

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

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 $\pm 60^\circ$ or $\pm 50^\circ$ |
| String voltage | 1,500 V _{DC} or 1,000 V _{DC} | 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 _{AC} 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

Electrical Specification (STC*)

| Test Condition | Front | Rear | | |
|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Power Pmax(W) | 375 | 265 | 380 | 269 | 385 | 272 | 390 | 276 | 395 | 279 | 400 | 283 | 405 | 286 | 410 | 290 |
| Maximum Power Voltage Vmp(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 | 41.25 | 41.65 |
| Maximum Power Current Imp(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 | 9.94 | 6.96 |
| Open Circuit Voltage Voc(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 | 49.54 | 48.84 |
| Short Circuit Current Isc(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 | 10.44 | 7.33 |
| 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 | 20.1 | 14.2 |
| Power Output Tolerance (W) | 0~+5 | | | | | | | | | | | | | | | |

* Irradiance 1000W/m², Module Temperature 25°C, Air Mass 1.5

Electrical Specification (NOCT*)

| Test Condition | Front | Rear | | |
|-------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Maximum Power Pmax [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 | 306.48 | 215.12 |
| Maximum Power Voltage Vmp (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 | 38.60 | 38.70 |
| Maximum Power Current Imp (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 | 7.94 | 5.56 |
| Open Circuit Voltage Voc(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 | 46.40 | 45.80 |
| Short Circuit Current Isc (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 | 8.40 | 5.88 |

* Irradiance 800W/m², 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 ² (0.006 inches ²), 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 Isc | +0.06%/°C |
| Temperature Coefficient of Voc | -0.30%/°C |
| Temperature Coefficient of Pmax | -0.39%/°C |

Maximum Ratings

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

Packaging Configuration

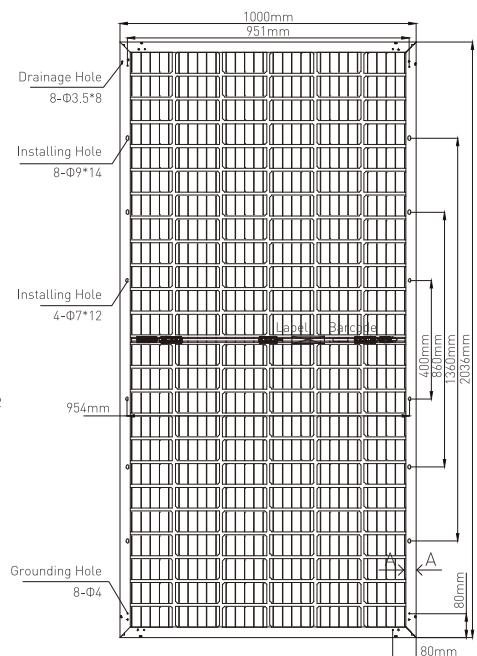
| | |
|--------------------------|------------|
| Module per box | 30 pieces |
| Module per 40' container | 660 pieces |



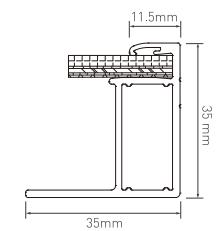
Contact Us for More Information

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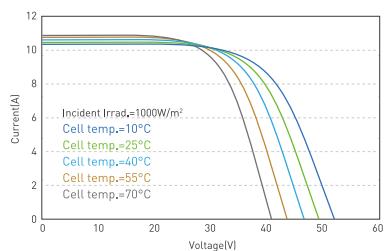
Module Dimension



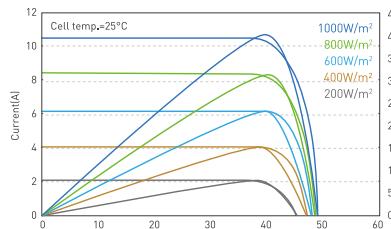
Back View



I-V Curve at Different Temperature (410W)



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



CAUTION: READ INSTALLATION MANUAL BEFORE USING THE PRODUCT