

# NX Horizon

## Smart Solar Tracking System

Serving as the backbone on over 20 gigawatts of solar power plants around the world, the NX Horizon™ smart solar tracker system combines best-in-class hardware and software to help EPCs and asset owners maximize performance and minimize operational costs.

### Self-Powered System with Smart Performance Monitoring

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NX Horizon's reliable self-powered motor and control system, balanced mechanical design and independent row architecture provide project design flexibility, while lowering operation and maintenance (O&M) costs. NX Horizon works in concert with the NX Data Hub platform, a utility-grade software that uses bidirectional communications to each and every tracker row in the power plant for continuous, real-time monitoring. In addition, NEXTracker's Digital O&M™ services provide real-time analytics and predictive maintenance to help manage operations and minimize O&M costs over the lifetime of the systems.

#### Flexible and Resilient by Design

With its self-aligning module rails and vibration-proof fasteners, NX Horizon can be easily and rapidly installed. The self-powered, decentralized architecture allows each row to be commissioned in advance of site power, and is designed to withstand high winds and other adverse weather conditions. On a recent 838 megawatt project in Villanueva, Mexico, these design features allowed for the project to go online nine months ahead of schedule.

#### TrueCapture and Bifacial Enabled

Incorporating the most promising innovations in utility scale solar, NX Horizon with TrueCapture™ smart control system can add additional energy production by up to six per cent. Further unlocking the advantages of independent-row architecture and the data collected from thousands of sensors across its built-in wireless network, the software continuously optimizes the tracking algorithm of each row in response to site terrain and changing weather conditions. NX Horizon can also be paired with bifacial PV module technology, which can provide even more energy harvest and performance. With bifacial technology, NX Horizon outperforms conventional tracking systems with over 1% more annual energy.

**4 YEARS IN A ROW**

Global Market Share Leader (2015-18)

**20+ GW**

Delivered on 5 Continents

**BEST-IN-CLASS**

Software Ecosystem and Global Services

**UP TO 6%**

Using TrueCapture Smart Control System

Quality and Reliability from Day One

Quality and reliability are designed and tested into every NX Horizon component and system across our supply chain and manufacturing operations. NEXTracker is the leader in dynamic wind analysis and safety stowing, delivering major benefits in uptime and long-term durability. NX Horizon is certified to UL 2703 and UL 3703 standards, underscoring NEXTracker’s commitment to safety, reliability and quality.

GENERAL AND MECHANICAL

Tracking type	Horizontal single-axis, independent row	Tracking range of motion	Options for ±60° or ±50°
String voltage	1,500 V <sub>DC</sub> or 1,000 V <sub>DC</sub>	Operating temperature range	Self powered: -30°C to 55°C (-22°F to 131°F) AC powered: -40°C to 55°C (-40°F to 131°F)
Typical row size	78 - 90 modules, depending on module string length	Module configuration	1 in portrait. 3 x 1,500V or 4 x 1,000V strings per standard tracker. Partial length trackers available.
Drive type	Non-backdriving, high accuracy slew gear	Module attachment	Self-grounding, electric tool-actuated fasteners
Motor type	24V brushless DC motor	Materials	Galvanized steel
Array height	Rotation axis elevation 1.3 to 1.8 m / 4’3” to 5’10”	Allowable wind speed	Configurable up to 200 kph (125 mph) 3-second gust.
Ground coverage ratio (GCR)	Configurable. Typical range 28-50%	Wind protection	Intelligent wind stowing with symmetric dampers for maximum array stability in all wind conditions.
Modules supported	Mounting options available for virtually all utility-scale crystalline modules, First Solar Series 6 and First Solar Series 4.	Foundations	Standard W6 section foundation posts
Bifacial features	High-rise mounting rails, bearing + driveline gaps and round torque tube		

ELECTRONICS AND CONTROLS

Solar tracking method	Astronomical algorithm with backtracking. TrueCapture™ upgrades available for terrain adaptive backtracking and diffuse tracking mode.
Control electronics	NX tracker controller with inbuilt inclinometer and backup battery.
Communications	Zigbee wireless communications to all tracker rows and weather stations via network control units (NCUs).
Nighttime stow	Yes
Power supply	Self powered: NX provided 30 or 60W Smart Panel AC powered: Customer-provided 120-240 V <sub>AC</sub> circuit

INSTALLATION, OPERATIONS AND SERVICE

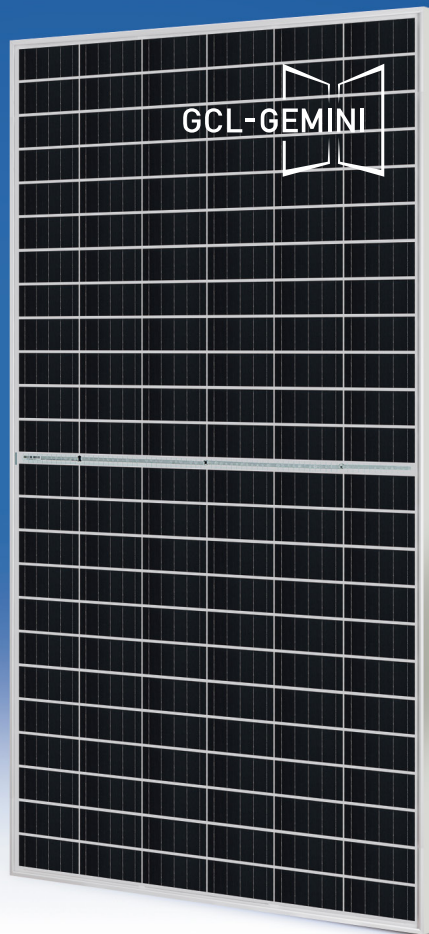
PE stamped structural calculations and drawings	Included
Onsite training and system commissioning	Included
Installation requirements	Simple assembly using swaged fasteners and bolted connections. No field cutting, drilling or welding.
Monitoring	NX Data Hub™ centralized data aggregation and monitoring
Module cleaning compatibility	Compatible with NX qualified cleaning systems.
Warranty	10-year structural, 5-year drive and control components
Codes and standards	UL 3703, UL 2703, IEC 62817



# GCL-M3/72DH

## Bifacial Monocrystalline Module

375-410W



**410W**

Maximum Power Output

**20.1%**

Maximum Module Efficiency

**0~+5W**

Power Output Guarantee



Use the Tedlar® PVF film produced by DUPONT



Selected encapsulating material and stringent production process control ensure the product is highly PID resistant and snail trails free



Sand blowing test, salt mist test and ammonia test passed to endure harsh environments



Higher lifetime power yield: 0.6% annual power degradation 30 years power warranty



Special cell process ensures great performance under low irradiance conditions

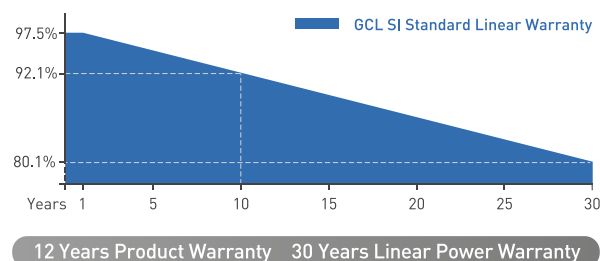


Transparent backsheet, double-sided sun capturing, power generation increase in returns

### GCL Delivers Reliable Performance Over Time

- World-class manufacturer of crystalline silicon photovoltaic modules
- Fully automatic facility and world-class technology
- Rigorous quality control to meet the highest standard: ISO 9001, ISO 14001 and ISO 45001
- Tested for harsh environments (salt mist, ammonia corrosion and sand blowing test: IEC 61701, IEC 62716, DIN EN 60068-2- 68)
- Long term reliability tests
- 2x100% EL inspection ensuring defect-free modules

### Linear Performance Warranty



\* Please refer to GCL standard warranty for details



\* Please refer to GCL for details

# GCL-M3/72DH

## Bifacial Monocrystalline Module

375-410W

### Electrical Specification (STC\*)

Test Condition		Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear
Maximum Power	P <sub>max</sub> (W)	375	265	380	269	385	272	390	276	395	279	400	283	405	286
Maximum Power Voltage	V <sub>mp</sub> (V)	39.98	40.38	40.17	40.57	40.36	40.76	40.55	40.95	40.73	41.13	40.90	41.30	41.08	41.48
Maximum Power Current	I <sub>mp</sub> (A)	9.38	6.57	9.46	6.62	9.54	6.68	9.62	6.73	9.70	6.79	9.78	6.85	9.86	6.90
Open Circuit Voltage	V <sub>oc</sub> (V)	48.28	47.58	48.47	47.77	48.66	47.96	48.85	48.15	49.03	48.33	49.20	48.50	49.37	48.67
Short Circuit Current	I <sub>sc</sub> (A)	9.88	6.94	9.96	6.99	10.04	7.05	10.12	7.10	10.20	7.16	10.28	7.22	10.36	7.27
Module Efficiency	(%)	18.4	13.0	18.7	13.2	18.9	13.4	19.2	13.5	19.4	13.7	19.6	13.9	19.9	14.1
Power Output Tolerance	(W)	0~+5													

\* Irradiance 1000W/m<sup>2</sup>, Module Temperature 25°C, Air Mass 1.5

### Electrical Specification (NOCT\*)

Test Condition		Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear
Maximum Power	P <sub>max</sub> (W)	279.74	196.94	283.49	199.50	287.26	202.07	291.06	204.66	294.88	207.26	298.72	209.88	302.59	212.50
Maximum Power Voltage	V <sub>mp</sub> (V)	37.20	37.30	37.40	37.50	37.60	37.70	37.80	37.90	38.00	38.10	38.20	38.30	38.40	38.50
Maximum Power Current	I <sub>mp</sub> (A)	7.52	5.28	7.58	5.32	7.64	5.36	7.70	5.40	7.76	5.44	7.82	5.48	7.88	5.52
Open Circuit Voltage	V <sub>oc</sub> (V)	45.00	44.40	45.20	44.60	45.40	44.80	45.60	45.00	45.80	45.20	46.00	45.40	46.20	45.60
Short Circuit Current	I <sub>sc</sub> (A)	7.98	5.60	8.04	5.64	8.10	5.68	8.16	5.72	8.22	5.76	8.28	5.80	8.34	5.84

\* Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s

### Mechanical Data

Number of Cells	144 Cells (6×24)
Dimensions of Module L*W*H (mm)	2036×1000×35mm [80.16×39.37×1.38 inches]
Weight (kg)	23.4 kg
Glass	High transparency solar glass 3.2mm [0.13 inches]
Backsheet	Use Tedlar® PVF film produced by DUPONT
Frame	Silver, anodized aluminium alloy
J-Box	IP68 Rated
Cable	4.0mm <sup>2</sup> [0.006 inches <sup>2</sup> ], Portrait: 200/200mm [7.87 inches]
Number of diodes	3
Wind/Snow Load	2400Pa/ 5400Pa*
Connector	MC Compatible

\* For more details please check the installation manual of GCLSI

### Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	44±2°C
Temperature Coefficient of I <sub>sc</sub>	+0.06%/°C
Temperature Coefficient of V <sub>oc</sub>	-0.30%/°C
Temperature Coefficient of P <sub>MAX</sub>	-0.39%/°C

### Maximum Ratings

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Max Series Fuse Rating	25A

### Packaging Configuration

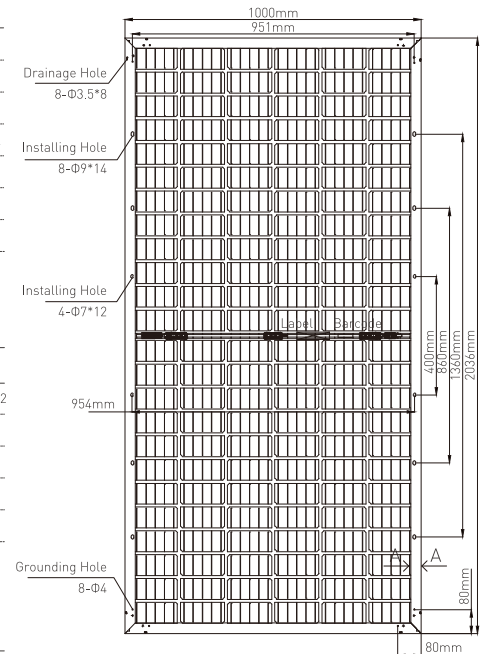
Module per box	30 pieces
Module per 40' container	660 pieces



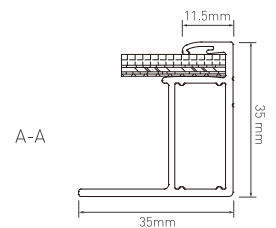
Contact Us for More Information

website: [www.gclsi.com](http://www.gclsi.com) email: [gclsisales@gclsi.com](mailto:gclsisales@gclsi.com)

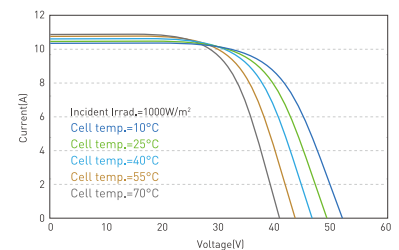
### Module Dimension



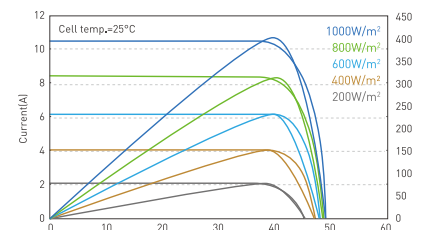
Back View



### I-V Curve at Different Temperature (410W)



### I-V/P-V Curve at Different Irradiation (410W)



CAUTION: READ INSTALLATION MANUAL BEFORE USING THE PRODUCT