

GCL- NT10/54H



415-440 W

Monocrystalline Module

440 W

Maximum Power Output

22.5%

Maximum Module Efficiency

0~+5W

Power Output Guarantee



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



Highly transparent self-cleaning glass brings additional yield and easy maintenance



Ideal choice for large scale ground installation

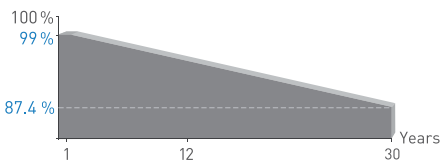


N type technology: The N-type module has better reliability and lower LID/LETID



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

Linear Performance Warranty



12 Year Product Warranty

30 Year Linear Power Warranty

0.40% Annual Degradation Over 30 years



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



Special cutting and soldering technology leads to low hotspot risk

* Please refer to GCL standard warranty for details

Additional Insurance Backed by Swiss RE

* Please refer to GCL for details



Electrical Specification (STC*)

Maximum Power	P _{max} (W)	415	420	425	430	435	440
Maximum Power Voltage	V _{mp} (V)	31.83	32.04	32.25	32.46	32.66	32.86
Maximum Power Current	I _{mp} (A)	13.04	13.11	13.18	13.25	13.32	13.39
Open Circuit Voltage	V _{oc} (V)	38.25	38.40	38.54	38.70	38.85	38.99
Short Circuit Current	I _{sc} (A)	13.75	13.83	13.90	13.97	14.04	14.10
Module Efficiency	(%)	21.3	21.5	21.8	22.0	22.3	22.5
Power Output Tolerance	(W)	0~+5					

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

Electrical Specification (NMOT*)

Maximum Power	P _{max} (W)	311.9	315.7	319.5	323.6	327.9	331.7
Maximum Power Voltage	V _{mp} (V)	29.93	30.12	30.31	30.53	30.73	30.91
Maximum Power Current	I _{mp} (A)	10.42	10.48	10.54	10.60	10.67	10.73
Open Circuit Voltage	V _{oc} (V)	36.29	36.43	36.56	36.71	36.85	37.00
Short Circuit Current	I _{sc} (A)	11.09	11.15	11.21	11.27	11.34	11.40

* Irradiance 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s

Mechanical Data

Number of Cells	108 Cells (6×18)
Dimensions of Module L*W*H (mm)	1722×1134×30mm (67.80×44.65×1.18 inches)
Weight (kg)	20.5kg
Glass	High transparency tempered glass 3.2 mm (0.13 inches)
Backsheet	White
Frame	Black/Silver, anodized aluminium alloy
J-Box	IP68 Rated
Cable	4.0mm ² (0.006 inches ²), Portrait: 280/280mm (11.02inches)
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 Module Operating Temperature(NMOT)	45±2°C
Temperature Coefficient of I _{sc}	+0.045%/°C
Temperature Coefficient of V _{oc}	-0.25%/°C
Temperature Coefficient of P _{MAX}	-0.29%/°C

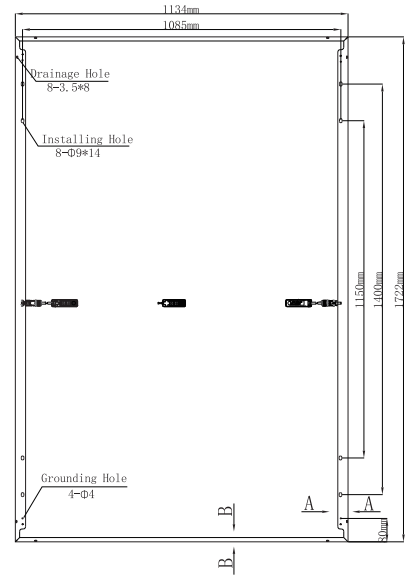
Maximum Ratings

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

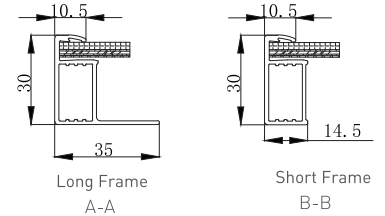
Packaging Configuration

Module per box	36 pieces
Module per 40' container	936 pieces

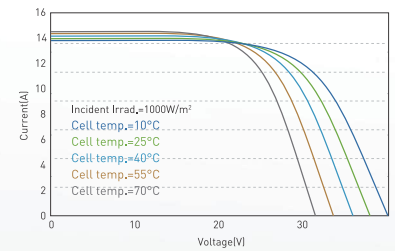
Module Dimension



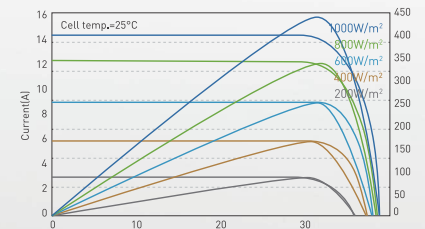
Back View



I-V Curve at Different Temperature (440W)



I-V/P-V Curve at Different Irradiation (440W)



CAUTION: READ INSTALLATION MANUAL BEFORE USING THE PRODUCT

Contact Us for More Information

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