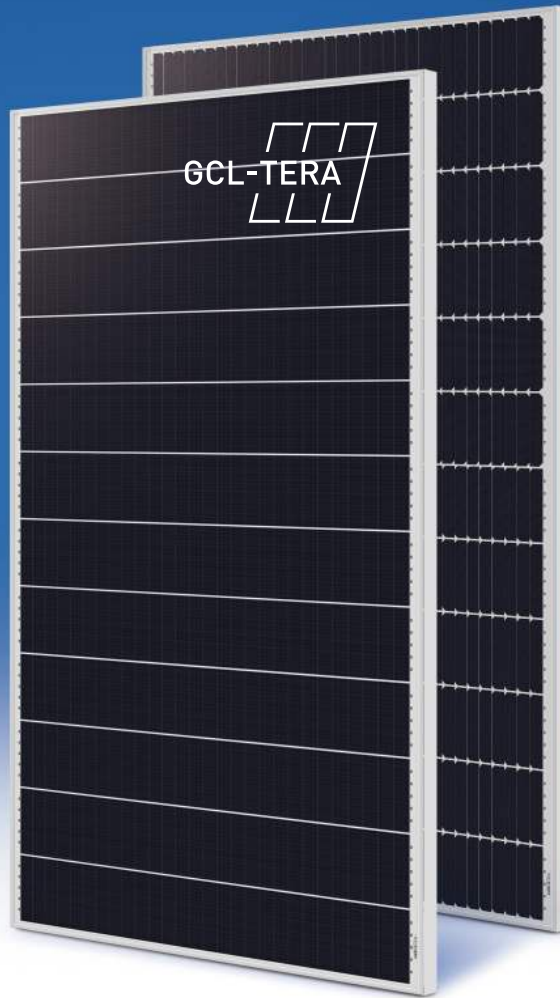




# GCL-M2/72Hxxx

High Efficiency Shingling Module

390-420W



**420** <sup>(±3%)</sup> **W**  
Maximum Power Output

**20.2%**  
Maximum Module Efficiency



Unique cell cutting and inter-connecting process, increases light absorption area and decreases module internal power loss



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



Optimized system performance due to module level current sorting



Special cell process ensures great performance under low irradiance conditions



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

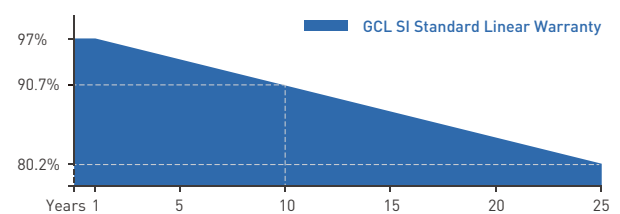
## Company Introduction

GCL System Integration Technology Co. Ltd (002506 Shenzhen Stock) (GCL System) is part of GOLDEN CONCORD Group (GCL) which is an international energy company specializing in clean and sustainable power production. The group, founded in 1990 now employs 30,000 people.

## 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: ISO9001:2015, ISO14001: 2015 and OHSAS: 18001 2007
- 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
- 2\*100% EL inspection ensuring defect-free modules

## Linear Performance Warranty



10 Years Product Warranty 25 Years Linear Power Warranty

\* 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 <sub>max</sub> (W)	390(±3%)	395(±3%)	400(±3%)	405(±3%)	410(±3%)	415(±3%)	420(±3%)
Maximum Power Voltage	V <sub>mp</sub> (V)	37.1	37.2	37.3	37.4	37.5	37.6	37.7
Maximum Power Current	I <sub>mp</sub> (A)	10.51	10.62	10.72	10.83	10.93	11.04	11.14
Open Circuit Voltage	V <sub>oc</sub> (V)	45.1(±3%)	45.2(±3%)	45.2(±3%)	45.3(±3%)	45.3(±3%)	45.4(±3%)	45.5(±3%)
Short Circuit Current	I <sub>sc</sub> (A)	11.27(±3%)	11.31(±3%)	11.35(±3%)	11.39(±3%)	11.43(±3%)	11.47(±3%)	11.53(±3%)
Module Efficiency	(%)	18.8	19.0	19.3	19.5	19.7	20.0	20.2

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

## Electrical Specification (NMOT\*)

Maximum Power	P <sub>max</sub> (W)	290	294	298	302	305	309	313
Maximum Power Voltage	V <sub>mp</sub> (V)	35.1	35.2	35.3	35.4	35.5	35.6	35.7
Maximum Power Current	I <sub>mp</sub> (A)	8.27	8.35	8.44	8.52	8.60	8.68	8.77
Open Circuit Voltage	V <sub>oc</sub> (V)	42.7	42.8	42.8	42.9	42.9	43.0	43.1
Short Circuit Current	I <sub>sc</sub> (A)	9.09	9.13	9.16	9.19	9.22	9.26	9.30

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

## Mechanical Data

Solar Cell Type	Mono 31.35×156.75mm (6 inches)
Number of Cells	408 Cells (34×12)
Dimensions of Module L*W*H (mm)	1942×1069×40mm (76.46×42.09 × 1.57 inches)
Weight (kg)	24 kg
Glass	High transparency solar glass 3.2mm (0.13 inches)
Backsheet	White
Frame	Silver, anodized aluminium alloy
J-Box	IP67 Rated
Cable	4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> ), 1200mm (47.2 inches)
Number of diodes	2
Static mechanical load*	Design load: 3600Pa (Positive) / 1600Pa (Negative). γ m=1.5
Connector	05-8(Manufacturer: Zhejiang Renhe Photovoltaic Technology Co.,LTD)

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

## Temperature Ratings

Nominal Module Operating Temperature (NMOT)	42.3±2°C
Temperature Coefficient of I <sub>sc</sub>	+0.05%/°C
Temperature Coefficient of V <sub>oc</sub>	-0.31%/°C
Temperature Coefficient of P <sub>MAX</sub>	-0.40%/°C

## Maximum Ratings

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC-(H)
Max Series Fuse Rating	20A

## Packaging Configuration

Module per box	26 pieces
Module per 40' container	624 pieces

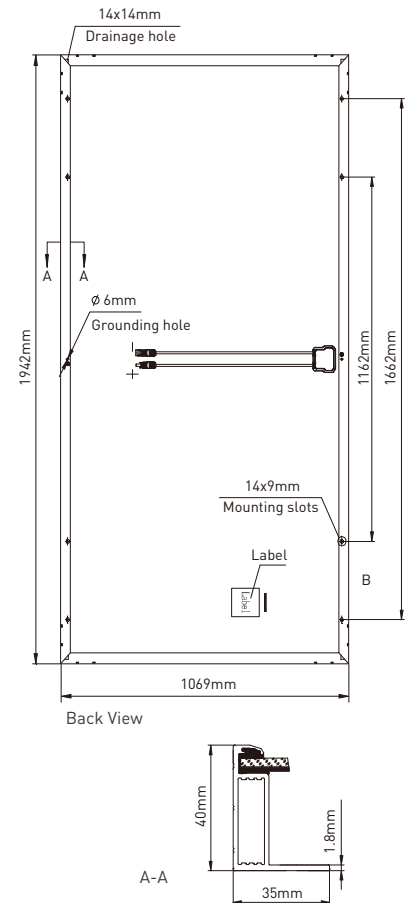
Contact Us for More Information

**GCL System Intergration Technology Co., Ltd.**  
**Jianghai Economic Zone, Nanqiao Town, Fengxian District Shanghai City, 201406, P.R. China**

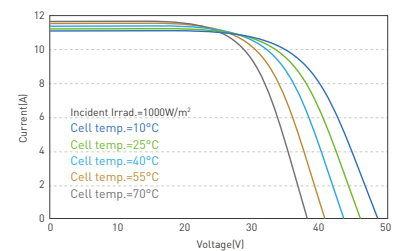
website: [en.gclsi.com](http://en.gclsi.com) email: [gclsisales@gclsi.com](mailto:gclsisales@gclsi.com)



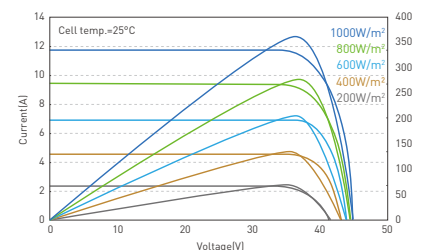
## Module Dimension



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



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



CAUTION: READ INSTALLATION MANUAL BEFORE USING THE PRODUCT

Modules are assembled in China