EUROPHONE SOLAR

Photovoltaikmodul - Technisches Datenblatt

Stand: April 2006

上海电气 SHANGHAI ELECTRIC
上海电气太阳能有限公司 SHANGHAI ELECTRIC SOLAR ENERGY CO., LTD.

SESE M-Serie

Electrical characteristics

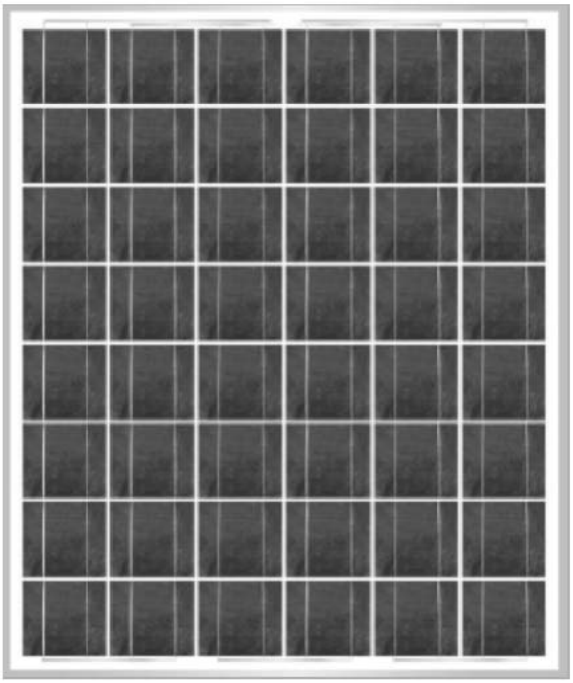
Typical power Pmax (STC)*	180 Wp
Tolerance	+/- 2.5 Wp
Max power voltage Vpm	23,21 V
Max power current Ipm	7,78 A
Leerlaufspannung Uoc	29,02 V
Kurzschlussstrom Isc	8,54 A
Temperature coefficient	
- Open circuit voltage	- 91,46 mV/K
- Short circuit current	2,26 mA/K
- Nominal power	-0,43 %/K
Max. system voltage	1000 V

Dimensions

Length	1334 mm
Width	994 mm
Frame	40 mm
Weight	17 kg
Front glass	3.2 mm
Encapsulation	EVA
Back side	Tedlar
Output terminal	MC-Connectors
Cable	(4 mm²) und 95 cm Länge

Operating conditions

Ambient temperature	-20 bis +90°C
Hail resistance	28 mm
Surface load	240kg/m²



Typical power classes:	185 Wp, 190 Wp, 195 Wp, 200 Wp
Other products:	Ganymed M-Series, 150 - 180 Wp, mono crystalline, 48 cells Ganymed P-Serie, 80 - 130 Wp, multi crystalline, 48 cells Kalysto P-Serie, 80 - 130 Wp, multi crystalline, 48 cells
Zellenhersteller:	ErSol Solar Energy AG, Erfurt, Germany
Cell typ:	E6+ Blue Power, multi crystalline and mono crystalline 48 cells
Module manufacturer:	Shanghai Electric Solar Energy Co., LTD., Shanghai, P.R. China
Product warranty:	2 years
Efficiency warranty:	90 %at 10 years, 80 % at 25 years (see warranty conditions)
Certificate:	TÜV Rheinland, IEC 61215, SK II

* STC - Standard Test Conditions (25C, 1,000 W/m2, AM 1.5)
** Technical data are subject to change without prior notice. All electrical data are derived from average module measu subject to deviations.
*** Drawings and pictures are not true to scale. On request we will submit scaled drawings.

Cl Resina 41 A Nave 8, 28021 Madrid
Tel: +34 915 302 176 Fax: +34 915 280 804
www.europhone2000.es

EUROPHONE SOLAR

SESE M-Serie

Electrical characteristic

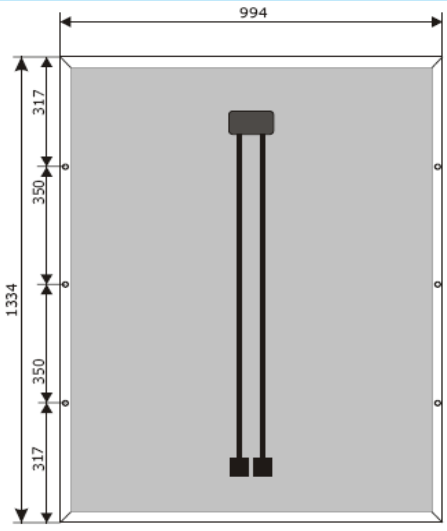
	M185	M190	M195	M200
Typical Power Pmax (STC)	185 Wp	190 Wp	195 Wp	200 Wp
Leistungstoleranz	+/- 2.5 Wp	+/- 2.5 Wp	+/- 2.5 Wp	+/- 2.5 Wp
Max power voltage Vpm	23,54 V	23,93 V	24,24 V	24,50 V
Max power current Ipm	7,91 A	7,99 A	8,05 A	8,14 A
Open circuit voltage Voc	29,11 V	29,26 V	29,35 V	29,57 V
Closed circuit current Isc	8,64 A	8,69 A	8,75 A	8,87 A
Temperature coefficient				
- Open circuit voltage	-89,92 mV/K	-90,56 mV/K	-91,58 mV/K	-92,80 mV/K
- Short circuit current	2,17 mA/K	2,22 mA/K	2,28 mA/K	2,34 mA/K
- Nominal power	-0,43 %/K	-0,43 %/K	-0,43 %/K	-0,43 %/K
Max. system voltageax.	1000 V	1000 V	1000 V	1000 V

Dimensions

Length	1334 mm
Width	994 mm
Frame	40 mm
Weight	17 kg
Front glass	3.2 mm
Encapsulation	EVA
Back side	Tedlar
Connection terminal	MC-Connectors
Cable	(4 mm²) und 95 cm Länge

Technical data are subject to change without prior notice. All electrical data are derived from average module measurements and subject to deviations.

For any further information please refer to:



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EUROPHONE SOLAR

SESE P-Serie

Electrical characteristics

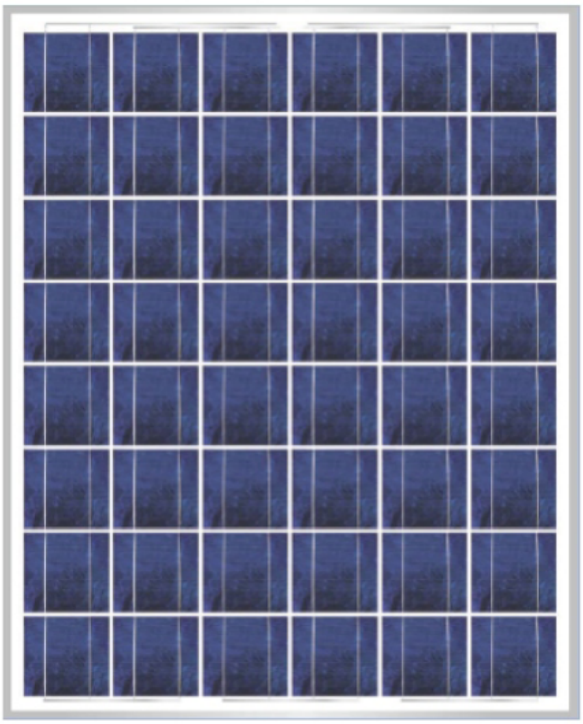
Typical power Pmax (STC)*	150 Wp
Tolerance	+/- 2.5 Wp
Max power voltage Vpm	21,80 V
Max power current Ipm	6,88 A
Open circuit voltage Voc	28,58 V
Short circuit current ISC	7,52 A
Temperature coefficient	
- Open circuit voltage	- 91,46 mV/K
- Short circuit current	2,26 mA/K
- Nominal power	-0,43 %/K
Max. system voltage	1000 V

Dimensions

Length	1334 mm
Width	994 mm
Frame	40 mm
Weight	17 kg
Front glass	3.2 mm
Encapsulation	EVA
Back side	Tedlar
Output terminal	MC-Connectors
Cable	2x 1,0 m cable(4 mm²)

Operating conditions

Ambient temperature	-20 bis +90°C
Hail resistance	28 mm
Surface load	240 kg/m²



Typical power classes:	150 Wp, 155 Wp, 160 Wp, 165 Wp, 170 Wp, 175 Wp.
Other products:	Ganymed M-Series, 180 - 205 Wp mono crystalline, 60 cells Ganymed P-Serie, 80 - 130 Wp, multi crystalline, 60 cells Kalysto P-Serie, 80 - 130 Wp, multi crystalline, 50 cells
Cell manufacturer:	ErSol Solar Energy AG, Erfurt, Germany
Cell typ:	E6+ Blue Power, multi crystalline and mono crystalline 48 cells
Module manufacturer:	ShangHai Electric solar Energy co.,Ltd
Product warranty:	2 years
Efficiency warranty:	90 % at 10 years, 80 % at 25 years (see warranty conditions)
Certificate:	TUEV Rheinland, IEC 61215, SK II

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EUROPHONE SOLAR

SESE P-Serie

Electrical characteristic

	P155	P160	P165	P170	P175
Typical Power Pmax (STC)	155 Wp	160 Wp	165 Wp	170 Wp	175 Wp
Tolerance	+/- 2.5 Wp	+/- 2.5 Wp	+/- 2.5 Wp	+/- 2.5Wp	+/- 2.5Wp
Max power voltage Vpm	22,85 V	23,40 V	23,50 V	23,65 V	23,75 V
Max power current Ipm	6,78 A	6,90 A	7,05 A	7,25 A	7,45 A
Open circuit voltage VOC	29,28 V	29,35 V	29,50 V	29,75 V	29,90 V
Closed circuit current ISC	7,6 A	7,6 A	7,7 A	7,8 A	7,9 A
Temperature coefficient					
- Open circuit voltage	-89,88 mV/K	-89,92 mV/K	-90,56 mV/K	-91,58 mV/K	-92,80 mV/K
-Short circuit current	2,16 mA/K	2,17 mA/K	2,22 mA/K	2,28 mA/K	2,34 mA/K
-Nominal power	-0,43 %/K	-0,43 %/K	-0,43 %/K	-0,43 %/K	-0,43 %/K
Max. system voltage	1000 V	1000 V	1000 V	1000 V	1000 V

Dimensions

Length	1334 mm
Width	994 mm
Frame	40 mm
Weight	17 kg
Front glass	3.2 mm
Encapsulation	EVA
Back side	Tedlar
Connection terminal	MC-Connectors
Cable	2x 1,0 m cable(4 mm²)

Technical data are subject to change without prior notice. All electrical data are derived from average module measurements and subject to deviations.

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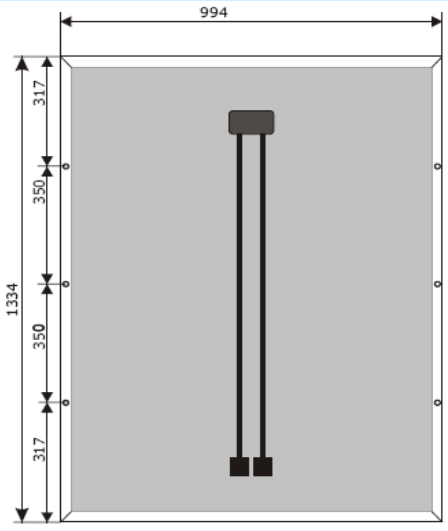

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TÜV
TÜV Rheinland Group

Certificate

Registration No.: Q 60015494 Page 1 **Report No.: 21206081**

License Holder:
Shanghai Electric Solar Energy Co., Ltd
No. 11 Royal Real Industrial Section,
Xi Mao Jin Road, A District
Songjiang Export Processing Zone Shanghai
P. R. China (201613)

Product:
PV Modules
Types **SESE48-156P,**
SESE48-156M

Manufacturing Plant:
Shanghai Electric Solar Energy Co., Ltd
No. 11 Royal Real Industrial Section,
Xi Mao Jin Road, A District
Songjiang Export Processing Zone Shanghai
P. R. China (201613)

Basis:

☒ **IEC 61215 ed.2: 04.2005**
EN 61215 ed. 2: 05.2005
"Crystalline silicon terrestrial photovoltaic (PV) modules - Design qualification and type approval"

☒ **Factory Inspection**
To document the consistent quality of the product factory inspections are performed periodically.

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TÜV
TÜV Rheinland Group
ID: 0000018460

- Qualified, IEC 61215
- Periodic Inspection

Remarks:
Details of the inspection are documented in the factory inspection report no. **21204426-02**

Conditions:
The product test is voluntarily according to technical regulations. Any change of the design, materials, components or processing may require the repetition of some of the qualification tests in order to retain type approval.
The certificate has a validity of 5 years counting from date of issue.

Certification body

Cologne, 3 August 2006 Dipl.-Ing. M. Adrian

TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Cologne

Orion Registrar, Inc., USA

质量管理体系认证证书

经奥瑞认证有限公司审核确认：

上海电气太阳能有限公司

（地址：中国上海松江区松江出口加工区 A 区西泖泾路罗伊尔工业园区 11 号）

质量管理体系符合：

IS09001:2000

本质量管理体系覆盖下列产品：

太阳能电池和光伏组件生产活动、产品和服务

本认证证书受奥瑞认证有限公司监督，
获证组织应保持质量体系
以适应标准的要求。

客户编号：00216-00001　　证书号：N0000506-1

证书有效期：2006 年 6 月 5 日至 2009 年 6 月 4 日

（自 2007 年 6 月 5 日起，本证书与“保持注册证书”一并使用有效）

EAC Code(s)： 19

ANAB ACCREDITED　RVA MGMT. SYS. RvA C 147　MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT IAF

Mr.Paul M. Burck, President

06/05/2006
Date

Orion Registrar Inc. ★ PO Box 745070 ★ Arvada, Colorado 80006-5070 ★ 303-456-6010 ★ FAX 303-456-6681

Orion Registrar, Inc., USA
Certificate of Registration

This is to certify the Quality Management System of:

Shanghai Electric Solar Energy Co., Ltd.
No. 11 Royal Real Industrial Section, Xi Mao Jin Road,
A District, Songjiang Export Processing Zone,
Shanghai
China

Has been assessed by Orion Registrar and found to be in compliance with the following Quality Standard :

ISO 9001: 2000

The Quality Management System is Applicable to:

Manufacture, Sales and Service of "PV Modules"

The Registration Period is from June 5, 2006 to June 4, 2009

This registration is subject to the company maintaining its system to the required standard, and applicable exceptions, which will be monitored by Orion

Client ID 00216-00001. Certificate ID N0000506-1

EAC Code(s): 19

ANAB ACCREDITED
RvA MGMT. SYS. C 147
MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT IAF

Mr.Paul M. Burck, President

06/05/2006
Date

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Orion Registrar, Inc., USA

环境管理体系认证证书

经奥瑞认证有限公司审核确认：

上海电气太阳能有限公司

（地址：中国上海松江区松江出口加工区 A 区西泖泾路罗伊尔工业园区 11 号）

环境管理体系符合：

IS014001:2004

本环境管理体系覆盖下列产品：

太阳能电池和光伏组件生产活动、产品和服务

本认证证书受奥瑞认证有限公司监督，

获证组织应保持环境体系

以适应标准的要求。

客户编号：00216-00001　　证书号：N0000507-1

证书有效期：2006 年 6 月 5 日至 2009 年 6 月 4 日

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EAC Code(s)：19

ANAB ACCREDITED

President　　06/05/2006 Date

Orion Registrar, Inc. ★ Arvada, Colorado ★ PO Box 745070 ★ 303-456-6010 ★ FAX 303-456-6681

Orion Registrar, Inc., USA
Certificate of Registration

This is to certify the Environmental Management System of:

Shanghai Electric Solar Energy Co., Ltd.
No. 11 Royal Real Industrial Section, Xi Mao Jin Road,
A District, Songjiang Export Processing Zone,
Shanghai
China

Has been assessed by Orion Registrar and found to be in compliance with the following Environmental Standard:

ISO 14001: 2004

The Environmental Management System is Applicable to:

Manufacture, Sales and Service of "PV Modules"

The Registration Period is from June 5, 2006 to June 4, 2009
This registration is subject to the company maintaining its system to the required standard, and applicable exceptions, which will be monitored by Orion
Client ID 00216-00001. Certificate ID N0000507-1
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Date

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