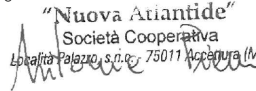
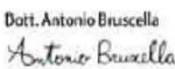




"DI BENEDETTO 2"

1	PROGETTO REV 00	MR	11/21	
REV.	DESCRIZIONE E REVISIONE	Sigla	Data	Firma
EMESSO				

PROGETTAZIONE	 SERVIZI DI INGEGNERIA Via della Pineta 1 - 85100 - Potenza email: info@gvcingegneria.it - website: www.gvcingegneria.it C.F. e P.IVA 01737760767 P.E.C: gvc srl@gigapec.it Direttore Tecnico: dott. ing. MICHELE RESTAINO Collaboratori GVC s.r.l. per il progetto: dott. ing. GIORGIO MARIA RESTAINO dott. ing. CARLO RESTAINO dott. ing. ATTILIO ZOLFANELLI  GVC s.r.l. Direttore Tecnico Ing. Michele Restaino	Nuova Atlantide soc. coop. a r.l. Località Palazzo snc - 75011 Accettura - Matera email: progettazione@nuovaatlantide.com Direttore Tecnico: geol. ANTONIO DI BIASE Collaboratore per il progetto: geol. TOMMASO SANTOCHIRICO "Nuova Atlantide" Società Cooperativa Località Palazzo snc - 75011 Accettura (MT)  	Dott. Antonio Bruscella Piazza Alcide De Gasperi 27 - 85100 - Potenza email: antonio Bruscella@hotmail.it Dott. Antonio Bruscella  	Dott. agr. Paolo Castelli Viale Croce Rossa 25 - 90144 - Palermo email: paolo.castelli@hotmail.it P.IVA 0546509826 	AGRONOMIA
	GEOLOGIA	ARCHEOLOGIA			

Comittente	MARMARIA SOLARE 10 s.r.l. Via Tevere n.41 - 00198 ROMA, Italia marmariasolare10srl@legalmail.it C.F. e P.IVA 16229571001 SOCIETA' DEL GRUPPO POWERTIS s.r.l.	Powertis Via Tevere, 41 - 00198 ROMA, Italia www.powertis.com	 Soltec Via Tevere, 41 - 00198 ROMA, Italia www.soltech.com			
Comune	COMUNE DI CRACO (MT)	COD. RIF	G/139/09/A/01/PD			
		ELABORATO		FILE		
Opera	PROGETTO PER LA REALIZZAZIONE DI UN IMPIANTO AGRIVOLTAICO DI POTENZA NOMINALE PARI A 19.958,40 kWp DENOMINATO "DI BENEDETTO 2" - UBICATO NEL COMUNE DI CRACO (MT) - REGIONE BASILICATA	Categoria	N.°			
		PD		Scala	-----	
Oggetto	PROGETTO DEFINITIVO SCHEMI FUNZIONALI DEI SINGOLI PANNELLI	A.12.b.3				
		Questo disegno è di nostra proprietà riservata a termine di legge e ne è vietata la riproduzione anche parziale senza nostra autorizzazione scritta				



Preliminary Technical
Information Sheet



HiKu7 Mono

640 W ~ 665 W

CS7N-640 | 645 | 650 | 655 | **660** | 665MS

MORE POWER

- 665 W Module power up to 665 W
Module efficiency up to 21.4 %
- \$ Up to 3.5 % lower LCOE
Up to 5.7 % lower system cost
- Comprehensive LID / LeTID mitigation technology, up to 50% lower degradation
- Compatible with mainstream trackers, cost effective product for utility power plant
- Better shading tolerance

MORE RELIABLE

- 40 °C lower hot spot temperature, greatly reduce module failure rate
- Minimizes micro-crack impacts
- Heavy snow load up to 5400 Pa, wind load up to 2400 Pa*

12 Years Enhanced Product Warranty on Materials and Workmanship*

25 Years Linear Power Performance Warranty*

1st year power degradation no more than 2%
Subsequent annual power degradation no more than 0.55%

*According to the applicable Canadian Solar Limited Warranty Statement.

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2015 / Quality management system
ISO 14001:2015 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

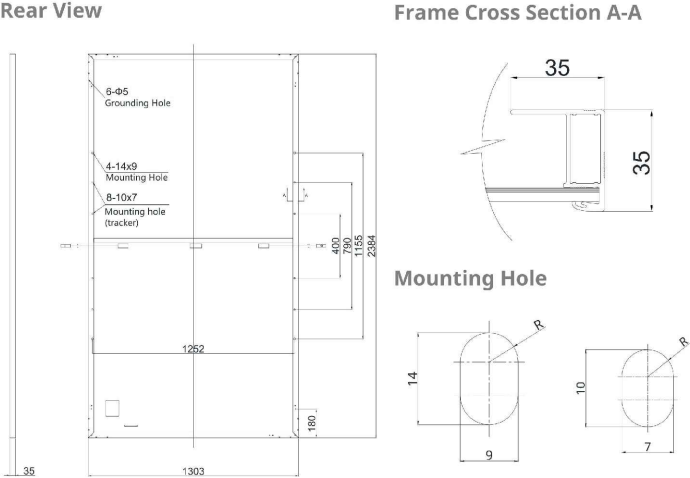
* As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. Canadian Solar was recognized as the No. 1 module supplier for quality and performance/price ratio in the IHS Module Customer Insight Survey, and is a leading PV project developer and manufacturer of solar modules, with over 46 GW deployed around the world since 2001.

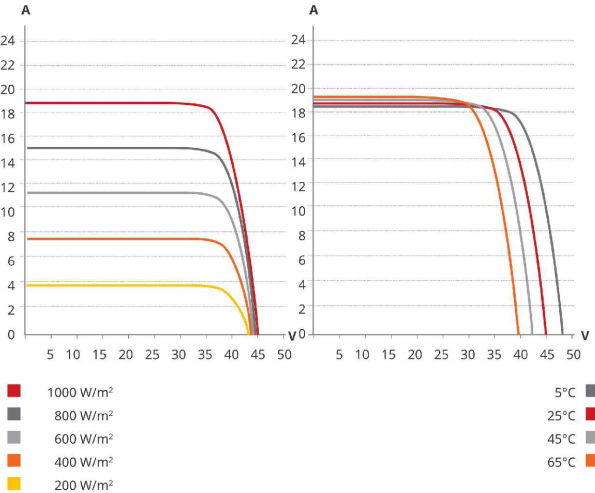
* For detailed information, please refer to the Installation Manual.

CANADIAN SOLAR INC.
545 Speedvale Avenue West, Guelph, Ontario N1K 1E6, Canada, www.csisolar.com, support@csisolar.com

ENGINEERING DRAWING (mm)



CS7N-650MS / I-V CURVES



ELECTRICAL DATA | STC*

CS7N	640MS	645MS	650MS	655MS	660MS	665MS
Nominal Max. Power (Pmax)	640 W	645 W	650 W	655 W	660 W	665 W
Opt. Operating Voltage (Vmp)	37.5 V	37.7 V	37.9 V	38.1 V	38.3 V	38.5 V
Opt. Operating Current (Imp)	17.07 A	17.11 A	17.16 A	17.20 A	17.24 A	17.28 A
Open Circuit Voltage (Voc)	44.6 V	44.8 V	45.0 V	45.2 V	45.4 V	45.6 V
Short Circuit Current (Isc)	18.31 A	18.35 A	18.39 A	18.43 A	18.47 A	18.51 A
Module Efficiency	20.6%	20.8%	20.9%	21.1%	21.2%	21.4%
Operating Temperature	-40°C ~ +85°C					
Max. System Voltage	1500V (IEC) or 1000V (IEC)					
Module Fire Performance	CLASS C (IEC 61730)					
Max. Series Fuse Rating	30 A					
Application Classification	Class A					
Power Tolerance	0 ~ + 10 W					

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL DATA | NMOT*

CS7N	640MS	645MS	650MS	655MS	660MS	665MS
Nominal Max. Power (Pmax)	478 W	482 W	486 W	489 W	493 W	497 W
Opt. Operating Voltage (Vmp)	35.0 V	35.2 V	35.4 V	35.6 V	35.8 V	36.0 V
Opt. Operating Current (Imp)	13.66 A	13.70 A	13.73 A	13.75 A	13.78 A	13.81 A
Open Circuit Voltage (Voc)	42.0 V	42.2 V	42.4 V	42.6 V	42.8 V	43.0 V
Short Circuit Current (Isc)	14.77 A	14.80 A	14.84 A	14.87 A	14.90 A	14.93 A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m² spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline
Cell Arrangement	132 [2 x (11 x 6)]
Dimensions	2384 × 1303 × 35 mm (93.9 × 51.3 × 1.38 in)
Weight	35.7 kg (78.7 lbs)
Front Cover	3.2 mm tempered glass
Frame	Anodized aluminium alloy, crossbar enhanced
J-Box	IP68, 3 bypass diodes
Cable	4 mm² (IEC)
Cable Length (Including Connector)	460 mm (18.1 in) (+) / 340 mm (13.4 in) (-) or customized length*
Connector	T4 series or H4 UTX or MC4-EVO2
Per Pallet	30 pieces
Per Container (40' HQ)	480 pieces

* For detailed information, please contact your local Canadian Solar sales and technical representatives.

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.34 % / °C
Temperature Coefficient (Voc)	-0.26 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature	42 ± 3°C

PARTNER SECTION



* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustment to the information described herein at any time without further notice. Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

CANADIAN SOLAR INC.
545 Speedvale Avenue West, Guelph, Ontario N1K 1E6, Canada, www.csisolar.com, support@csisolar.com