

中科富能轻质光伏组件产品质量保证书

Limited Warranty for ZKFN Solar PV Flexible Module

山东中科富能光电科技有限公司（后文简称中科富能）对本公司光伏组件产品作出本质量保证。

Shandong ZKFN Solar Technology Co., Ltd. ("ZKFN Solar") shall guarantee the quality of PV flexible modules of our company.

1、产品质量保证 Quality Warranty

1.1 山东中科富能光电科技有限公司将向买方提供经过相关机构（如 TUV）认证过的光伏组件产品（买方同意的有特殊要求的产品除外）；同时，产品外观符合买方与山东中科富能光电科技有限公司约定的外观标准。

The ZKFN Solar agrees to provide the buyer with products that are certified by relevant institutions, such as TUV (except for products specially requested by the buyer). Additionally, the appearance of the products must be consistent with the agreed-upon standards of appearance as between the buyer and ZKFN Solar.

1.2 中科富能保证其所生产的光伏组件（包括直流连接头和电缆）在正常使用、安装条件下，不会出现材料和工艺原因导致的不符合 IEC61215、IEC61730、UL1703 标准中定义的严重外观缺陷及功率异常的外观缺陷。如最初客户发票所示之日起 12 年内出现材料和工艺不符合 IEC61215、IEC61730、UL1703 标准中规定的严重外观缺陷及功率异常的外观缺陷，中科富能将根据具体情形，与客户协商决定选择修理、更换，或按组件损坏程度赔偿客户。上述三种补偿均为唯一补偿办法，不可与其他补偿方式同时享受，且不能超过本质保书规定的 12 年的期间。以下组件安装场景下的产品质保期为 3 年：组件在非静止安装场景下运用，如长期振动、颠簸、折叠、搭扣式固定、搬运等情况。组件须安装在完全无阴影遮挡的环境下，如果因阴影遮挡造成产品异常，卖方不提供质保。特殊定制组件质保年限依据双方约定为准。

The ZKFN Solar warrants that its photovoltaic solar modules, including factory-assembled DC connectors and cables, are free from serious visual defects in materials and workmanship which defined in IEC61215、IEC61730、UL1703 or that cause abnormal power output under normal application and installation. If any of these visual defects appeared within 12 (twelve) years from the date of sale as shown on the invoice to the direct customer of support, the ZKFN Solar will consult with the customer to determine whether to repair or replace the product, or refund the purchase price paid by the customer. The repair or replacement or refund remedy, at the option of support, shall be the sole and exclusive remedy provided under the "Limited Product Warranty" and shall not extend beyond the 12 (twelve) years' period set forth herein. For PV modules used in non-static installation scenarios, such as long-term vibration, turbulence, folding, buckle type fixation, handling and other conditions, the warranty period is 3 (three) years. PV modules must be installed in an environment completely free from shadow obstruction. If any product malfunction occurs due to shadow obstruction, the seller will not provide warranty service. The warranty period for special customized components shall be subject to mutual agreement.

2、线性功率保证 Linear Performance Warranty

2.1 交货组件功率的测量应在标准测试条件下进行，即光强 1000 W/m^2 ，温度 25°C ，大气质量 AM1.5。

The power of a product shall be tested under standard test conditions which are: light intensity 1000 W/m^2 , temperature 25°C , and AM 1.5.

2.2 买方必须保证对产品合适的搬运、系统设计、安装、使用、环境及维护。

The buyer must ensure to properly handle, transport, design the system of, install, use, and keep appropriate environment and maintenance for the products.

2.3 组件功率 Power of Module:

单晶硅 PERC 型组件：自系统安装并正常运行第一年，输出功率不小于该产品说明书所述最低输出功率的98%；第二年，输出功率不小于该产品说明书所述最低输出功率的97.45%；以后平均每年输出功率衰减不大于上一年该产品输出功率的 0.55%；25年后产品输出功率不小于其说明书所述最低输出功率的84.8%。非静止安装场景下运用，输出功率保证 3 年不小于 90.2%，特殊定制组件功率质保年限依据双方约定为准。

Mono-crystalline silicon PERC module: within the first year from the date of installation and normal operation, the output power shall not be less than 98% of the product's minimum output power as set forth in the specifications. Within the second year, the output power shall not be less than 97.45% of the product's minimum output power as set forth in the specifications. Afterwards, the loss of average annual output power shall not exceed 0.55% of the product's output power of the immediately preceding year. After 25 (twenty-five) years, the product's output power shall not be less than 84.8% of its minimum output power as set forth in the specifications. The output power guarantee for non-static installation scenarios is 3 years output power shall not be less than 90.2%, and the power guarantee period for special customized components is subject to mutual agreement.

单晶硅 TOPCON 型组件：自系统安装并正常运行第一年，输出功率不小于该产品说明书所述最低输出功率的99%；第二年，输出功率不小于该产品说明书所述最低输出功率的98.6%；以后平均每年输出功率衰减不大于上一年该产品输出功率的 0.4%；25年后产品输出功率不小于其说明书所述最低输出功率的89.4%。非静止安装场景下运用，输出功率保证 3 年不小于 90.2%，特殊定制组件功率质保年限依据双方约定为准。

Mono-crystalline silicon TOPCON module: within the first year from the date of installation and normal operation, the output power shall not be less than 99% of the product's minimum output power as set forth in the specifications. Within the second year, the output power shall not be less than 98.6% of the product's minimum output power as set forth in the specifications. Afterwards, the loss of average annual output power shall not exceed 0.4% of the product's output power of the immediately preceding year. After 25 (twenty-five) years, the product's output power shall not be less than 89.4% of its minimum output power as set forth in the specifications. The output power guarantee for non-static installation scenarios is 3 years output power shall not be less than 90.2%, and the power guarantee period for special customized components is subject to mutual agreement.

2.4 如果在条款规定的时间内，组件的输出功率未达到以上约定的输出功率，山东中科富能光电科技有限公司将与买方一同分析原因。如山东中科富能光电科技有限公司确认属于己方责任，山东中科富能光电科技有限公司将提供在商业合理范围内最好的补偿方案，如提供额外的组件，修复或者更换组件，依据本质量保证书提供补偿金，延续原始提供的组件的质保期限等。如果当时提供的产品已经停止生产，山东中科富能光电科技有限公司将提供正在生产的标准产品作为补偿。

If the output power of the module does not meet the above levels within the time specified, the ZKFN Solar and the buyer will jointly analyze the causes. If ZKFN Solar determines that the liability is attributable to itself, then ZKFN Solar will provide the buyer with best remedial choices commercially reasonable, such as providing additional module, repairing or replacing the module, providing the buyer with compensation in accordance with this limited warranty, extending the warranty period for the

original module, etc. If the ZKFN Solar has ceased to manufacture the module in problem, the ZKFN Solar will provide the standard products it is manufacturing as remedy.

2.5 组件功率不足的补偿：对组件实际总功率与该批次组件承诺总功率的差额部分，山东中科富能光电科技有限公司可以提供相应功率组件的形式予以补偿。

Compensation for the shortage of power: For the difference between the actual total output power and the committed total output power, the ZKFN Solar will compensate the buyer with additional modules having the equivalent power.

3、前提 Preconditions

3.1 由于雷电、暴风、冰雹、洪水、火灾、地震、战争、动乱等自然灾害或人为因素造成的非产品本身质量原因导致的损失不在质保范围内，光伏电站建设完成后建议购买光伏电站财产险。

Losses caused by natural disasters, such as lightning, storm, hail, flood, fire, earthquake, war, and unrest, caused by the quality of non-product itself, are not within the scope of the warranty, After the construction of the photovoltaic power station is completed, it is recommended to purchase the property insurance of the photovoltaic power station.

3.2 本质量保证书不包括退赔故障组件在路途上的运输费用，也不包括装卸货产生的费用或者由此产生的其他费用。

This Limited Warranty covers neither the transportation charges of the products to be returned, nor the unloading and reloading charges and other charges such occurred.

3.3 本质量保证书不包括任何产品型号或编号标识模糊不清的情况。

This Limited Warranty does not cover the situation that the type and serial number of any products are illegible.

3.4 买方必须保证对产品合适的包装、搬运、存储、系统设计、安装、使用、环境及维护。

The buyer must ensure proper package, handling, transportation, storage, system design, installation, use, environment and maintenance for the product.

4、质保转让 Warranty Transfer

4.1 本质保书适用于最终用户，最终用户是指组件的最终使用者，同时要求组件为首次安装使用。

These warranty terms exclusively apply to end-customers. End-customers in terms of this warranty is the purchaser of the respective PV-Module, who has purchased the respective PV-Module for end-use and has installed the same for the first time (First Installation).

4.2 本质保书对于已安装使用的组件，可以从最终客户转移给另外的用户，客户必须保留原始的安装信息，同时要求组件为首次安装使用。

This warranty is transferrable by an END-CUSTOMER to the purchaser of an already installed PV-Module insofar as the PV-Module remains at its original place of installation.

5、质保免责声明 Warranty Disclaimer

除上述明确列出的内容外，山东中科富能光电科技有限公司和买方对产品或其他事项均未做出任何口头或书面、明示或暗示的陈述、保证或担保。该等被排除的暗示性的保证包括但不限于：（1）关于适销性的保证；（2）适合于某一特别目的的保证；（3）不侵权的保证。

Except as expressly set forth above, the parties make no representations, warranties, or guarantees, either express or implied, oral or written, with respect to the product or otherwise, including without limitation any implied warranty (1) of merchantability, (2) of fitness for particular purpose, (3) non-infringement.

6、适用组件型号 Apply to Module Type

ZKFN B1 000A-XXX (XXX=500-520,in steps of 5, 144 cells)
ZKFN B1 001A-XXX (XXX=500-520,in steps of 5, 144 cells)
ZKFN B1 002A-XXX (XXX=500-520,in steps of 5, 144 cells)
ZKFN A1 000A-XXX (XXX=460-475,in steps of 5, 132 cells)
ZKFN C1 000A-XXX (XXX=335-350,in steps of 5, 96 cells)
ZKFN D1 000A-XXX (XXX=250-260,in steps of 5, 72 cells)
ZKFN E1 000A-XXX(XXX=165-175, in steps of 5, 48 cells)
Z ZKFN F1 000A-XXX(XXX=82-87, in steps of 5, 24 cells)
ZKFN H1 000A-175 ZKFN H1 001A-175
ZKFN I1 000A-87 ZKFN I1 001A-87
ZKFN J1 000A-163 ZKFN K1 000A-144
ZKFN-182M(PD)-XXX (XXX=465-480,in steps of 5, 132 cells)
ZKFN B1 010A-XXX (XXX=540-560,in steps of 5, 144 cells)
ZKFN B1 010B-XXX (XXX=540-560,in steps of 5, 144 cells)
ZKFN B1 012A-XXX (XXX=540-560,in steps of 5, 144 cells)
ZKFN B1 012B-XXX (XXX=540-560,in steps of 5, 144 cells)
ZKFN C1 010A-XXX (XXX=366-372,in steps of 3, 96 cells)
ZKFN D1 010A-XXX (XXX=275-280,in steps of 5, 72 cells)
ZKFN H1 010A-XXX (XXX=183-186,in steps of 3, 48 cells)
ZKFN H1 011A-XXX (XXX=183-186,in steps of 3, 48 cells)
ZKFN I1 010A-XXX (XXX=91, 24 cells)
ZKFN I1 011A-XXX (XXX=91, 24 cells)
ZKFN J1 010A-XXX (XXX=175, 46 cells)

版本号 B02

ZKFN K1 010A-XXX (XXX=152, 40 cells)

7、其他 Else

以上内容均以中文翻译为准。

For the contents above, Chinese version shall prevail.

8、联系方式 Contact Information

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