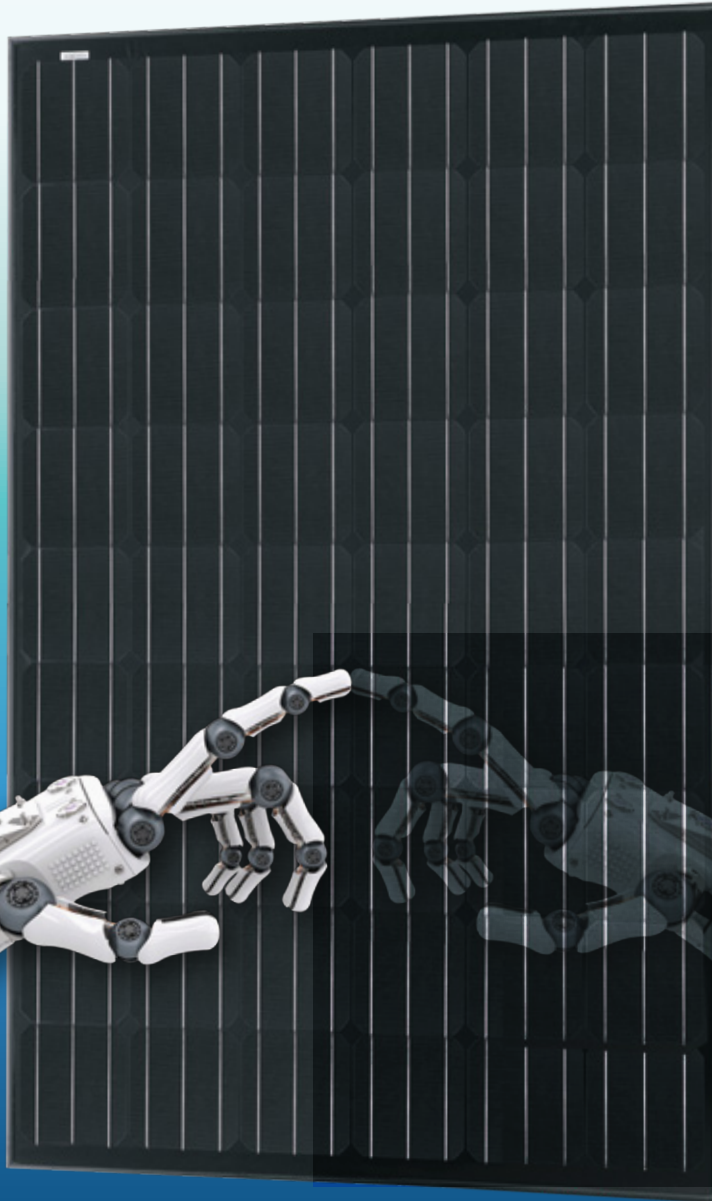




**SMART MODULES  
WITH INBUILT OPTIMIZER**



**TIGO SMART  
JUNCTION BOX**



- DIODES
- MONITORING
- SAFETY
- OPTIMIZATION
- LONGER STRINGS

## **SMART MODULE: EE-SM-250MB-54**

**MONOCRYSTALLINE SILICON SOLAR MODULE**

COMPACT SIZE. IDEAL FOR SMALLER ROOFS.  
SAME POWER OUTPUT AS STANDARD SIZE PANEL.  
EASIER TO HANDLE. NEW JUNCTION BOX

**250W / 260W / 265W 54 CELLS COMPACT MODUCE**

**12  
YEAR**

PRODUCT  
WARRANTY

**25  
YEAR**

PERORMANCE  
WARRANTY (90%)

**25  
YEAR**

PERORMANCE  
WARRANTY (80%)

**+3%**

POSITIVE  
TOLERANCE

**20.8%**

CELL  
EFFICIENCY

**17.8%**

MODILE  
EFFICIENCY

## ELECTRICAL PERFORMANCE

Module type	EE-SM-250MB-54 Series							
Power output	$P_{max}$	W	250	255	260	265	270	275
Power output tolerances	$\Delta P_{max}$	%	0 - 3					
Voltage at Pmax	$V_{mpp}$	V	28.41	28.06	28.77	29	29.29	29.51
Current at Pmax	$I_{mpp}$	A	8.8	8.91	9.04	9.14	9.22	9.32
Open-circuit voltage	$V_{oc}$	V	35.25	35.39	35.55	35.89	36.1	36.38
Short-circuit current	$I_{sc}$	A	9.21	9.31	9.41	9.50	9.61	9.70
Solar Module Efficiency	Eff.	%	17.01	17.35	17.67	18.03	18.37	18.71

STC:1000W/m<sup>2</sup> irradiance, 25°C cell temperature, AM 1.5g spectrum according to EN 60904-3.

## THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45±2
Temperature coefficient of Pmax	$\gamma$	%/°C	-0.40
Temperature coefficient of Voc	$\beta_{Voc}$	%/°C	-0.30
Temperature coefficient of Isc	$\alpha_{Isc}$	%/°C	0.06
Temperature coefficient of Vmpp	$\beta_{Vmpp}$	%/°C	-0.35

## OPERATING CONDITIONS

Max. system voltage	1000V <sub>oc</sub>
Limiting reverse current	15A
Operating temperature range	-40°C to 85°C
Max. static load front (e.g., snow)	5400Pa
Max. static load back (e.g., wind)	2400Pa
Max. hailstone impact (diameter / velocity)	25mm / 23m/s

## MECHANICAL CHARACTERISTICS

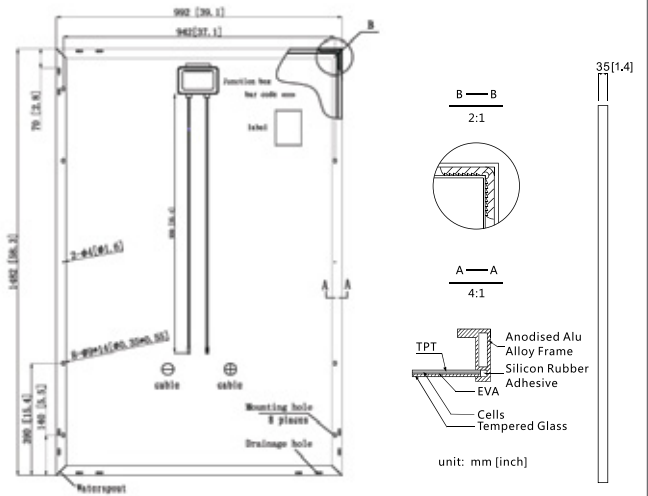
Front cover (material / thickness)	Tempered glass + ARC glass/3.2mm
Backsheet (color)	black
Cell (quantity/material/dimensions)	54 / monocrystalline silicon / 156 x 156mm
Frame (material / color)	anodized aluminum alloy / black
Junction box (protection degree)	≥ IP67
Cables & Plug connectors	900mm / 4mm <sup>2</sup> & MC4 compatible / IP67
Module Dimensions (L / W / H)	1482mm x 992mm x 35mm
Module Weight	16.0kg

## PACKING DETAILS

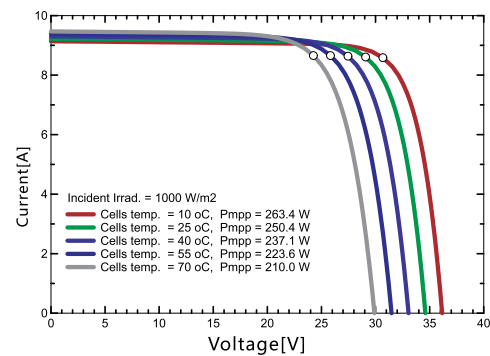
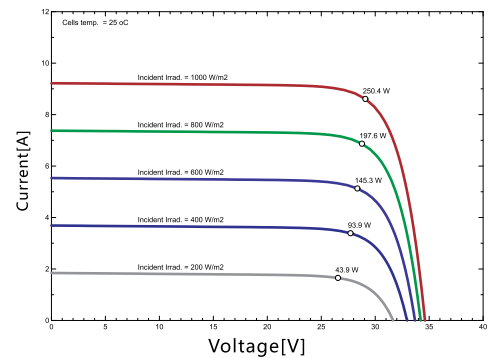
Container	20'GP	40'HQ
Pieces per pallet	60	66
Pallets per container	6	14
Pieces per container	360	924



## Module Diagram:



## Electrical Curves:



## DIODES MONITORING SAFETY OPTIMIZATION LONGER STRINGS

- String length increased up to 30%
- Fewer BOS components
- Faster installation
- Inverter optimization
- Lower wire-losses
- Plus all the benefits of Optimization