



## DS5-45-MONO Series (45 Cells) 250wp

### General Description

As a solar specialist with more than 30 years of experience in photovoltaic (PV), DuSol has made and continues to make significant contribution to undertaking groundbreaking progress in solar technology. DuSol photovoltaic modules are designed for applications with high power requirements. These quality MONO-PERC modules produce a continuous, reliable yield, even under demanding operational conditions. All DuSol DS series modules offer system integration configurations which are optimal both technically and economically and are suitable for installations in on and off-grid PV systems.

### Future

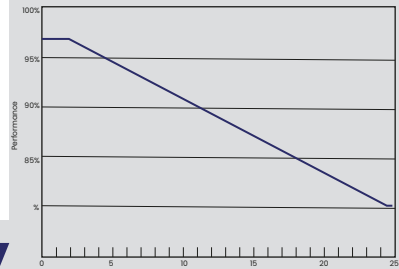
High-performance photovoltaic modules made of MONO-PERC (158.75mm)<sup>2</sup> 2 silicon DuSol solar cells with module efficiencies of 20.5% or higher.

- 5 busbar technology for enhancing the power output.
- Anti-reflex coating to increase light absorption.
- Production controlled positive power tolerance from 0 to +5%.
- Only modules will be delivered that have specific power or more for high energy yield.
- Delivery of modules in 5watt intervals.
- Improved temperature coefficient to reduce power losses at higher temperatures.
- High power performance even at lower irradiation.

### Quality PV Modules from DuSol

Continual checks guarantee a consistently high level of quality. Every module undergoes visual, mechanical, and electrical inspection. This is recognizable by

- 10 years product guarantee.
- 25 years linear performance guarantee.
- Minimum 96% of the specified minimum power output during the first year.
- Modular design gives the end customers the power of choice of capacity
- Compatible with most of the available Hybrid inverters
- Maximum 0.667% annual reduction of the power output for the following 24 years.



Desert sand storm test passed  
 (Albarubens Lab)



Salt spray test passed



### Certificates and approvals

All modules are tested and Certified according to

- IED/EN 61215 and IEC/EN 61730, Application class A
- Protection class / CE
- ISO9001 (DAC)

## Electrical Specification (STC)

### DS545250M

Nominal Power	P <sub>max</sub>	250	W
Open-circuit Voltage	V <sub>oc</sub>	30.4	V
Short Circuit Current	I <sub>sc</sub>	10.07	A
Voltage at Maximum Power	V <sub>mpp</sub>	26.1	V
Maximum Power Current	I <sub>mpp</sub>	9.56	A
Efficiency Module	n	20	%

STC Standard Test Conditions: Irradiance 1,000W/m<sup>2</sup>, AM 1.5, Cell Temperature 25°C. Rated Electrical Characteristics are within + % of the indicated values of I<sub>sc</sub>, V<sub>oc</sub>, and 0 to 5% of P<sub>max</sub> (power measurement tolerance ± 5%).

## Electrical Specification (NOCT)

### DS545250M

Nominal Power	P <sub>max</sub>	184.6	W
Open-circuit Voltage	V <sub>oc</sub>	28.07	V
Short Circuit Current	I <sub>sc</sub>	8.05	A
Voltage at Maximum Power	V <sub>mpp</sub>	23.82	V
Maximum Power Current	I <sub>mpp</sub>	7.75	A
Cell Tem (°C)	T deg	47.5	°C

NOCT (47.5°C): Module operating temperature at 800 W/m<sup>2</sup> irradiance, air temperature of 20°C, wind speed of 1 m/s

## Limits

Max Permissible System Voltage	1500VDC
Max Reverse Current	14A
Operating Tem	(-40 to +85) deg C
Max Mechanical Load	2400 N/m <sup>2</sup>

## Mechanical Data

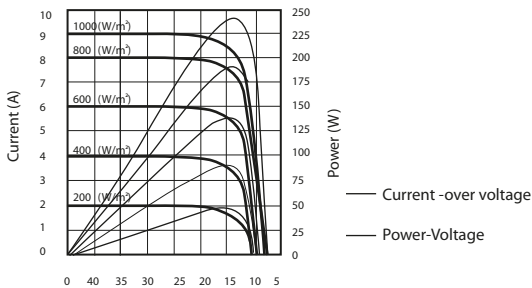
Length	1500(+ / -3.0 mm)
Width	840mm (+ / -2.0mm)
Depth	35mm(+/-0.8mm)
Weight	13.8Kg

## Temperature Co-efficient

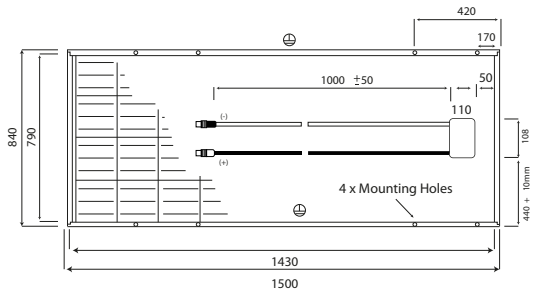
P <sub>max</sub>	-0.38% / K
V <sub>oc</sub>	-0.36% / K
I <sub>sc</sub>	+ 0.07% / K

## Characteristics

Characteristics curves: Current / Power against voltage (cell temperature: 25 °C)



## Rear View



All the measurements are in mm

## General Data

Cell Type	Mono PERC, 5BB (158.75x158.75)mm <sup>2</sup> , 45 cells in series
Front Glass	Tempered Low Iron Pattern Glass, 3.2mm
Module Frame	Anodized Aluminium, Silver
Connection Box	PPO PA, IP67, 110x108x19mm, 3by pass diodes
Cable	4mm <sup>2</sup> , Length 1000mm
Connector	SMK (MC4 Compatible), typ CCT 9901-2361F/2451F (katalognr. P51-75=H/R51-7), IP67

## Registration

DuSol Solar guarantees the safety, quality and value of your product over many years the only thing we ask you to do is to register your modules with the serial number, so that we can send you the guarantee certificate to register your modules quickly and easily at [www.DuSol.ae](http://www.DuSol.ae)