

**For a Free Quote:**

Web: [EnergyPal.com/solar](http://EnergyPal.com/solar)

Call: 1-800-990-3725

Email: [contact@energypal.com](mailto:contact@energypal.com)

# EnergyPal

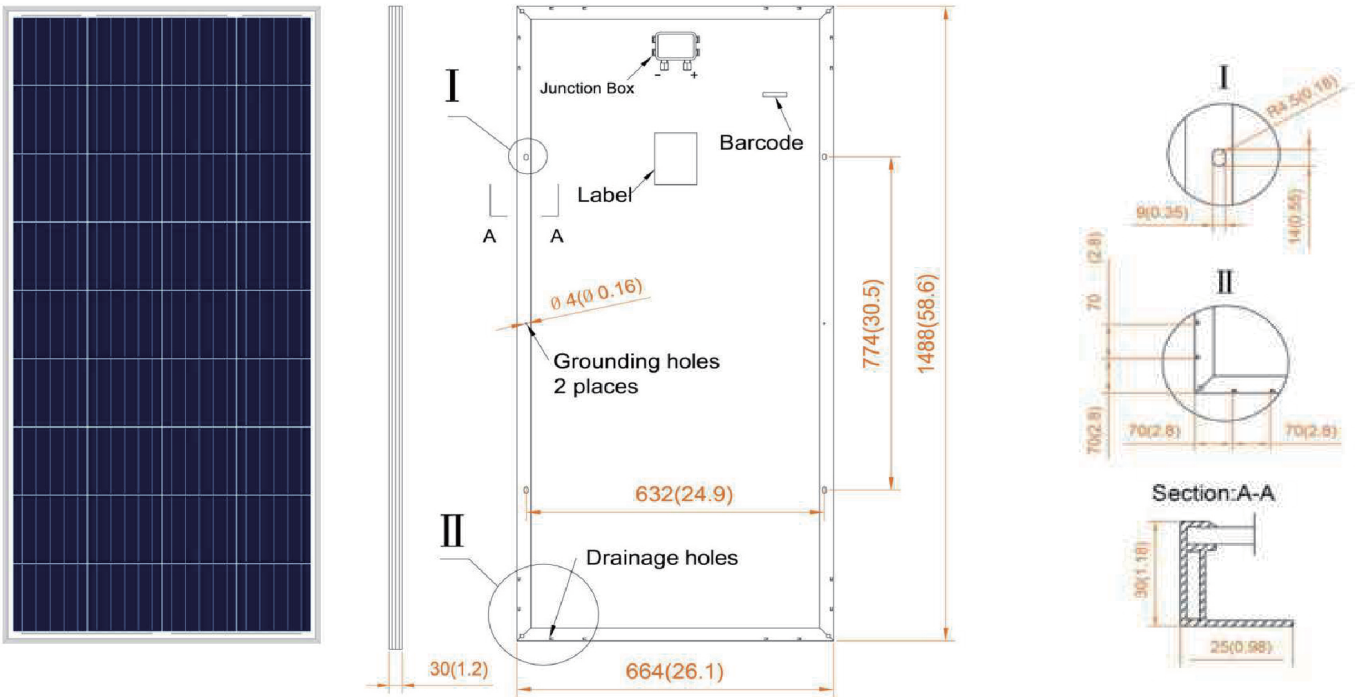
## **Solar Panel Guide Specification Data Sheet**

**Tamrons Active International Limited**




**FSM140~165**

**FSM165P636**

Also available on the web at  
[EnergyPal.com/tamrons-active-international-limited-solar-panels/fsm165p636](http://EnergyPal.com/tamrons-active-international-limited-solar-panels/fsm165p636)



## MANAGEMENT SYSTEM

-  ISO 9001: Quality management system
-  ISO 14001: Standard for environmental management system
-  OHSAS 18001: International standard for occupational health and safety assessment system



\*BLACK FRAME/BLACK BACK-SHEET PRODUCTS ARE AVAILABLE UPON REQUEST

## PRODUCT CERTIFICATES



### Electrical Characteristics under STC\*

Module Type	FSM140P636	FSM145P636	FSM150P636	FSM155P636	FSM160P636	FSM165P636
Maximum Power-Pmax (Wp)	140	145	150	155	160	165
Voltage at Maximum Power-Vmp (V)	18.2	18.3	18.4	18.5	18.6	18.8
Current at Maximum Power-Imp (A)	7.69	7.92	8.15	8.38	8.60	8.78
Open Circuit Voltage-Voc (V)	22.2	22.3	22.4	22.5	22.6	22.9
Short Circuit Voltage-Isc (A)	8.31	8.56	8.80	9.05	9.27	9.46
Module Efficiency- $\eta_m$ (%)	14.2	14.7	15.2	15.7	16.2	16.7
Power Tolerance (%)	0/+3	0/+3	0/+3	0/+3	0/+3	±3

\*STC (Standard Testing Conditions): Irradiance 1000W/m<sup>2</sup>, cell temperature 25°C, AM=1.5

\*NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m<sup>2</sup>, ambient temperature 20°C, wind speed 1 m/s

### Mechanical Characteristics

Cell Type	Poly-crystalline 156.75×156.75mm
Number of Cells	36 (4×9)
Dimension	1488×664×30mm
Weight	12 kg

### Temperature Characteristics

NOCT*	45±2°C
Temperature Coefficient of Pmax (%)	-0.40/°C
Temperature Coefficient of Voc (%)	-0.31/°C
Temperature Coefficient of Isc (%)	0.04/°C

### Maximum System Ratings

Operating Temperature	-40°C to +85°C
Maximum System Voltage	1000V DC
Maximum Series Fuse Rating	16A

### Packing Configuration

Quantity per Cartoon	35 pieces
Quantity per 20' Container	490 pieces
Quantity per 40' Container	1,470 pieces

\* The datasheet is for informational purposes only and subject to change without prior notice. Copyright © 2018 TAMRONS All rights reserved.



Positive Power Tolerance +0 ~ +4.99 w



Withstand Heavy Loading  
Front load 5400 Pa & Rear Load 2400 Pa



Excellent Low Light Performance  
3.5% relative eff. reduction at low-irradiance (200w/m<sup>2</sup>)



**Tamrons Active International Limited**

web: www.tamrons.com; mail: sales@tamrons.com

Production plants in China, Taiwan, Dubai and Thailand

can meet the customer's needs and brand OEM

