

# PROVINCIA DI MATERA

## COMUNE DI SALANDRA

LOCALITA':

# CONTRADA LOMBONE

PROGETTO:

**INTERVENTO PER L'ATTUAZIONE DELLA TRANSIZIONE ENERGETICA, MEDIANTE LA REALIZZAZIONE DI UN PARCO AGRIVOLTAICO DIFFUSO A TERRA, DI POTENZA PARI A CIRCA 160,00 MWP, CON SISTEMA DI STORAGE E GRUPPO POWER-TO-GAS, PER LA PRODUZIONE DI IDROGENO VERDE"**

TITOLO DOCUMENTO:

## Schemi funzionali dei singoli moduli

REFERENTE PER LO SVILUPPO DEL PROGETTO



### ENERGY CONSULTING & SERVICES ITALY s.r.l.

N. REA 2639769 C.C.I.A.A. di Milano  
Corso Matteotti, 1 - 20121 Milano (MI)  
energyconsultingervicesitalysrl@legalmail.it  
CF/P.IVA 12085480965

SOGGETTO RICHIEDENTE



### CLEAN ENERGY BASILICATA S.R.L.

N. REA 2587685 C.C.I.A.A. di Milano  
Via Santa Sofia, 22 - 20122 Milano (MI)  
PEC: cleanenergyragosrl@legalmail.it  
CF/P.IVA 11210080963

GRUPPO DI PROGETTAZIONE



**Ing. Carmen Martone**

**Geol. Raffaele Nardone**

Via V. Verrastro 15/A, 85100 Potenza  
P.Iva 02094310766



**Ing. Domenico Ivan CASTALDO**

Iscr. n°8630 Y Ordine Ingegneri di Torino

C.F. CST DNC 73M18 H355W -

Via Treviso n. 12 CAP 10144 - Torino

Tel. 011/217.0291

PEC: info@pec.studioingcastaldo.it

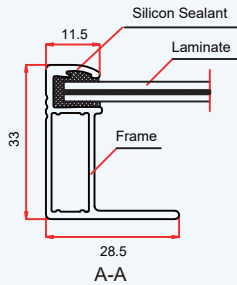


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DIMENSIONS OF PV MODULE(mm)

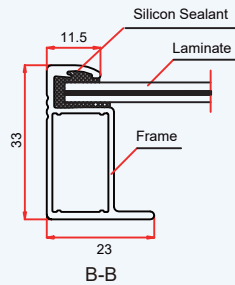


Front View



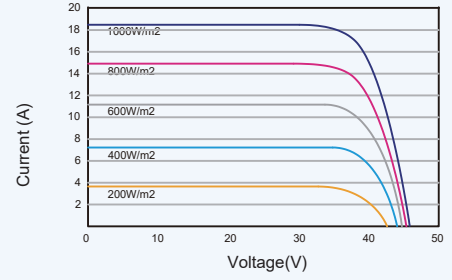
A-A

Back View

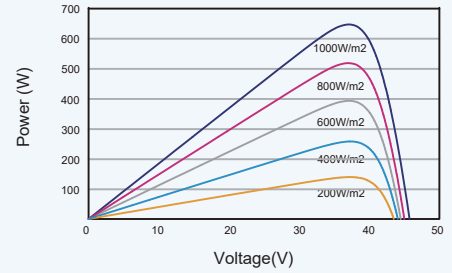


B-B

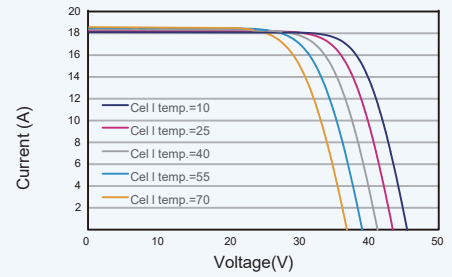
I-V CURVES OF PV MODULE(650 W)



P-V CURVES OF PV MODULE(650 W)



I-V CURVES OF PV MODULE(650 W)



ELECTRICAL DATA (STC)

Peak Power Watts-PMAX (Wp)*	645	650	655	660	665
Power Tolerance-PMAX (W)	0 ~ +5				
Maximum Power Voltage-VMPP (V)	37.5	37.7	37.9	38.1	38.3
Maximum Power Current-IMPP (A)	17.23	17.27	17.31	17.35	17.39
Open Circuit Voltage-VOC (V)	45.3	45.5	45.7	45.9	46.1
Short Circuit Current-ISC (A)	18.31	18.35	18.40	18.45	18.50
Module Efficiency η m (%)	20.8	20.9	21.1	21.2	21.4

STC: Irradiance 1000W/m2, Cell Temperature 25°C, Air Mass AM1.5. \*Measuring tolerance: ±3%.

Electrical characteristics with different power bin (reference to 10% Irradiance ratio)

Total Equivalent power -PMAX (Wp)	690	696	701	706	712
Maximum Power Voltage-VMPP (V)	37.5	37.7	37.9	38.1	38.3
Maximum Power Current-IMPP (A)	18.44	18.48	18.52	18.56	18.60
Open Circuit Voltage-VOC (V)	45.3	45.5	45.7	45.9	46.1
Short Circuit Current-ISC (A)	19.59	19.63	19.69	19.74	19.79
Irradiance ratio (rear/front)	10%				

Power Bifaciality: 70±5%.

ELECTRICAL DATA (NOCT)

Maximum Power-PMAX (Wp)	488	492	495	499	504
Maximum Power Voltage-VMPP (V)	34.9	35.1	35.2	35.4	35.6
Maximum Power Current-IMPP (A)	13.98	14.01	14.05	14.10	14.16
Open Circuit Voltage-VOC (V)	42.7	42.9	43.0	43.2	43.4
Short Circuit Current-ISC (A)	14.75	14.79	14.83	14.87	14.91

NOCT: Irradiance at 800W/m2, Ambient Temperature 20°C, Wind Speed 1m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	132 cells
Module Dimensions	2384×1303×33 mm (93.86×51.30×1.30 inches)
Weight	38.3 kg (84.4 lb)
Front Glass	2.0 mm (0.08 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	POE/EVA
Back Glass	2.0 mm (0.08 inches), Heat Strengthened Glass (White Grid Glass)
Frame	33mm(1.30 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm2 (0.006 inches2), Portrait: 350/280 mm(13.78/11.02 inches) Length can be customized
Connector	MC4 EVO2 / TS4*

\*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of PMAX	- 0.34%/°C
Temperature Coefficient of VOC	- 0.25%/°C
Temperature Coefficient of ISC	0.04%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC) 1500V DC (UL)
Max Series Fuse Rating	35A

WARRANTY

12 year Product Workmanship Warranty  
30 year Power Warranty  
2% first year degradation  
0.45% Annual Power Attenuation

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box: 33 pieces  
Modules per 40' container : 594 pieces

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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