



# MOD 3~10KTL3-XH

- Battery ready, future proof
- Dual MPP Trackers
- Type II SPD on DC and AC side
- AFCI function optional
- 24h self-consumption monitoring



**GROWATT**

P O W E R  
- I N G O  
T O M O -  
R R O W O

Datasheet	MOD 3000TL3-XH	MOD 4000TL3-XH	MOD 5000TL3-XH	MOD 6000TL3-XH	MOD 7000TL3-XH	MOD 8000TL3-XH	MOD 9000TL3-XH	MOD 10KTL3-XH
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### Input data (DC)

Max. recommended PV power (for module STC)	6000W	8000W	10000W	12000W	14000W	16000W	18000W	20000W
Max. DC voltage	1100V							
Start voltage	160V							
Nominal voltage	600V							
MPPT voltage range	140V-1000V							
No. of MPP trackers	2							
No. of PV strings per MPP tracker	1							
Max. input current per MPP tracker	16A							
Max. short-circuit current per MPP tracker	20A							

### Input data (DC battery)

Compatible battery	ARK XH Battery System(7.68kWh-25.6kWh)							
Operating voltage range	600 V-950 V							
Max.operating current	11A				18.5A			
Max.charge power	6000W				10000W			
Max.discharge power	3300W	4400W	5500W	6600W	7700W	8800W	9900W	11000W*

### Output data (AC)

AC nominal power	3000W	4000W	5000W	6000W	7000W	8000W	9000W	10000W
Max. AC apparent power	3300VA	4400VA	5500VA	6600VA	7700VA	8800VA	9900VA	11000VA*
Nominal AC voltage (range*)	220V/380V, 230V/400V (340-440V)							
AC grid frequency (range*)	50/60 Hz (45-55Hz/55-65 Hz)							
Max. output current	5.0A	6.7A	8.3A	10.0A	11.7A	13.3A	15.0A	16.7A
Adjustable power factor	0.8leading...0.8lagging							
THDi	<3%							
AC grid connection type	3W+N+PE							

### Efficiency

MAX. efficiency	98.3%	98.3%	98.3%	98.3%	98.6%	98.6%	98.6%	98.6%
European efficiency	97.5%	97.5%	97.5%	97.5%	98.1%	98.1%	98.1%	98.1%
MPPT efficiency	99.9%							

### Protection devices

DC reverse polarity protection	Yes
DC Switch	Yes
AC/DC surge protection	Type II / Type II
Insulation resistance monitoring	Yes
AC short-circuit protection	Yes
Ground fault monitoring	Yes
Grid monitoring	Yes
Anti-islanding protection	Yes
Residual-current monitoring unit	Yes
String fault monitoring	Yes
AFCI protection	Optional

### General data

Dimensions (W / H / D)	425/387/147mm	425/387/147mm	425/387/147mm	425/387/147mm	425/387/178mm	425/387/178mm	425/387/178mm	425/387/178mm
Weight	12.5kg	12.5kg	12.5kg	12.5kg	14kg	14kg	14kg	14kg
Operating temperature range	- 25°C ... +60°C							
Nighttime power consumption	< 5.5W							
Topology	Transformerless							
Cooling	Natural convection							
Protection degree	IP66							
Relative humidity	0~100%							
Altitude	4000m							
DC connection	H4/MC4(Optional)							
AC connection	Connector							
Display	OLED + LED/WIFI + APP							
Interfaces: USB/RS485/WIFI /GPRS/LAN/RF	Yes/Yes/Optional/Optional/Optional/Optional							
Warranty: 5 years /10 years	Yes/Optional							

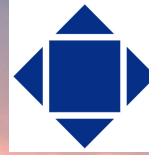
CE, VDE0126, Greece, EN50549, C10/C11, VFR 2019, IEC62116, IEC61727, IEC 60068, IEC 61683, CEI0-21, N4105, TOR Erzeuger G98/G99, G100, AS4777, UNE21 7001, UNE206007, PO12.2

\* For Belgium C10/C11, MOD 10KTL3-XH max. battery discharge power is limit to10000W and max. output power is limit to 10000VA.

\* The AC voltage range and frequency range may vary depending on specific country grid standard. All specifications are subject to change without notice.



**ASTRONERGY**  
A CHINT COMPANY



**TeknikGruppen**  
TG-Energi a/s

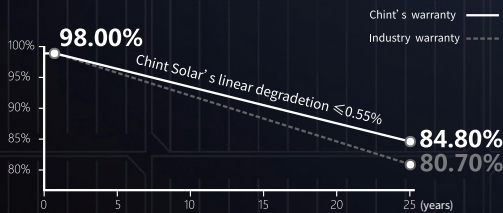
# ASTRO 5s

Create Sustainable and Efficient Green Energy

CHSM54M(BL)-HC  
Monofacial Series (182)

## 390~405W

- PERC+ / Multi-busbar / Half-cut
- Non-destructive cutting
- PID resistance
- All black



12-year Product Warranty  
25-year Linear Power Warranty



ISO 9001:2015:ISO Quality Management System  
ISO 14001:2015:ISO Environment Management System  
ISO 45001:Occupational Health and Safety  
The first solar company which passed the Nord IEC/TS 62941 certification audit.



Tier 1  
BloombergNEF



**390~405W**

POWER RANGE

**0~+5W**

POWER TOLERANCE

**20.7%**

MAX MODULE EFFICIENCY

**≤ 2.0%**

FIRST YEAR POWER DEGRADATION

**≤ 0.55%**

YEAR 2-25 POWER DEGRADATION

## Electrical Specifications

**STC:** Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25° C, AM=1.5

	390	395	400	405
Rated output (P <sub>mpp</sub> / W <sub>p</sub> )	390	395	400	405
Rated voltage (V <sub>mpp</sub> / V)	30.76	30.92	31.09	31.26
Rated current (I <sub>mpp</sub> / A)	12.68	12.77	12.86	12.96
Open circuit voltage (V <sub>oc</sub> / V)	36.60	36.80	37.00	37.20
Short circuit current (I <sub>sc</sub> / A)	13.40	13.52	13.65	13.76
Module efficiency	20.0%	20.2%	20.5%	20.7%

**NMOT:** Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20° C, AM=1.5, Wind Speed 1m/s

	291.5	295.2	298.9	302.7
Rated output (P <sub>mpp</sub> / W <sub>p</sub> )	291.5	295.2	298.9	302.7
Rated voltage (V <sub>mpp</sub> / V)	28.66	28.82	28.98	29.13
Rated current (I <sub>mpp</sub> / A)	10.17	10.24	10.32	10.39
Open circuit voltage (V <sub>oc</sub> / V)	34.59	34.78	34.97	35.15
Short circuit current (I <sub>sc</sub> / A)	10.87	10.97	11.07	11.17

## Temperature Ratings (STC)

Temperature coefficient (P <sub>mpp</sub> )	-0.35%/°C	No. of diodes	3
Temperature coefficient (I <sub>sc</sub> )	+0.045%/°C	Junction box IP rating	IP 68
Temperature coefficient (V <sub>oc</sub> )	-0.27%/°C	Max. series fuse rating	25 A
Nominal module operating temperature (NMOT)	41±2°C	Max. system voltage (IEC/UL)	1000V <sub>DC</sub>

## Operating Parameters

## Mechanical Specifications

Outer dimensions (L x W x H)	1722 x 1134 x 30 mm
Cell Type	P type Mono-crystalline
No. of cells	108 (6*18)
Frame technology	Aluminum, black anodized
Front glass thickness	3.2 mm
Cable length (IEC/UL)	Portrait: 300 mm; Landscape: 1200 mm
Cable diameter (IEC/UL)	4 mm <sup>2</sup> / 12 AWG
① Maximum mechanical test load	5400 Pa (front) / 2400 Pa (back)
Connector type (IEC/UL)	HCB40 / MC4 (optional)
Module weight	21.6 kg (Tolerance +/- 1.0kg)
Packing unit	36 pcs / box (Subject to sales contract)
Weight of packing unit (for 40' HQ container)	821 kg
Modules per 40' HQ container	936 pcs

① Refer to Astronergy crystalline installation manual or contact technical department. Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

## Curve

