

# MONOCRYSTALLINE SOLAR PV MODULES

## 36 Cells | 45-185 WATT

This module is ideal for Solar Power packs applications, demonstrating financial astuteness and environmental stewardship.

### PRODUCT FEATURES



#### POSITIVE POWER TOLERANCE

Count on sunfuel to deliver all the watts you pay for with a positive only power tolerance of +3%.



#### 5 BUSBAR TECHNOLOGY

5 BB technology provides low resistance path to the flow of electrons even in low light conditions resulting better output power.



#### HIGH PERFORMANCE

This module uses an advanced surface texturing & ARC process to increase light absorption and improve efficiency.



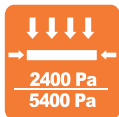
#### PID RESISTANT

Each Sunfuel module is manufactured in state of the art manufacturing environment using PID free raw material resulting high power output and less degradation.



#### LOW - LIGHT PERFORMANCE

Anitmony Free low iron ARC textured glass and textured 5 BB solar cell combines together to perform excellent in Low Light conditions.



#### HIGH LOAD RESISTANT

Each Sunfuel module withstand wind load [2400 Pa] and snow load [5400 Pa].



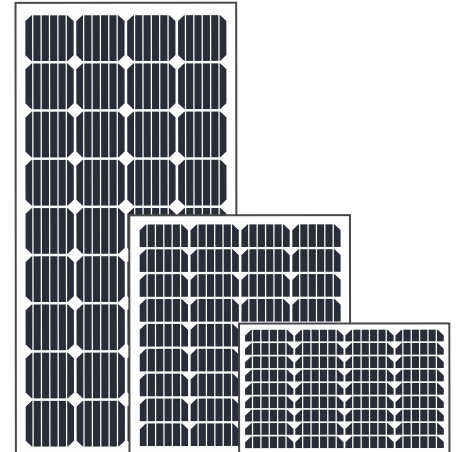
#### RELIABLE

25-year limited warranty on power output and 5-year limited warranty on materials or workmanship.



#### ELECTROLUMINESCENCE TESTING

Dual stage EL testing assures quality analysis by recognizing real time cell breakage, surface cracks and fissures of a micron scale.



### APPLICATIONS

- Off-grid residential systems
- Solar street light applications
- Domestic Lighting System
- Railway Signaling

### SUNFUEL TECHNOLOGIES OFFERS THE BEST COMBINED POWER AND PRODUCT WARRANTY

#### SUNFUEL PRODUCT & LINEAR PERFORMANCE WARRANTY

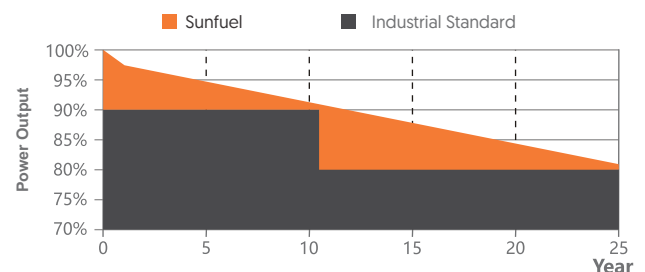
##### Product Warranty

5 Years

##### Performance Warranty \*



with 2.5% for 1st year degradation and 0.67% from year 2 to year 25



\*Refer to sunfuel's warranty document for terms and conditions. .

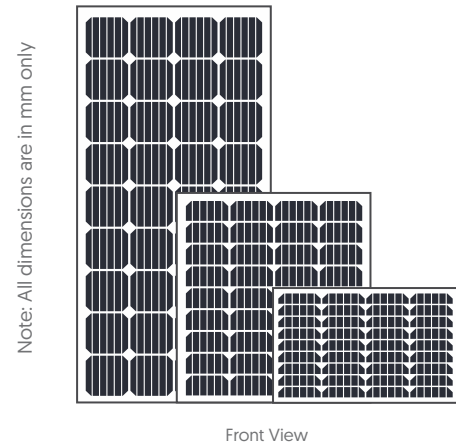
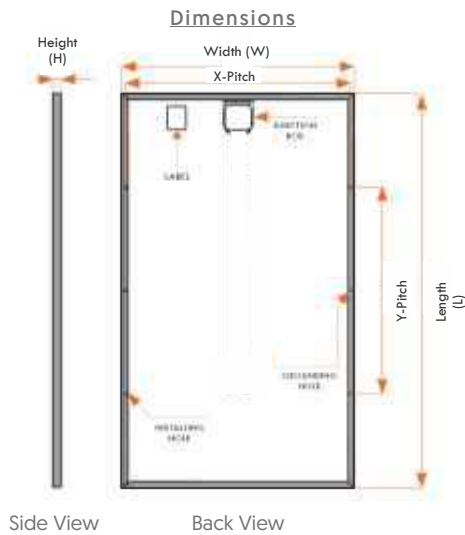


# TECHNICAL DATA

## ELECTRIC PARAMETERS

### Electrical Parameters at Standard Test Conditions (STC)

MODULES (SFTI)	36M 45	36M 60	36M 75	36M 90	36M 120	36M 125	36M 135	36M 140	36M 180	36M 185
Pmax [watts] (nominal)	45	60	75	90	120	125	135	140	180	185
Voltage at Pmax Vmp [V]	20.00	20.00	19.95	19.96	19.95	20.40	19.95	20.39	19.95	20.22
Current at Pmax Imp [A]	2.25	3.00	3.76	4.51	6.02	6.13	6.77	6.87	9.03	9.15
Open-circuit Voltage Voc [V]	23.36	23.33	23.26	23.26	23.26	23.80	23.26	23.76	23.26	23.58
Short Circuit Current Isc [A]	2.40	3.19	3.95	4.77	6.36	6.45	7.15	7.25	9.53	9.64
Module Efficiency [%]	15.74	16.40	16.96	17.24	17.70	18.44	17.89	18.56	18.17	18.67
X - Pitch [mm]	632		632		632		632		632	
Y - Pitch [mm]	215	275	332.5	392.5	510		567.5		745	
Module Dimensions L x W x H [mm]	430x665x35	550x665x35	665x665x35	785x665x35	1020x665x35		1135x665x35		1490 X 665 X 35	
Module Weight [kg]	3.0	4.2	5.0	5.8	7.6		8.5		11	



## CONSTRUCTION MATERIALS

Junction Box	IP 65, 2 Terminal / 3 Terminal with 2 bypass diodes
Application Class	CLASS A (Safety class II)
Front Covers	High transmission, low Iron, tempered glass
Cells	36 Nos., Monocrystalline
Cell Encapsulant	EVA (Ethylene Vinyl Acetate)
Back Cover	Composite film (Backsheet)
Frame	Anodized aluminium frame with twin wall profile
Mounting Holes	Mounting hole 4 nos. (oval shape [12mm x 9mm] and 6mm Grounding hole 2 nos.

## TEMPERATURE COEFFICIENT

Tc of Open Circuit Voltage [ $\beta$ ]	- 0.32 $\pm$ 0.01 % / $^{\circ}$ C
Tc of Short Circuit Current [ $\alpha$ ]	0.03 $\pm$ 0.02% / $^{\circ}$ C
Tc of Power [ $\gamma$ ]	- 0.43 $\pm$ 0.02% / $^{\circ}$ C
Maximum System Voltage [V]	1000 V
NOCT( $^{\circ}$ C)	44 $^{\circ}$ C $\pm$ 2 $^{\circ}$ C
Temperature Range	- 40 $^{\circ}$ C to + 85 $^{\circ}$ C

## PACKAGING INFORMATION

Individual packing, 5 modules in 1 master carton

**DISCLAIMER:** Specification included in the datasheet are subject to change without prior notice owing to continuous innovation on the Product Development and R&D activities. Sunfuel reserves the right to make any adjustment to the information.