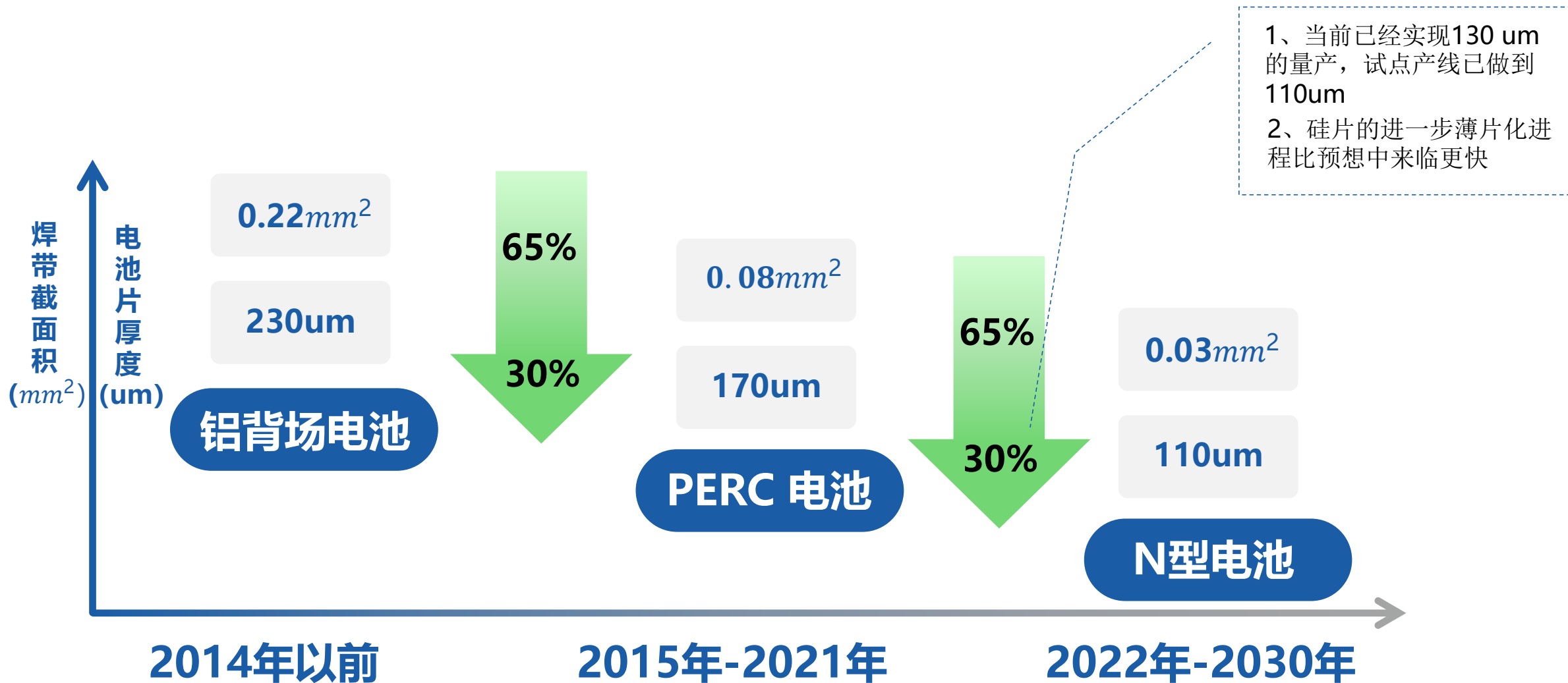
精密互联装备

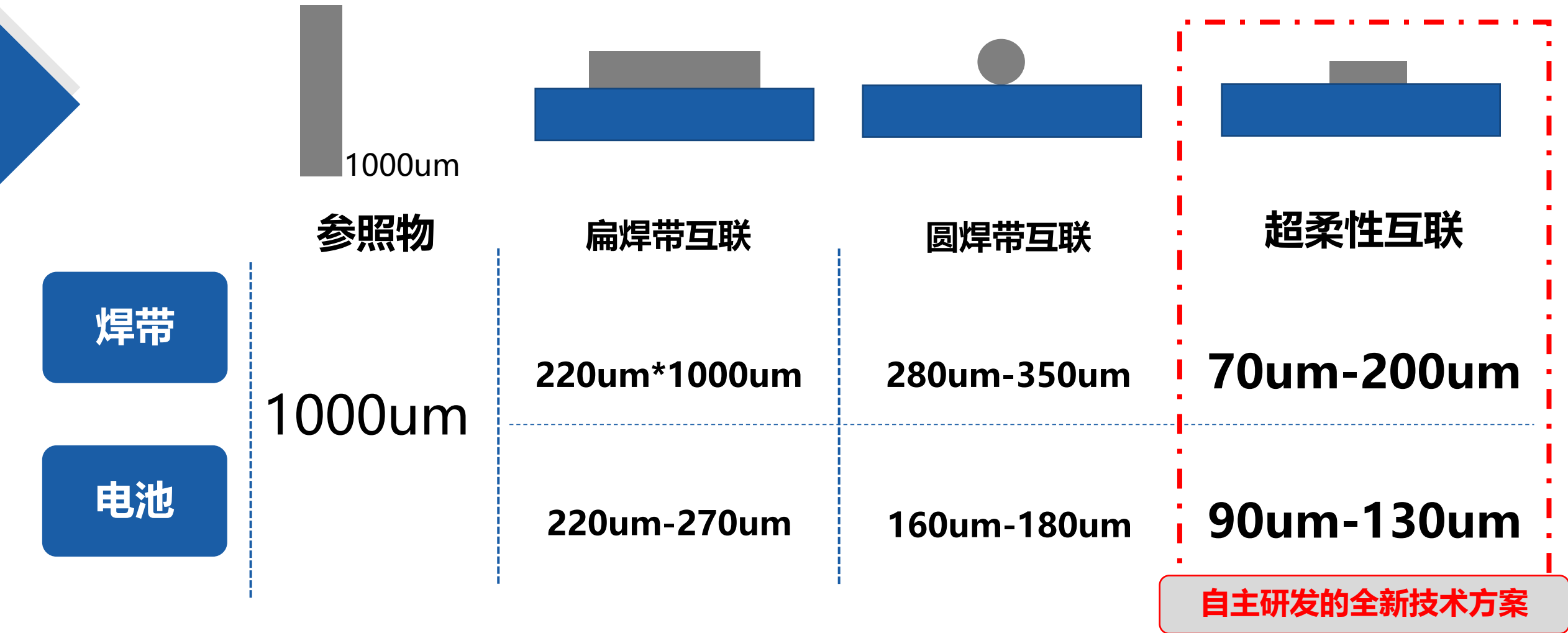


专利介绍



公司大力投入研发，专注于新技术、新工艺、新产品的研发，已经申请30多项专利，涵盖新装备、新工艺、新结构、新产品，形成了全新的第三代高效光伏组件整体解决方案。







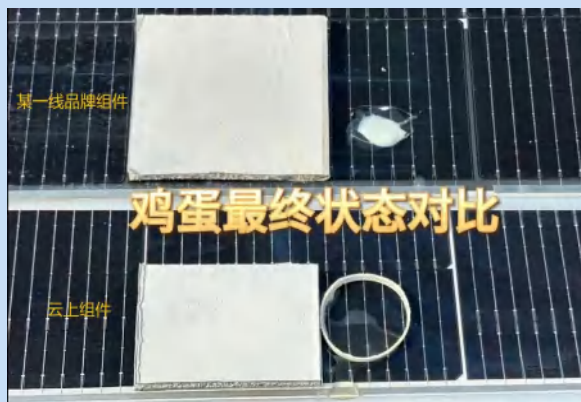
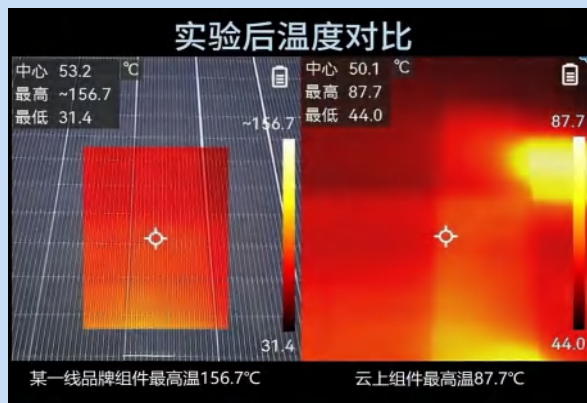
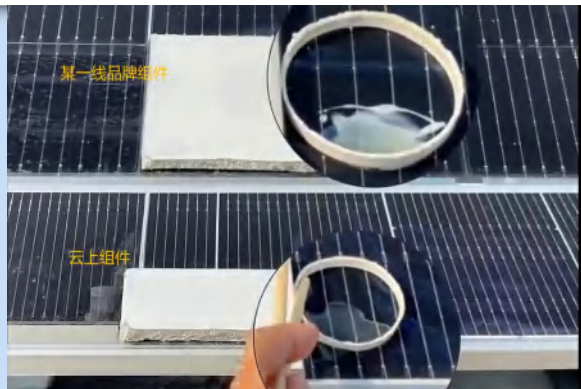
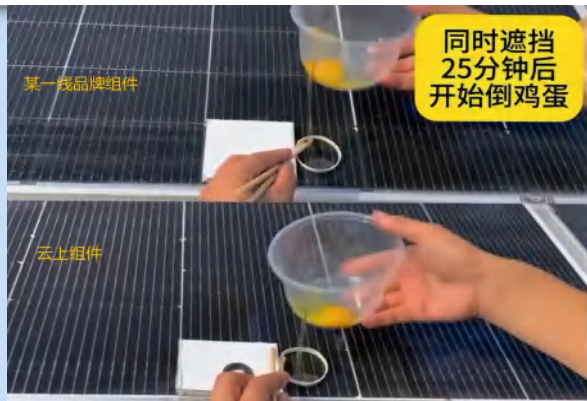
常规组件

固定电路结构



DFL组件

可变电路结构



通过对组件整体结构的系统优化，彻底解决了长期困扰整个行业的量产组件的热斑问题，大幅提升了光伏组件的可靠性，彻底解决了组件的热致衰减问题，大幅提高了光伏电站的安全性能。

- 首创分步式串联焊接
- 超柔性扁平导电丝
- 高精度视觉定位
- 兼容各种金属化电池
- 模块化设计便于操作维护

自主研发的高效精密 互联装备



PART 03

产品介绍





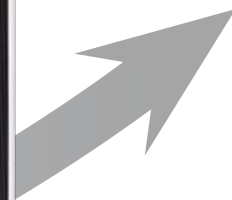
第一代封装方案
2015年以前



当前主流封装方案
2018年至今



第三代 封装方案
2024年开始



功率、发电量、稳定性、安全、收益率等全面提升，缔造最优的光伏产品和解决方案

第三代封装产品特点介绍

▲ N型电池片

采用最先进的TOPcon/BC电
池

▲ 多分片电池片

采用三/四分切割电池片

▲ 满屏负间距排版

极致提高正面利用率和功率

▲ 可变电路结构

极致提高可靠性和发电量

▲ 多串并联结构

保持电性能参数一致

▲ 高转换效率

最高转换效率24%~25%

▲ 高功率

相同组件尺寸功率提高10-20W

▲ 高发电量

相同尺寸发电量提高3%-5%以上

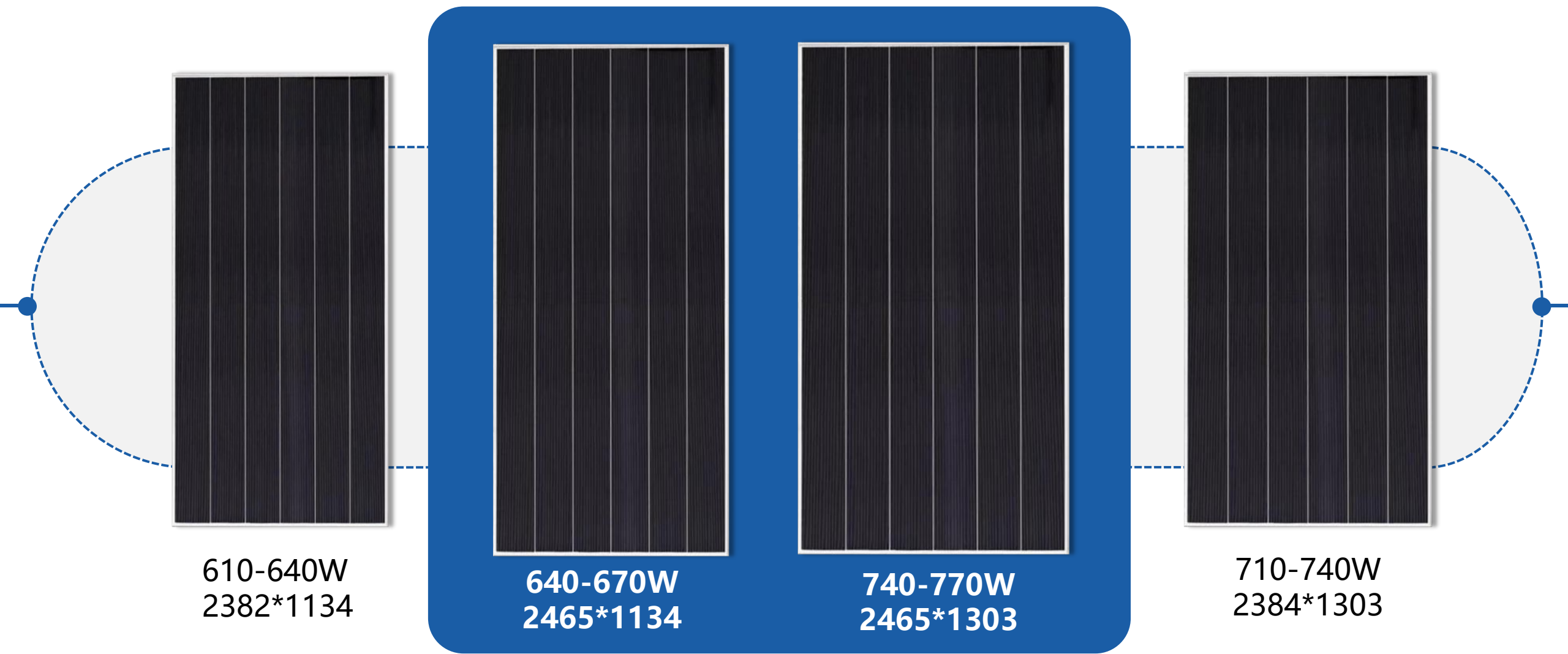
▲ 高可靠性

彻底消除热斑影响

▲ 抗遮挡能力更强

屋顶电站发电量提高10%以上





同级别单块组件最高量产功率

YS 云上新能源
YOURSUN ENERGY

Visual inspection (accord. to IEC 61215-2:2021, MQT 01)

Performance at STC (accord. to IEC 61215-2:2021, MQT 06.1)

Produkt Products		 TÜV Rheinland	
Prüfbericht-Nr.: Test Report No.:	CN2SK74H 002	Auftrags-Nr.: Order No.:	326112888
Kunden-Referenz-Nr.: Client Reference No.:	2681336	Auftragsdatum: Order date:	04.06.2025
Auftraggeber: Client:	Jiangsu Masterwork Green Energy Technology Co., Ltd. B1 GigaFactory, Industrial Park, Xinzhuang Town, Suyu District, Suqian City, 223885 Jiangsu, P.R. China		
Prüfgegenstand: Test item:	Photovoltaic (PV) Module(s)		
Bezeichnung / Typ-Nr.: Identification / Type No.:	Not provided		
Prüfgrundlage: Test specification:	IEC 61215-2:2021, MQT 06.1 Performance at STC; IEC 60904-1:2020, IEC 60904-3:2019, IEC 60904-7:2020		
Wareneingangsdatum: Date of receipt:	28.09.2025		
Prüfmuster-Nr.: Test sample No.:	5		
Prüfzeitraum: Testing period:	15.10.2025	Detaillierte Fotodokumentation siehe Anlage zu diesem Bericht	
Ort der Prüfung: Place of testing:	Building 14, Pingqiao (Taicang) Modern Industrial Park, 525 Yueshang Jiangsu South Road, Shaoi Town, Taicang City, Suzhou, Jiangsu Province, P.R. China	Detailed photo documentation see appendix to this report	
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shanghai) Co., Ltd.		
Prüfergebnis*: Test result**:	Refer to the verdict of test report		
geprüft von / tested by: 21.10.2025 Simon Ba Simon Ba Name / Position Name / Position		kontrolliert von / reviewed by: 21.10.2025 Jessica Gu Jessica Gu Name / Position Name / Position	
Unterschrift: Signature		Unterschrift: Signature	
Siegel / Other: N/A			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged	
(English: Ready-to-use condition as delivered; German: Übergabezustand wie empfangen wurde; French: État de livraison prêt à l'emploi; Russian: Состояние при получении; Chinese: 完好无损交付状态)		(English: Not ready-to-use condition as delivered; German: Nicht-übergabefähiger Zustand; French: Non prêt à l'emploi; Russian: Не готов к использованию; Chinese: 非完好无损交付状态)	
Dieser Prüfbericht bescheinigt sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht ausgetauscht werden. Dieser Bericht berechnigt sich nur zur Verwendung eines Prüfzertifikats.			
This test report only relates to the s.o. test sample. Without permission of the test center this report is not permitted to be duplicated.			

752.4W

Fig. 1: front view of module 8875250130635201517443 Fig. 2: rear view of module 8875250130635201517443



Not provided by the client



Fig. 3: rating label of module
8875250130635201517443

Fig. 4: junction box of module
8875250130635201517443

ZERTIFIKAT ♦ CERTIFICATE ♦ 認證證書


Product Service

CERTIFICATE

No. Z2 117243 0006 Rev. 00

Holder of Certificate: YOURSUN New Energy Development (Hangzhou) Co., Ltd
Room 202, Floor 2, Building 1
No. 9, Nangonghe Road, Linping street, Linping District
311106 Hangzhou City, Zhejiang Province
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
Mono-Crystalline Silicon Photovoltaic module

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the Testing, Certification, Validation and Verification Regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 704062409802-00

Valid until: 2030-05-14

Date, 2025-05-30


(Zhulin Zhang)

Page 1 of 2
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ZERTIFIKAT ♦ CERTIFICATE ♦ 認證證書


Product Service

CERTIFICATE

No. Z2 117243 0006 Rev. 00

Model(s): SFBC-24N70D-xxx, xxx=610 to 660 in steps of 5
SFBC-23N68D-xxx, xxx=605 to 640 in steps of 5
SFBC-17N50D-xxx, xxx=440 to 475 in steps of 5
xxx is standing for rated output power at STC

Parameters:

Construction:	Framed, double glass with Junction box, Cable and Connectors.
Safety Class:	Class II
Maximum System Voltage:	1500 V DC
Fire Safety Class:	Class C according to UL790
Test Laboratory:	Changzhou HuaYang Inspection and Testing Technology Co., Ltd. B Area on 1/F., Building 12, C Area on 4/F., and A Area on 1/F., Building 10, No. 8, Lanxiang Road, West Taihu Science and Technology Industrial Park, Changzhou, Jiangsu, China

Tested according to: IEC 61215-1:2021
IEC 61215-1-1:2021
IEC 61215-2:2021
IEC 61730-1:2023
IEC 61730-2:2023

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发电量对比

模拟屋顶电站在同样积灰遮挡条件下的发电量损失，每个阵列17块645W功率的组件。

实验条件：电站底部一排组件遮挡5cm宽度



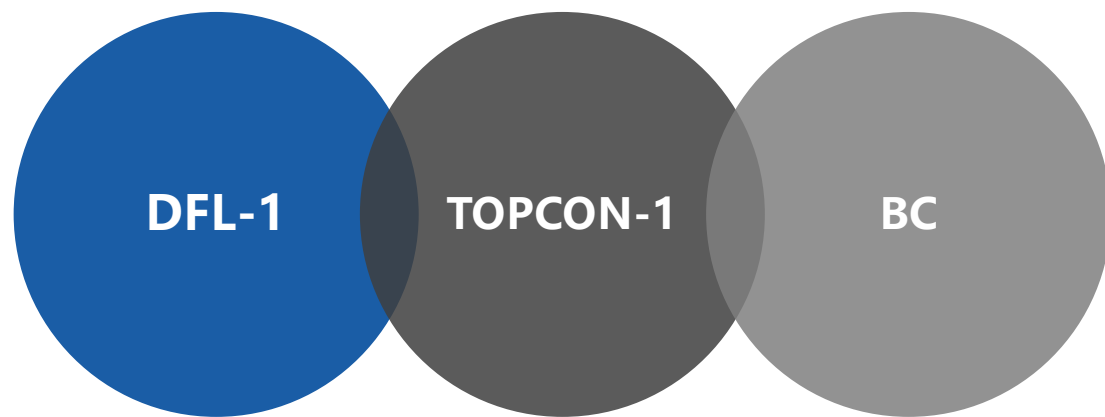
DFL



TOPCON

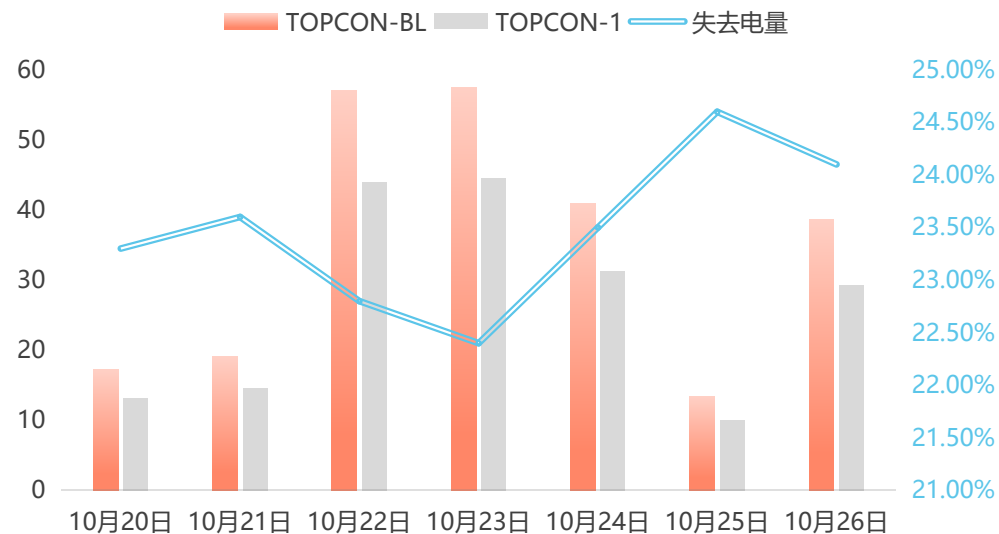
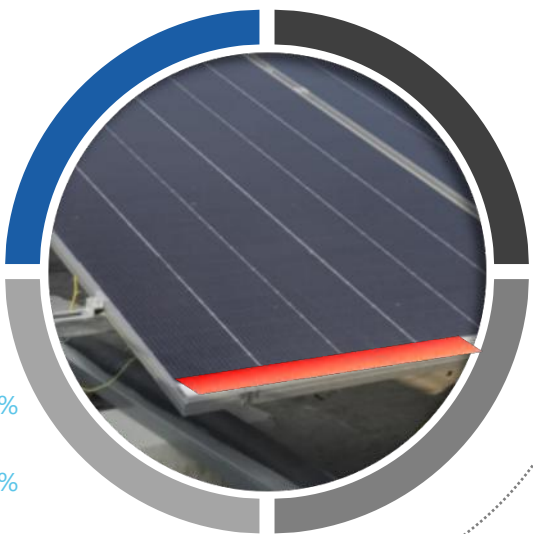
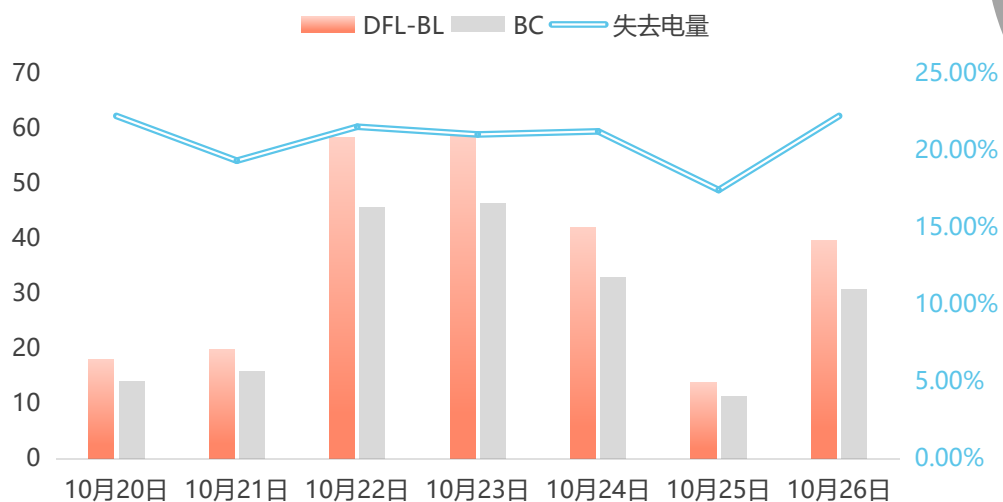
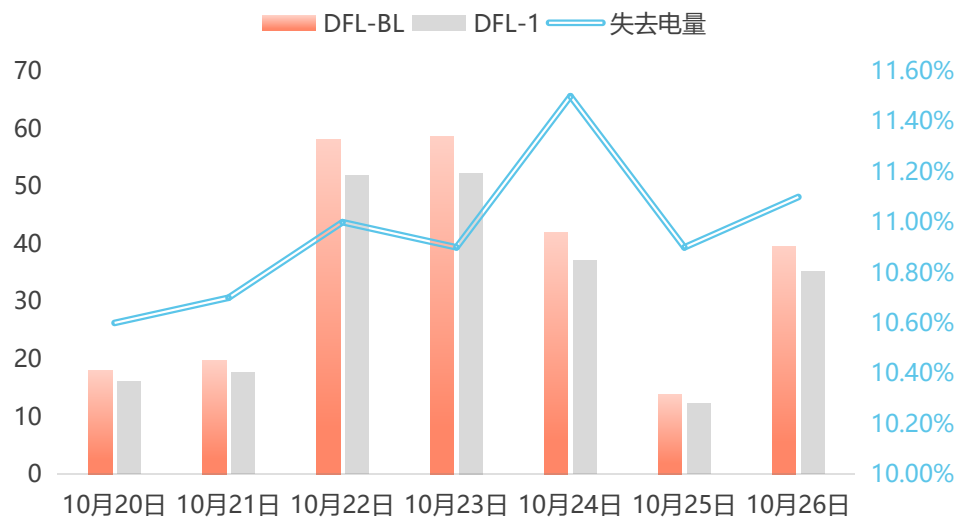


BC

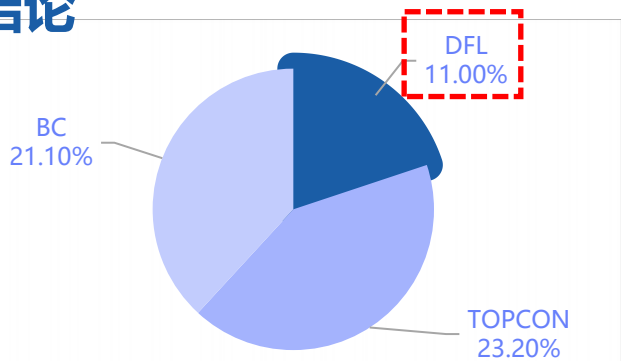


被遮挡组件

发电量对比

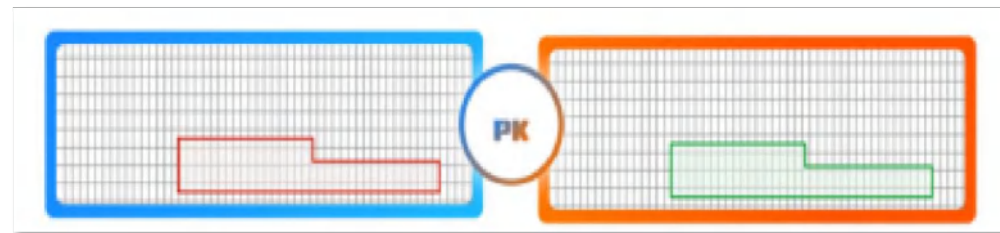


结论



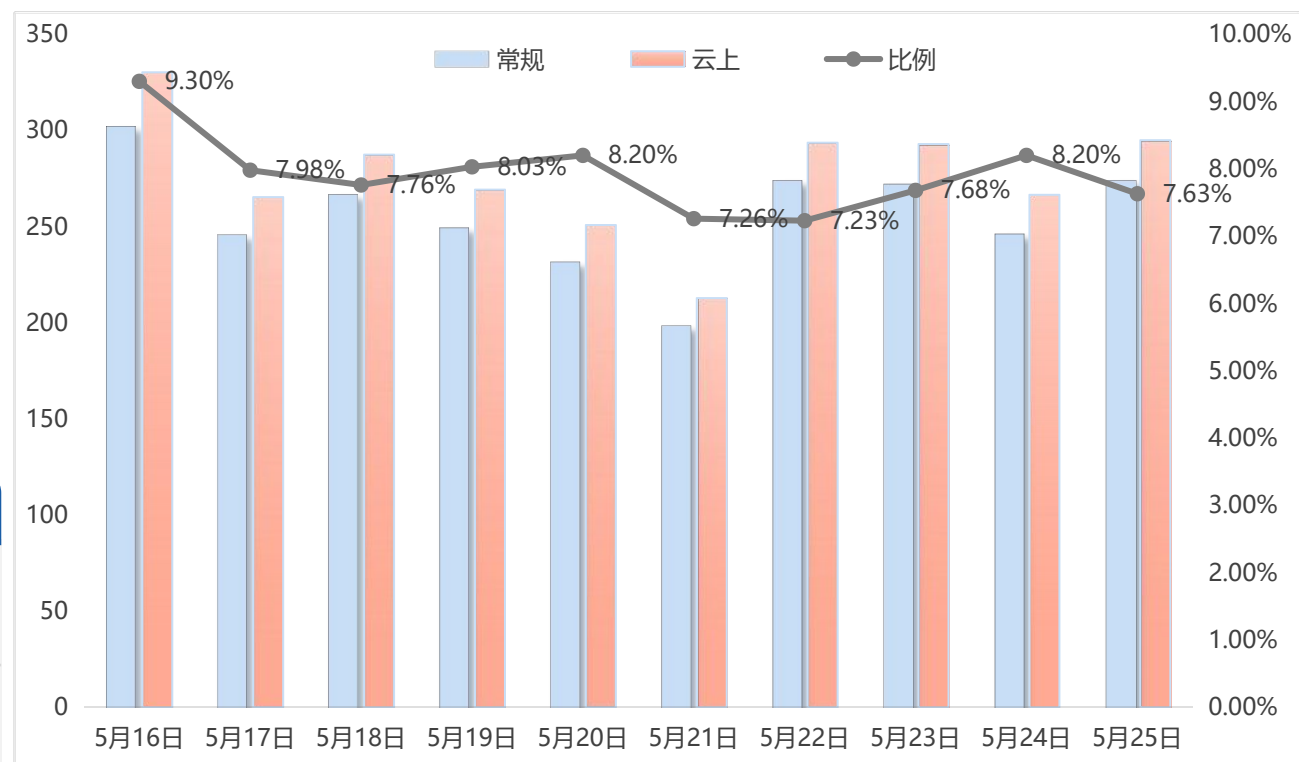
云上组件发电量损失可以比常规组件少50%以上，云上组件抗遮挡能力更强

发电量对比



江苏 盐城 实证对比电站

- ◆ 电池片采用相同效率的N型TOPCON电池
- ◆ 对照组和实验组分别位于相邻20米的两个屋顶，各90块



PART 04

项目案例

1、已完成分布式项目

2、在建地面电站项目



☐☐☐ 已建成电站 (部分)



山西-阳泉
容量: 3.8MW



内蒙古-鄂尔多斯
容量: 1.8MW



甘肃-陇南
容量: 1.2MW



重庆-巫山
容量: 4.6MW



江苏-南京
容量: 5.5MW



陕西-渭南
容量: 1.5MW



贵州-安顺
容量: 2.9MW



浙江-台州
容量: 1.9MW



甘肃金昌100MW清河滩电站

The background image shows a vast desert landscape with rolling sand dunes under a clear blue sky. In the foreground, a large array of blue solar panels is mounted on a structure, and their reflection is visible in a body of water. The overall scene conveys a message of sustainable technology in a natural environment.

THANK YOU!

科技改变生活 创新创造价值