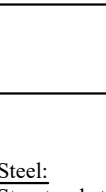
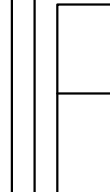




REGIONE PUGLIA
PROVINCIA DI FOGGIA
COMUNI DI CASTELLUCCIO DEI SAURI,
BOVINO, DELICETO E ASCOLI SATRIANO



PROGETTO IMPIANTO AGRIVOLTAICO DA REALIZZARE NEL COMUNE DI BOVINO (FG) IN LOCALITA' "LAMIA", E NEL COMUNE DI CASTELLUCCIO DEI SAURI IN LOCALITA' "POSTA CONTESSA", E DELLE RELATIVE OPERE DI CONNESSIONE DA REALIZZARE NEI COMUNI DI BOVINO, CASTELLUCCIO DEI SAURI, DELICETO E ASCOLTI SATRIANO (FG), AVENTE UNA POTENZA PARI A **63.784,00 kWp**, DENOMINATO **"DELICETO HV"**

PROGETTO DEFINITIVO

PARTICOLARI DEI TRACKER MONOASSIALI



LIV. PROG.	RIF. COD. PRATICA TERNA	CODICE ISTANZA AU	TAVOLA	DATA	SCALA
PD	202001480	JUTWD01	D.18	07.02.2024	1:100

REVISIONI					
REV.	DATA	DESCRIZIONE	ESEGUITO	VERIFICATO	APPROVATO



HIVE
ENERGY



SUNLEONARD
Energy

IF SOLAR S.r.l.

PROGETTAZIONE
HORIZONFIRM

Ing. D. Sinacore
Ing. A. Costantino
Ing. C. Chiaruzzi
Ing. G. Schillaci
Ing. G. Bufla
Ing. M.C. Musca

Arch. A. Calandriso
Arch. S. Murtomus
Arch. F. G. Mazzola
Arch. G. Vella
Dott. Agr. B. Micluzzo
Dott. Biol. M. Cassia

FIRMA RESPONSABILE

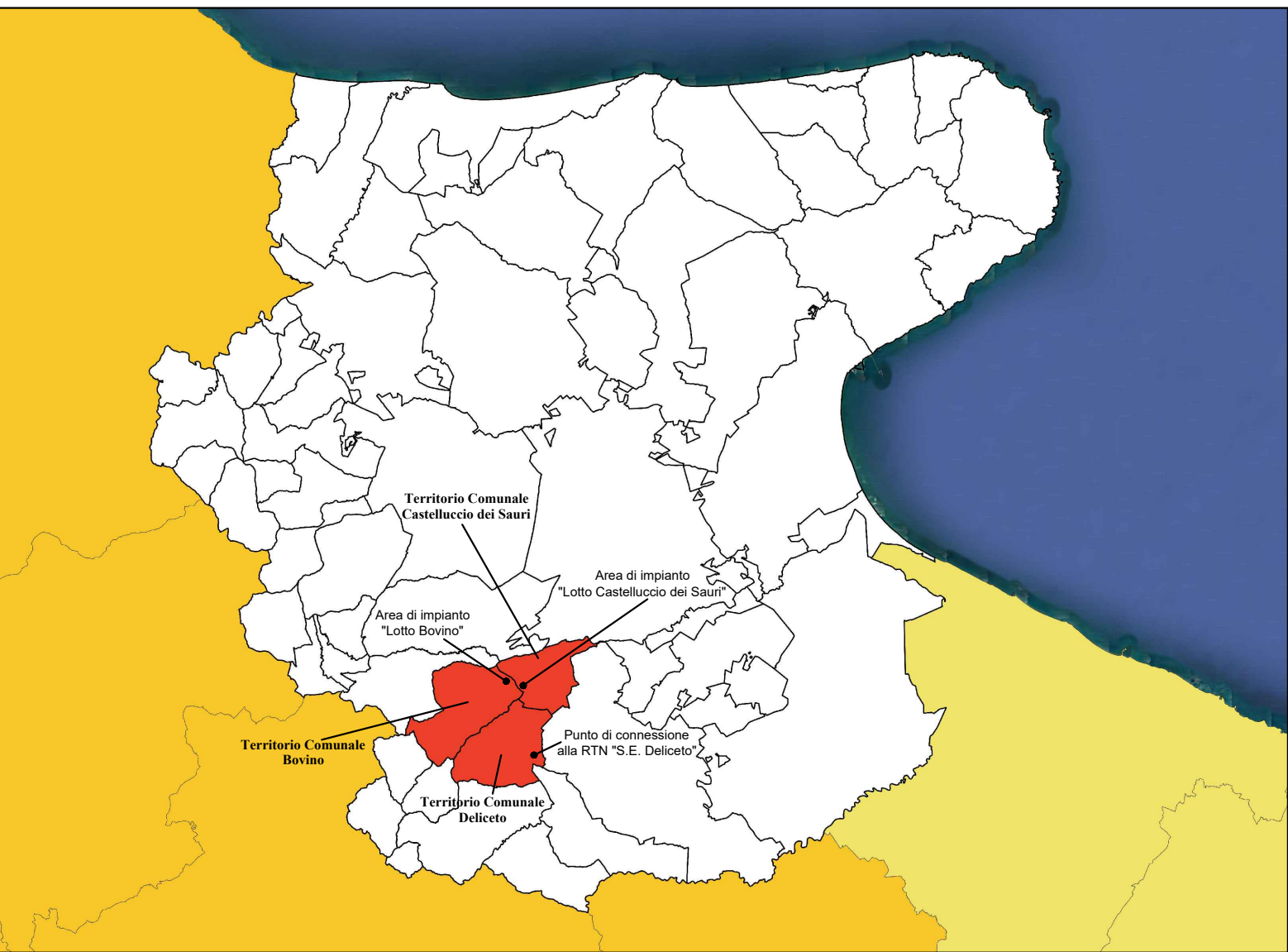
FIRMA DIGITALE PROGETTISTA

ENTE

PROFESSIONISTA INCARICATO

FIRMA DIGITALE PROGETTISTA

FIRMA GEOGRAFICA E TIMBRO PROFESSIONISTA



Material characteristics

Steel:
Structural steel - At least S235 JR - thickness and yield strengths according to structural calculation

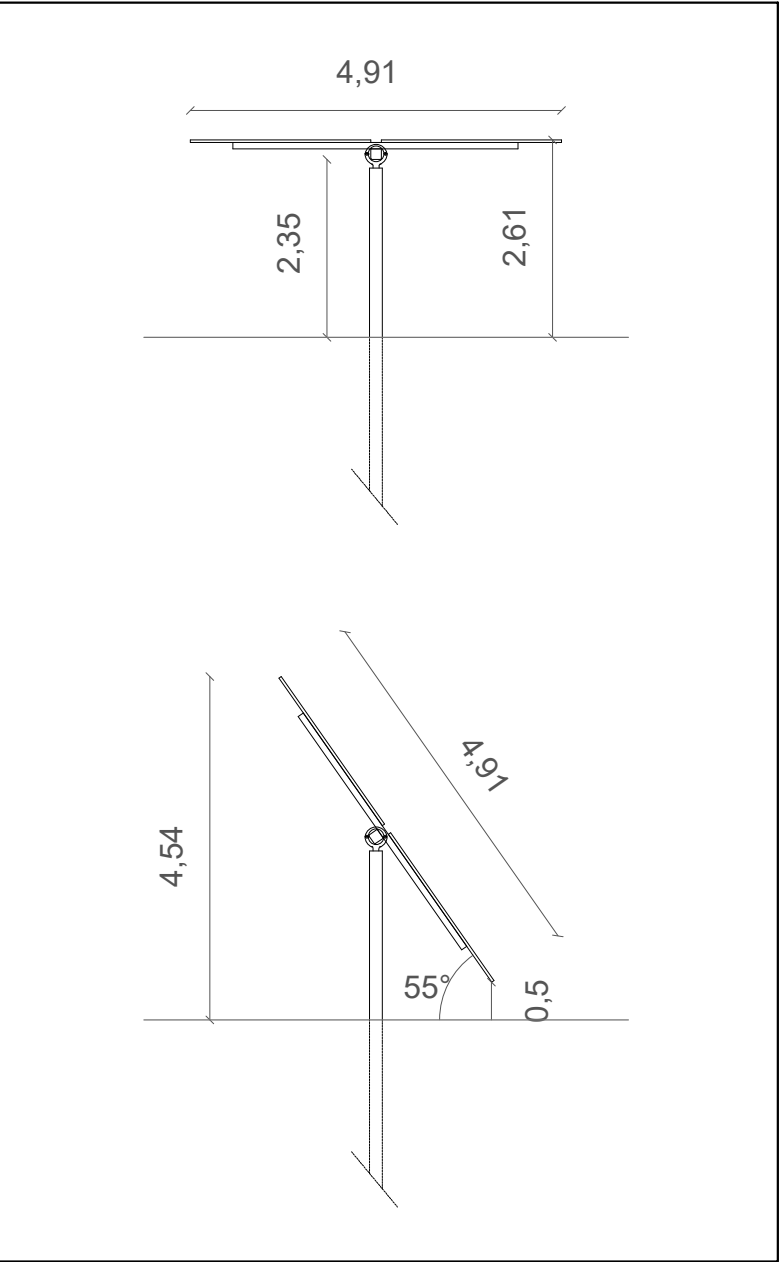
Spherical bearings:
Bronze / Stainless steel

Screws, nuts, washer:
Basic option: Hot-Galvanized steel S 8
Optimization option: steel S 8 - A2L - ISO4042

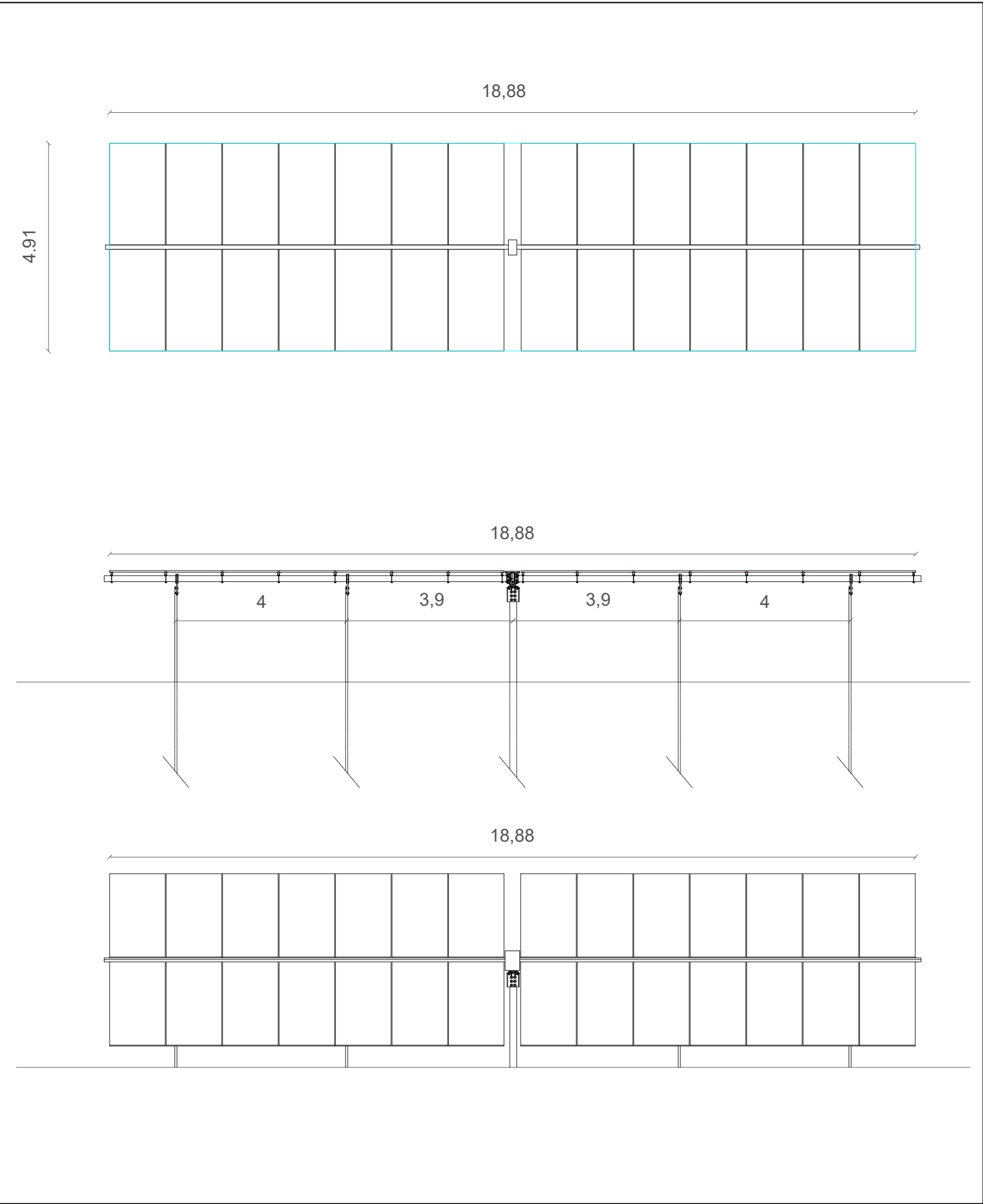
Galvanizing:
- **Basic Option:**
All equipment in steel must be hot-dip galvanized, according to the UNI EN ISO 1461. Other steel parts pre-galvanized according EN10346 (Z275) or equivalent for national standard.

- **Optimization option pre-galvanized steel:**
Foundation posts and movement steel parts galvanized according UNI EN ISO 1461. Other steel parts pre-galvanized according EN10346 (Z275) or equivalent for national standard.

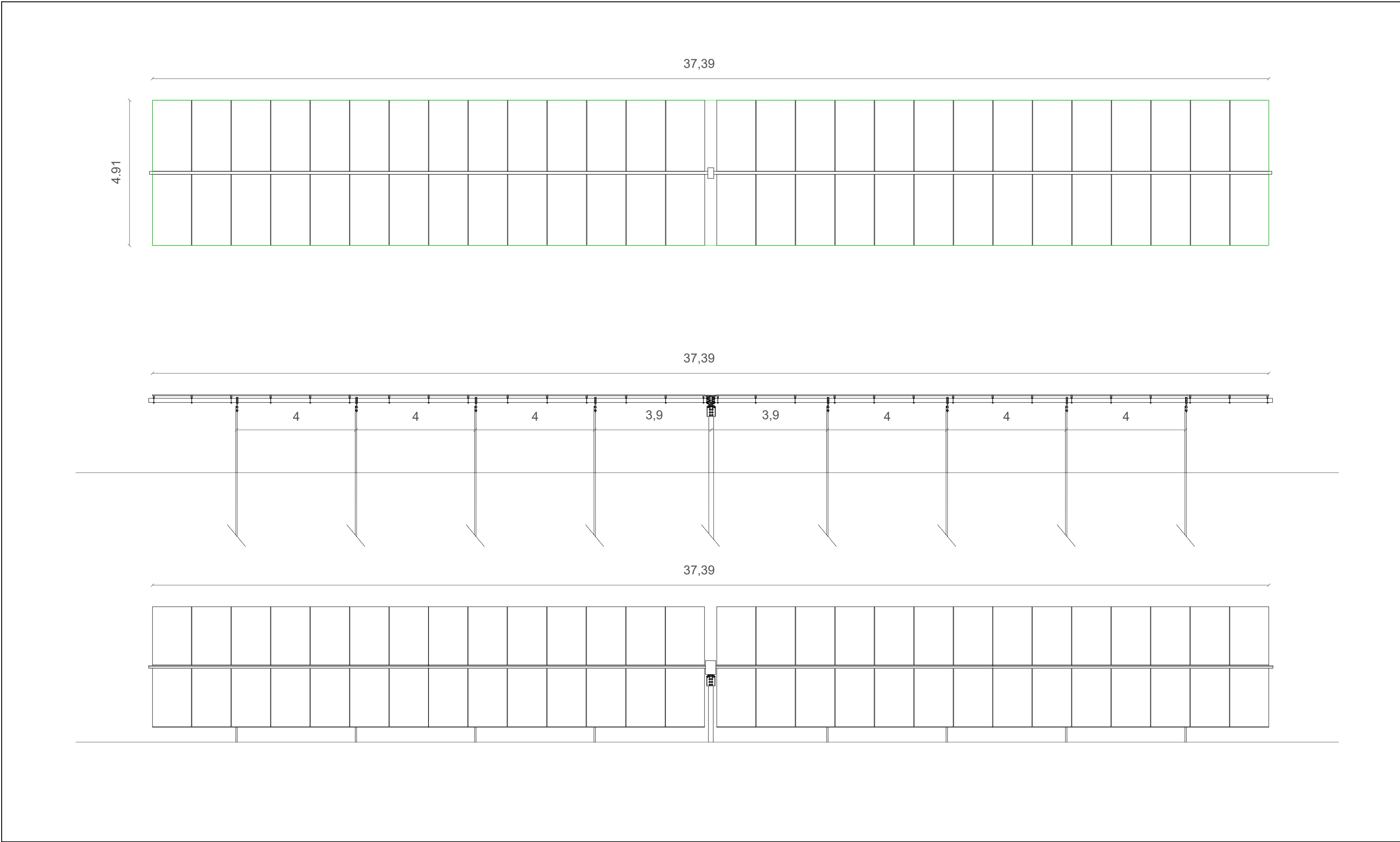
- **Optimization option weathering steel (Corten):**
Steel parts don't need any galvanization treatment, sacrificial thickness will be calculated for ISO9223 site classification for a design lifetime of 30 years



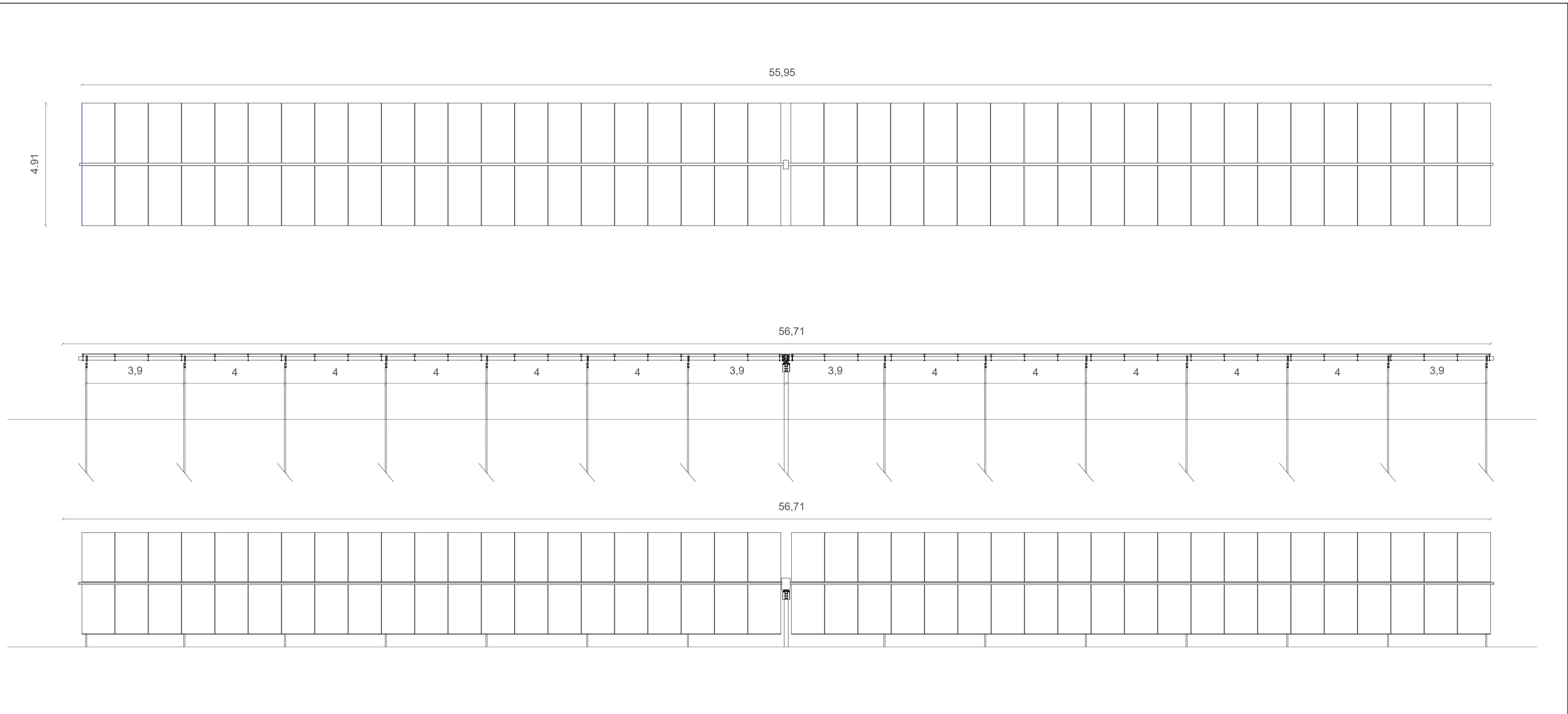
DETTAGLI DEI TRACKER CON VISTA TRASVERSALE IN POSIZIONE DI RIPOSO E DI MASSIMA INCLINAZIONE



DETTAGLI TRACKER DA 28 CON VISTA LONGITUDINALE IN POSIZIONE DI RIPOSO E DI MASSIMA INCLINAZIONE



DETTAGLI TRACKER DA 56 CON VISTA LONGITUDINALE IN POSIZIONE DI RIPOSO E DI MASSIMA INCLINAZIONE



DETTAGLI TRACKER DA 84 CON VISTA LONGITUDINALE IN POSIZIONE DI RIPOSO E DI MASSIMA INCLINAZIONE



PRODUCT: TSM-DEG21C-20
PRODUCT RANGE: 635-670W

670W
MAXIMUM POWER OUTPUT

0~+5W
POSITIVE POWER TOLERANCE

21.6%
MAXIMUM EFFICIENCY

1300

2500

2500

1300

1300

2500

2500

1300

Front View

Back View

A A

B B

I-V CURVES OF PV MODULE(650 W)

P-V CURVES OF PV MODULE(650 W)

ELECTRICAL DATA (STC)				Solar Cable								
Peak Power (Watts) (P _{max})	635	640	645	650	655	660	665	670	Solar Cable	Monocrystalline		
Power Tolerance (Watts) (P _{max})	0~+5	0~+5	0~+5	0~+5	0~+5	0~+5	0~+5	0~+5	Watt per cell	120-watt		
Maximum Power Voltage (V _{mp})	37.1	37.3	37.5	37.7	37.9	38.1	38.3	38.5	Module Dimensions	2264x1303x35 mm (89.16x51.30x1.38 inches)		
Maximum Power Current (I _{mp})	17.15	17.19	17.23	17.27	17.31	17.35	17.39	17.43	Weight	38.7kg (85.3 lb)		
Open Circuit Voltage (V _{oc})	44.9	45.1	45.3	45.5	45.7	45.9	46.1	46.3	Front Glass	2.0mm (0.008 inches) High Transmittance, Antireflection Coated		
Short Circuit Current (I _{sc})	18.21	18.26	18.31	18.35	18.40	18.45	18.50	18.55	Encapsulant material	POE EVA		
Module Efficiency (%)	20.4	20.6	20.8	20.9	21.1	21.2	21.4	21.6	Back Glass	2.0mm (0.008 inches) High Transmittance, Antireflection Coated		
STC reference conditions: Air Temperature 25°C, Air Mass 1.5, Irradiance 1000 W/m²												
Electrical characteristics with different power bin (reference to 30% irradiance ratio)												
Total Equivalent power (P _{max})	680	695	690	695	705	705	720	725	Frame	35mm (1.38 inches) Anodized Aluminum Alloy		
Maximum Power Voltage (V _{mp})	37.1	37.3	37.5	37.7	37.9	38.1	38.3	38.5	J-Box	IP65 rated		
Maximum Power Current (I _{mp})	18.35	18.39	18.44	18.48	18.52	18.55	18.60	18.65	Cables	Photovoltaic Technology Cable 4.0mm² (0.008 inches²)		
Open Circuit Voltage (V _{oc})	44.9	45.1	45.3	45.5	45.7	45.9	46.1	46.3	Connector	MC4 EVO2/T54*		
Short Circuit Current (I _{sc})	18.40	18.54	18.59	18.63	18.68	18.74	18.79	18.84	Trina Solar's Vertex Bifacial Dual Glass Performance Warranty			
Module width (mm)	1306											
Electrical Data (NOCT)												
Maximum Power (W)	480	484	488	492	495	499	504	508	100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% Years 85.0%			
Maximum Power Voltage (V _{mp})	34.6	34.7	34.9	35.1	35.2	35.4	35.5	35.7				
Maximum Power Current (I _{mp})	13.90	13.94	13.98	14.01	14.04	14.07	14.10	14.13				
Open Circuit Voltage (V _{oc})	42.3	42.5	42.7	42.9	43.0	43.2	43.4	43.6				
Short Circuit Current (I _{sc})	14.67	14.71	14.75	14.79	14.83	14.87	14.90	14.95				