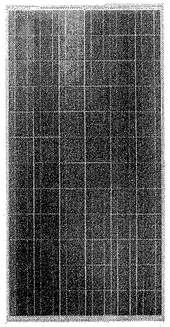
YGE-U 72 CELL SERIES

YL300P-35b
YL295P-35b
YL290P-35b
YL285P-35b
YL280P-35b

YINGLI SOLAR — U.S. Soccer Powered by Yingli Solar

INTRODUCING the YGE-U 72 Cell Series. Designed specifically for utility-scale projects and certified by UL for system voltages up to 1000V.



SYSTEM VOLTAGE

- 1000V maximum system voltage improves PV system energy yield by reducing resistive line losses

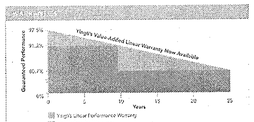
BOS COSTS

- Larger string sizes lower balance-of-system costs by decreasing the required number of wire runs and combiner boxes

RELIABILITY

- UL certification conveys confidence in product safety to authorities having jurisdiction throughout the US and Canada

WARRANTIES



10-year Limited Product Warranty also applies.*

* Its compliance will be subject to terms and conditions

ARRAY TECHNOLOGIES

The YGE-U 72 Cell Series is fully compatible with single-axis solar tracking systems manufactured by Array Technologies, which can boost system performance by up to 25% depending on site location.

CERTIFICATIONS

UL 1703 and UL 1703 UL Fire Safety Class C, CEC, FSEC, IEC 9001:2008, ISO 14001:2004, IEC61215:2005, IEC61730

YINGLISOLAR.COM/US | Yingli Americas

YGE-U 72 CELL SERIES

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ELECTRICAL PERFORMANCE

Electrical Parameters at Standard Test Conditions (STC)							
Module type			YL300P-35b	YL295P-35b	YL290P-35b	YL285P-35b	YL280P-35b
Power output	P_{max}	W	300	295	290	285	280
Power output tolerances	ΔP_{max}	W	0/+5				
Module efficiency	η_m	%	15.4	15.1	14.9	14.6	14.4
Voltage at P_{max}	V_{mpp}	V	36.7	36.3	35.8	35.5	35.3
Current at P_{max}	I_{mpp}	A	8.17	8.13	8.10	8.02	7.94
Open-circuit voltage	V_{oc}	V	46.3	45.4	45.3	45.0	45.0
Short-circuit current	I_{sc}	A	8.77	8.68	8.62	8.50	8.39

STC: irradiance of 1,000 W/m², 25°C cell temperature, AM1.5 light spectrum according to IEC 60904-3.
Average values of module efficiency reduction of 0.5% at 200 W/m² according to IEC 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)							
Power output	P_{max}	W	217.2	214.2	210.6	207.7	203.3
Voltage at P_{max}	V_{mpp}	V	33.4	32.7	32.3	32.0	32.0
Current at P_{max}	I_{mpp}	A	6.51	6.55	6.53	6.46	6.36
Open-circuit voltage	V_{oc}	V	42.7	41.4	41.3	41.1	41.1
Short-circuit current	I_{sc}	A	7.10	6.99	6.96	6.89	6.76

NOCT: irradiance of 800 W/m², AM 1.5 spectrum, wind speed 1 m/s, ambient temperature 20°C, cell temperature 45°C, open-circuit operation.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	46 ±2 °C
Temperature coefficient of P_{max}	γ	-0.45 %/°C
Temperature coefficient of V_{oc}	β_{Voc}	-0.33 %/°C
Temperature coefficient of I_{sc}	α_{Isc}	0.06 %/°C
Temperature coefficient of V_{mpp}	δ_{Vmpp}	-0.43 %/°C

OPERATING CONDITIONS

Max. system voltage	1000Vdc
Max. series fuse rating	15A
Limiting reverse current	15A
Operating temperature range	-40 to 194°F (-40 to 90°C)
Max. static load, front (e.g., snow and wind)	113 psf (5400 Pa)
Max. static load, back (e.g., wind)	35 psf (1670 Pa)
Hailstone impact	1 in. (25 mm) @ 51 mph (23 m/s)

CONSTRUCTION MATERIALS

Front cover (material/type/thickness)	Low-iron glass / tempered / 4.0 mm Glass may have antireflective coating
Cell (quantity/material/type/dimensions/number of busbars)	72 / polycrystalline / multicrystalline / 156 mm x 156 mm / 2.953 in x 2.953 in / 3
Encapsulant (material)	Ethylene vinyl acetate (EVA)
Frame (material/color)	Anodized aluminum alloy / silver
Junction box (protection degree)	IP65
Cable (type/length/gauge/cable diameter)	PV Wire / 47.24 in (1200 mm) / 12 AWG / 0.207 in (5.3 mm)
Plug connector (manufacturer/type/protection degree)	Amphenol / H4 UTX

The specifications in this datasheet are not guaranteed and are subject to change without prior notice. This datasheet complies with EN 50380:2003 requirements.

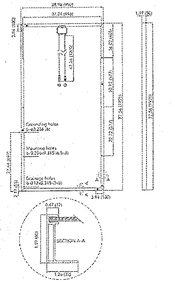
GENERAL CHARACTERISTICS

Dimensions (L/W/H)	77.56 in (1970 mm) / 38.98 in (990 mm) / 1.97 in (50 mm)
Weight	59.5 lbs (26.8 kg)

PACKAGING SPECIFICATIONS

Number of modules per pallet	21
Number of pallets per 53' container	26
Packaging box dimensions (L/W/H)	78 in (1990 mm) / 45.5 in (1155 mm) / 46 in (1150 mm)
Box weight	1551 lbs (703 kg)

Units: inch (mm)



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

Our Partners

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Tel: +1 (888) 686-8820

YINGLISOLAR.COM/US | NYSE:YGE

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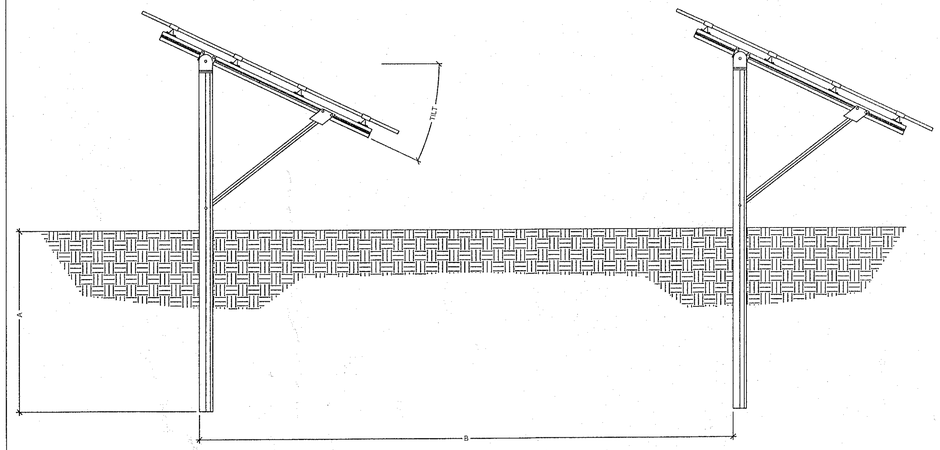
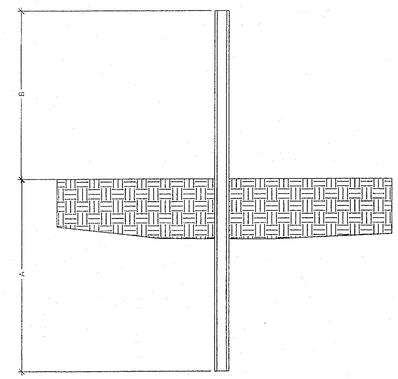


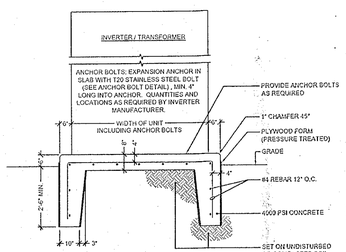
CROSS SECTION - TYPICAL GROUND MOUNTING
SCALE: NONE



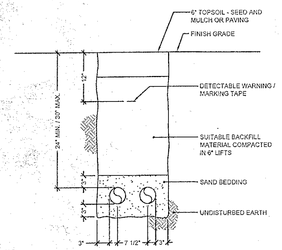
NOTES

1 IN THE EVENT OF ROCK REFUSAL, CONDUCT PULL OUT TEST TO MATCH SPECIFICATIONS PROVIDED BY GEOTECHNICAL ENGINEER.

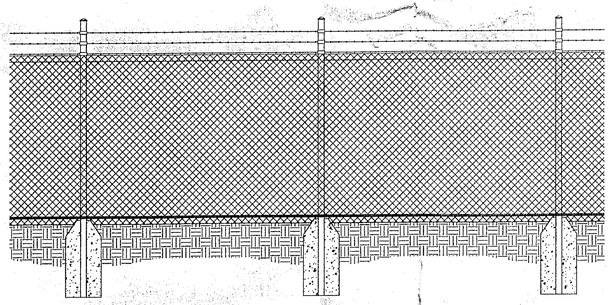
2 ALL POSTS TO BE DRIVEN UPRIGHT TO WITH THE LESSER OF MANUFACTURER'S TOLERANCE OR 2".



SECTION - CONCRETE PAD FOR INVERTER / TRANSFORMER
SCALE: NONE



DIRECT BURIAL PVC CONDUIT / DUCTBANK INSTALLATION - DETAIL - SECTION THROUGH TRENCH
SCALE: NONE



NOTES

1 FENCE SHALL BE GROUNDED USING A 10 MINIMUM COPPER LEAD BELOW GRADE AND A #4 ALUMINUM ALLOY TIE WIRE ABOVE GRADE CONNECTED TO THE FABRIC AT MULTIPLE POINTS AND TO EACH STRAND OF THE BARB WIRE. FENCE GROUNDS SHALL BE LOCATED ON THE INSIDE OF THE FENCE SO THAT NO PART OF THE FENCE SHALL BE OVER 60 (SIXTY) FEET FROM A GROUND CONNECTION. TIE ALL GATE PANELS AND GATEPOSTS OF ALL GATES WITH A CONTINUOUS COPPER WIRE OF 4/0 MINIMUM SIZE.
2 FENCE TO BE ALUMINUM-COATED STEEL CHAIN LINK FABRIC 6 FEET HIGH, PLUS 1 FOOT OF 3-STRAND BARBED WIRE ON TOP.
3 FENCE SHALL BE PROVIDED WITH 14" X 20" "DANGER" WARNING SIGNS INSTALLED AT INTERVALS DICTATED BY NESC.

FENCING DETAIL
SCALE: NONE

INCHES 0 1 2
Town of Bethlehem, NY

TOWN OF BETHLEHEM PLANNING BOARD APPROVAL

Town of Bethlehem Planning Board
By direction of the Chairman
these plans are hereby Approved.
See first sheet for date & signature.

DATE

STATE OF NEW YORK — JEFFREY ROGERS — 071271 — LICENSED PROFESSIONAL ENGINEER

6-20-13

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REV. NO.	DATE	DESCRIPTION	CEP&S APPROVAL	REV. NO.	DATE	DESCRIPTION	CEP&S APPROVAL

SITE ADDRESS
1277 FEURA BUSH ROAD
FEURA BUSH, NY 12067

Constellation. An Exelon Company
100 Constellation Way
Suite 1000C
Baltimore, MD 21202

PROJECT TITLE: **OWENS CORNING PV PROJECT 2.0MW (AC) SITE PLAN**

DRAWING TITLE: **SITE DETAILS** ---

DESIGNED BY:	RF
DRAWN BY:	RF
CHECKED BY:	---
SCALE:	---
DATE:	03/28/2013
CEP&S PROJECT NO.:	112228
DRAWING NO.:	SD-1