



# CERTIFICATE

Certificate number	17073 Rev.0	Replaces	-
Issued	22/04/2022	First edition	22/04/2022
Report number	IN0000629	Expiry date	10/03/2027
Page	1 of 2	Contract number	IN0000632

## Product Certificate Photovoltaic (PV) Panels

<b>License holder:</b>	<b>Zorlu Enerji Elektrik Üretim A.Ş.</b> Organize Sanayi Bölgesi, Pembe Cadde No: 13 Nilüfer/Bursa, Turkey
<b>Production site(s):</b>	Kirikkale 1.Osb Kizilirmak Cad. 2. Sok. No:13 Yahşihan Kirikkale,Turkey
<b>Model(s):</b>	ZES-XXX-HC166-01 (where: "XXX" = rated power. See extended models in the Annex)*

The product as listed in this certificate and marked with the below given Kiwa Cermet Italia mark for Photovoltaic (PV) Panels, can be considered complying to the requirements of Kiwa Cermet Italia Guideline "TD Ki – 0409, Solar Products and Components" based upon the following aspects:

Laboratory testing of the panels, which are performed by an accredited laboratory in accordance to ISO/IEC 17025 -see annex-, using the following standards:

- IEC 61215-1:2016  
Terrestrial photovoltaic (PV) modules – Design qualification and type approval – Part 1: Test requirements
- IEC 61215-1-1:2016  
Terrestrial photovoltaic (PV) modules – Design qualification and type approval – Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) modules
- IEC 61215-2:2016  
Terrestrial photovoltaic (PV) modules – Design qualification and type approval – Part 2: Test procedures
- IEC 61730-1:2016  
Photovoltaic (PV) module safety qualification – Part 1: Requirements for construction
- IEC 61730-2:2016  
Photovoltaic (PV) module safety qualification – Part 2: Requirements for testing

**Remarks:** To be used in plants at a maximum system voltage (Voc at STC) up to 1500 Vdc (Class II); fire test (IEC 61730-2 / MST 23 – Class C) was performed.

Periodic Inspection of the Factory site(s), according to "TD Ki – 0409", which includes:

- inspection of the manufacturing quality control and production procedures;
- inspection of the produced panels and confirmation that these are identical to the tested panels;
- periodic verification of the manufacturer test facilities.

*This certificate is issued in accordance with the Kiwa Cermet Italia regulations.*

*Publication of the certificate is allowed.*

*The validity of this certificate is subject to the positive result of periodic surveillance visits.*

*The validity of this certificate can be verified on request at the following e-mail address: [energy@kiwacermet.it](mailto:energy@kiwacermet.it).*

*Any total or partial reproduction of this document in any form, without Kiwa Cermet Italia express authorization, is prohibited.*

**Kiwa Cermet Italia S.p.A.**

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Chief Operating Officer  
Giampiero Belcredi





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## Product Certificate Photovoltaic (PV) Panels

### Annex Extended models\*

Model name	Cells number	Cell size (mm)	Cell technology	Module size (mm)	Rated power (Wp)
ZES-XXX-HC166-01	144	166x83	Mono-Si	2109x1052x42	From 450 to 460 in steps of 5

Remarks: "XXX" = rated power.

Chief Operating Officer  
Giampiero Belcredi

Laboratory test reports nr.: L0000518/A rev.00; L0000518/C rev.00; L0000518/D rev.00; 2.00.80582.1.0-02; 0.5.0CI0262/22, L0000576 rev.00.

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