

# YLM 144 CELL

## ELECTRICAL PERFORMANCE

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

Module type	YLxxxD-40d 1/2 (xxx=Pmax) YLxxxD-40d 1500V 1/2 (xxx=Pmax)					
Power output	$P_{max}$	W	435	440	445	450
Power output tolerances	$\Delta P_{max}$	W	0/+5			
Module efficiency	$\eta_m$	%	20.01	20.24	20.47	20.70
Voltage at $P_{max}$	$V_{mpp}$	V	40.75	40.95	41.15	41.35
Current at $P_{max}$	$I_{mpp}$	A	10.68	10.75	10.82	10.89
Open-circuit voltage	$V_{oc}$	V	49.30	49.50	49.70	49.90
Short-circuit current	$I_{sc}$	A	11.26	11.33	11.40	11.47

STC: 1000W/m<sup>2</sup> irradiance, 25°C module temperature, AM1.5g spectrum according to EN 60904-3.  
Average relative efficiency reduction of 3.3% at 200W/m<sup>2</sup> according to EN 60904-1.

### Electrical parameters at Nominal Operating Cell Temperature (NOCT)

Power output	$P_{max}$	W	322.2	326.0	329.7	333.4
Voltage at $P_{max}$	$V_{mpp}$	V	37.7	37.9	38.1	38.3
Current at $P_{max}$	$I_{mpp}$	A	8.54	8.60	8.66	8.71
Open-circuit voltage	$V_{oc}$	V	46.0	46.2	46.3	46.5
Short-circuit current	$I_{sc}$	A	9.12	9.17	9.23	9.29

NOCT: open-circuit module operation temperature at 800W/m<sup>2</sup> irradiance, 20°C ambient temperature, 1m/s wind speed.

## THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45±2
Temperature coefficient of $P_{max}$	$\gamma$	%/°C	-0.37
Temperature coefficient of $V_{oc}$	$\beta_{Voc}$	%/°C	-0.29
Temperature coefficient of $I_{sc}$	$\alpha_{Isc}$	%/°C	0.06

## OPERATING CONDITIONS

Max. system voltage	1000V <sub>DC</sub> or 1500V <sub>DC</sub>
Max. series fuse rating	20A
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

\*DO NOT CONNECT FUSE IN COMBINER BOX WITH TWO OR MORE STRINGS IN PARALLEL CONNECTION

## CONSTRUCTION MATERIALS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material)	144 / monocrystalline silicon
Frame (material)	anodized aluminum alloy
Junction box (protection degree)	≥ IP67
Cable (length / cross-sectional area)	400(300)mm / 4mm <sup>2</sup>

- Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly and are not guaranteed.
- The data do not refer to a single module and they are not part of the offer, they only serve for comparison to different module types.

## QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, CE, MCS, ISO 9001:2008, ISO 14001:2004,  
BS OHSAS 18001:2007, SA 8000



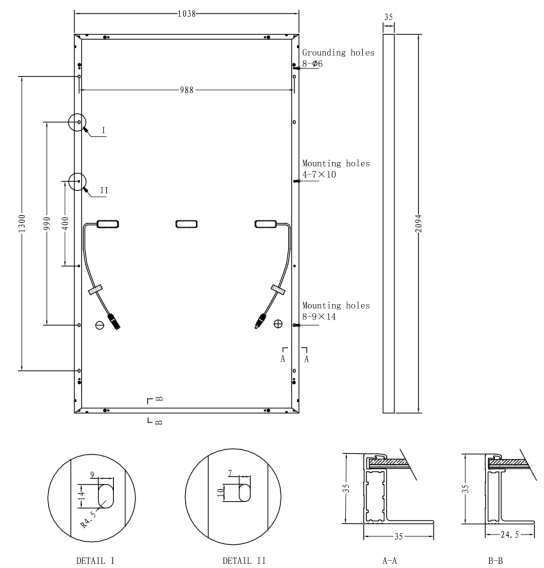
## GENERAL CHARACTERISTICS

Dimensions (L / W / H)	2094mm / 1038mm / 35mm
Weight	23.5kg

## PACKAGING SPECIFICATIONS

Number of modules per pallet	30
Number of pallets per 40' container	22
Packaging box dimensions (L / W / H)	2135mm / 1110mm / 1190mm
Box weight	745 kg

Unit: mm



**Warning:** Read the Installation and User Manual in its entirety before handling, installing and operating Yingli Solar modules.