

# DL5.0C

DL5.0C is designed for residential and small commercial applications, with up to 50 units in parallel and an energy range from 5.12 kWh to 256 kWh. It supports 1C discharge rate. With high cycle times and a long lifespan, it ensures worry-free electricity consumption.



## Flexible Expansion

Up to 50 units in parallel, 5.12kWh--256kWh capacity



## 1C Discharge

Simultaneously supplying power to multiple loads, no need to worry about power outages



## Automatic Self-heating

-20°C to 55°C operating temperature (optional)



## Easy Installation

Support wall-mounted, floor-mounted, stacked and rack-mounted installations, high space utilization



## Long-term Reliability

LFP cells, 6000+ cycles, 10 years warranty



## All-round Safety

Short-circuit lockout, surge-resistant, safe and reliable

Model	DL5.0C
Battery Type	LiFePO <sub>4</sub>
Nominal Battery Energy	5.12 kWh
Nomina Capacity	100Ah
Nominal Voltage	51.2V
Operating Voltage	44.8~57.6V
Recomended Charge & Discharge C Rate	0.5C
Maximum Discharge Crate	1C
Recommended Charge/Discharge Current	50A
Max. Charge/Discharge Current	Charge 75A Discharge 100A
Peak Discharge Current	110A(15s)
Depth of Discharge (DOD)	90%
Net Weight	54kg
Dimension[W/D/H](mm)	558/545/150
Charging Temp. Range	0~55°C/-20~55°C (with heating function)
Discharging Temp. Range	-20~55°C
Communication	CAN/RS485/RS232
Cycle Life *	≥6000 Cycles
Protection Level	IP20
WIFI Module	Optional
Expansion	Up to 50 units in parallel
Certification & Safety Standard	UN38.3/CE-EMC/IEC62619/CEI-021/GOST-R
Compatible Inverterst	SMA/Schneider/Victron energy/Ingeteam/Solis/GoodWe/Growatt/Soplanet/Luxpower/DEYE etc.

\* Test conditions: 0.2C Charging & Discharging. @25°C, 90% DOD



## SNA 3-6k Monofase

- Commutazione da off-grid alla rete senza interruzione di fornitura di energia
- Ampio intervallo di tensione di ingresso fotovoltaico
- Monofase/Trifase sbilanciata
- Supporto fino a 16 unità in parallelo
- L'inverter principale viene generato automaticamente per gestire l'intero sistema
- Porta del generatore separata disponibile



# SpecifiCation

Ingresso (DC fotovoltaico)	SNA 3000W	SNA 4000W	SNA 5000W	SNA 6000W
Potenza massima dell'array fotovoltaico (W)	6000 (3000/3000)	8000 (4000/4000)	8000 (4000/4000)	8000 (4000/4000)
Tensione nominale di ingresso fotovoltaico (V)	320			
Numero di ingressi MPPT indipendenti	2			
Intervallo di tensione di ingresso fotovoltaico (V)	100~480			
Intervallo di tensione MPPT (V)	120~385			
Tensione di avviamento (V)	100			
Corrente massima di ingresso fotovoltaico per MPPT (A)	17/17			
Corrente massima di cortocircuito dell'ingresso fotovoltaico per MPPT (A)	25/25			
<b>Batteria</b>				
Tipo di batteria compatibile	Ioni di litio / Piombo acido			
Tensione nominale della batteria (V)	48			
Intervallo di tensione della batteria (V)	38.4~60			
Corrente massima di carica/scarica (A)	70	90	110	140
Potenza massima di scarica/scarica (W)	3000	4000	5000	6000
Capacità consigliata della batteria per inverter	>100AH	>200AH	>200AH	>200AH
Risveglio forzato della batteria dalla funzione fotovoltaica	Sì			
Risveglio forzato della batteria dalla funzione di rete	Sì			
<b>Rete</b>				
Tensione nominale AC (V)	230			
Frequenza nominale AC (Hz)	50/60			
Corrente nominale in uscita AC (A)	13.5	17.5	22	26.5
Potenza nominale in uscita AC (W)	3000	4000	5000	6000
Corrente massima di ingresso AC	26	35	35	39.5
Potenza massima di ingresso AC	6000	8000	8000	9000
Fattore di potenza (PF)	0.99			
Distanza armonica totale di corrente (THDI)	<5%			
Corrente AC nominale dei relè di BYPASS (A)	40			
<b>UPS</b>				
Potenza nominale un uscita (W)	3000	4000	5000	6000
Tensione nominale in uscita (V)	230			
Corrente nominale in uscita (A)	13.5	17.5	22	26.5
Frequenza nominale in uscita (Hz)	50/60			
Potenza di picco, durata	2Pn, <2S			
Tempo di commutazione	<15ms@Singolo/ <30ms@In parallelo			
Forma d'onda	Onda sinusoidale			
THDV	3%			
<b>Efficienza</b>				
Efficienza massima di MPPT	0.99			
Efficienza massima	0.93			
Efficienza UE	/			
Efficienza massima di carica	0.93			
Efficienza massima di scarica	0.93			
<b>Protezione</b>				
Protezione da sovracorrente/sovratensione	Sì			
Protezione da corrente di cortocircuito AC	Sì			
Monitoraggio della rete	Sì			
Protezione da sovratensioni AC Tipo III	Sì			
Protezione dalla polarità inversa della batteria	Sì			
<b>Generale</b>				
Dimensioni (L*A*P)	330*505*135mm/13*19.9*5.3inch			
Peso	14.5kg/32lbs			
Grado di protezione	IP20			
Intervallo di temperatura ambiente operativa	0~50°C			
Intervallo di temperatura di conservazione	-15~60°C			
Umidità relativa	5%~95%			
Display e interfaccia di comunicazione	LCD+LED, RS485/Wi-Fi/CAN			
Garanzia	2 anni			
Metodo di raffreddamento	Raffreddamento Intelligente			
Topologia	Senza trasformatore			
Altitudine	<2000m			
Emissioni sonore (tipiche)	<50dB			
<b>Standard e Certificazioni</b>				
IEC 62109-1, IEC 61000, IEC62040/EN62040, IEC62109, NRS 097-2-1				



**Preliminary**

# Vertex N

MONOFACIAL DUAL GLASS MODULE

PRODUCT: TSM-NEG18R.28

PRODUCT RANGE: 475-505W

**505W**

MAXIMUM POWER OUTPUT

**0~+5W**

POSITIVE POWER TOLERANCE

**22.7%**

MAXIMUM EFFICIENCY



### High customer value

- Lower LCOE (levelized cost of energy), reduced BOS (balance of system) cost, shorter payback time
- Guaranteed first year and annual degradation
- High module power, high string power and low voltage design



### High power up to 505W

- Up to 22.7% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection



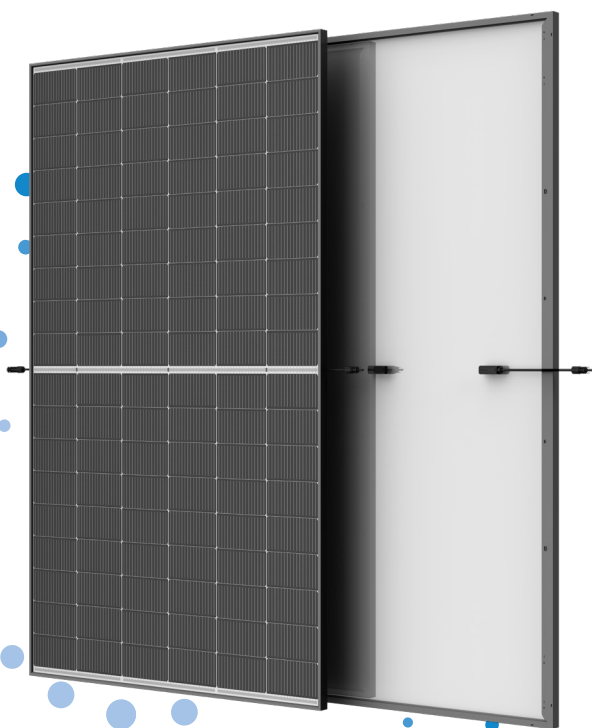
### Dual-glass design, high reliability

- Less prone to micro-cracks and scratches on the back during installation
- Applicable in harsh environments such as salt, ammonia, sand, high temperature and high humidity areas with excellent fire rating, weather resistance, salt spray, sand dust, ammonia performance
- Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load
- Easy to handle and install on roofs with excellent size and light weight

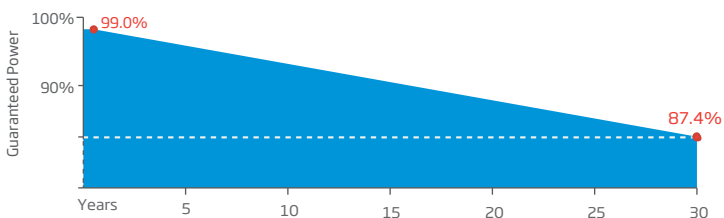


### Ultra-low degradation, longer warranty, higher output

- Extremely low 1% first year degradation and 0.4% annual power attenuation
- Up to 15 years product warranty and 30 years power warranty
- Lower temperature coefficient (-0.30%) and operating temperature



### Trina Solar's Vertex Monofacial Dual Glass Performance Warranty



### Comprehensive Products and System Certificates



IEC61215/IEC61730/IEC61701/IEC62716

ISO 9001: Quality Management System

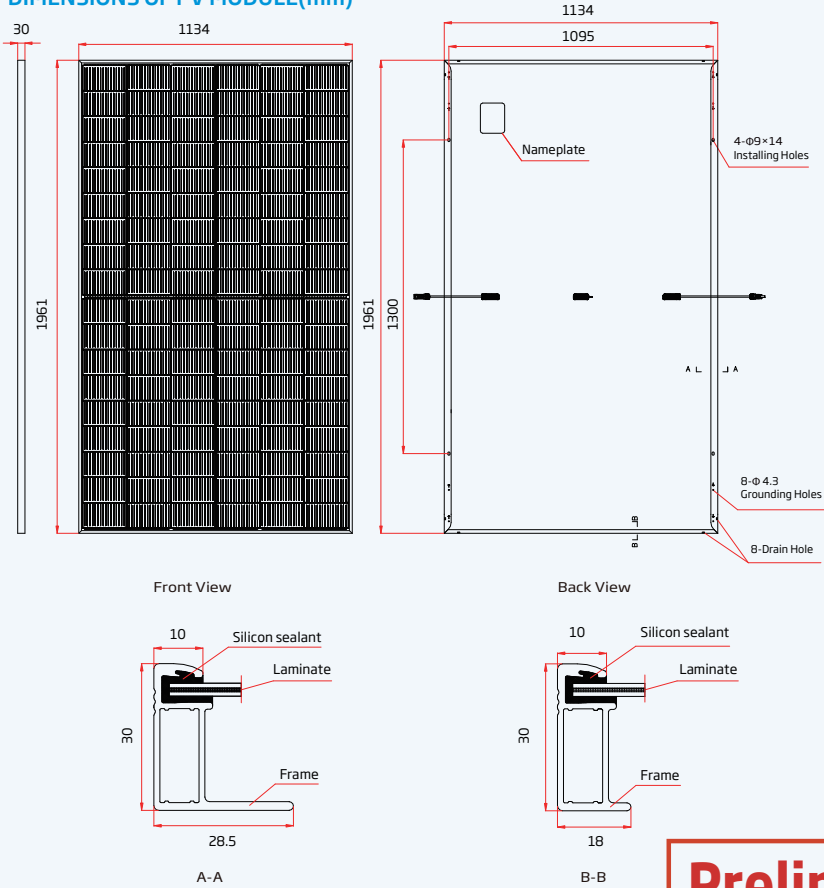
ISO 14001: Environmental Management System

ISO14064: Greenhouse Gases Emissions Verification

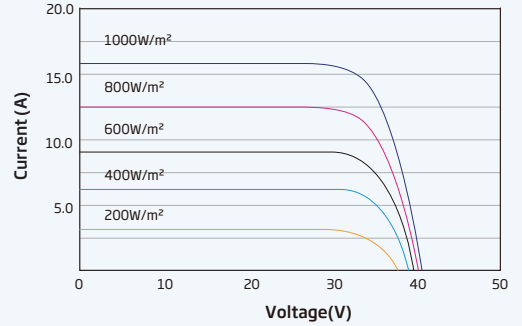
ISO45001: Occupational Health and Safety Management System



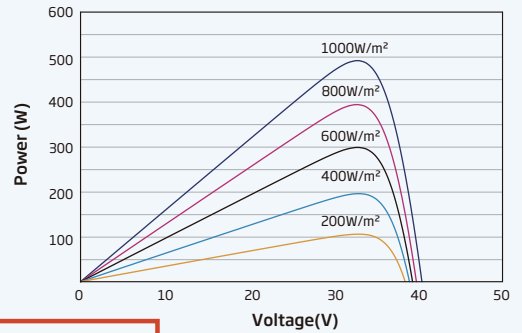
### DIMENSIONS OF PV MODULE(mm)



### I-V CURVES OF PV MODULE (490W)



### P-V CURVES OF PV MODULE (490W)



Preliminary

#### ELECTRICAL DATA (STC)

Peak Power Watts-P <sub>MAX</sub> (Wp)*	475	480	485	490	495	500	505
Power Tolerance-P <sub>MAX</sub> (W)	0 ~ +5						
Maximum Power Voltage-V <sub>MPP</sub> (V)	32.3	32.5	32.7	32.9	33.1	33.3	33.5
Maximum Power Current-I <sub>MPP</sub> (A)	14.72	14.77	14.84	14.91	14.97	15.03	15.09
Open Circuit Voltage-V <sub>OC</sub> (V)	39.0	39.2	39.4	39.6	39.8	40.0	40.3
Short Circuit Current-I <sub>SC</sub> (A)	15.68	15.72	15.76	15.80	15.83	15.86	15.90
Module Efficiency η <sub>m</sub> (%)	21.4	21.6	21.8	22.0	22.3	22.5	22.7

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5. \*Measuring tolerance: ±3%.

#### ELECTRICAL DATA (NOCT)

Maximum Power-P <sub>MAX</sub> (Wp)	363	367	370	374	378	381	385
Maximum Power Voltage-V <sub>MPP</sub> (V)	30.4	30.6	30.8	31.0	31.3	31.5	31.7
Maximum Power Current-I <sub>MPP</sub> (A)	11.94	11.98	12.02	12.06	12.08	12.11	12.15
Open Circuit Voltage-V <sub>OC</sub> (V)	36.9	37.1	37.3	37.5	37.7	38.0	38.2
Short Circuit Current-I <sub>SC</sub> (A)	12.64	12.67	12.70	12.74	12.76	12.78	12.82

NOCT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s.

#### MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	108 cells
Module Dimensions	1961×1134×30mm (77.20×44.65×1.18 inches)
Weight	23.5kg (51.8 lb)
Front Glass	1.6mm High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	POE/EVA
Back Glass	1.6mm (0.06 inches), Heat Strengthened Glass
Frame	30mm(0.06 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> ) Portrait: 280/350 mm(11.02/13.78 inches) Length can be customized
Connector	MC4 EVO2 / TS4 Plus / TS4*

\*Please refer to regional datasheet for specified connector.

#### TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of P <sub>MAX</sub>	-0.30%/°C
Temperature Coefficient of V <sub>OC</sub>	-0.24%/°C
Temperature Coefficient of I <sub>SC</sub>	0.04%/°C

#### MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	30A

#### WARRANTY

15 year Product Workmanship Warranty  
30 year Power Warranty  
1% first year degradation  
0.4% Annual Power Attenuation

(Please refer to product warranty for details)

#### PACKAGING CONFIGURATION

Modules per box: 36 pieces  
Modules per 40' container: 864 pieces