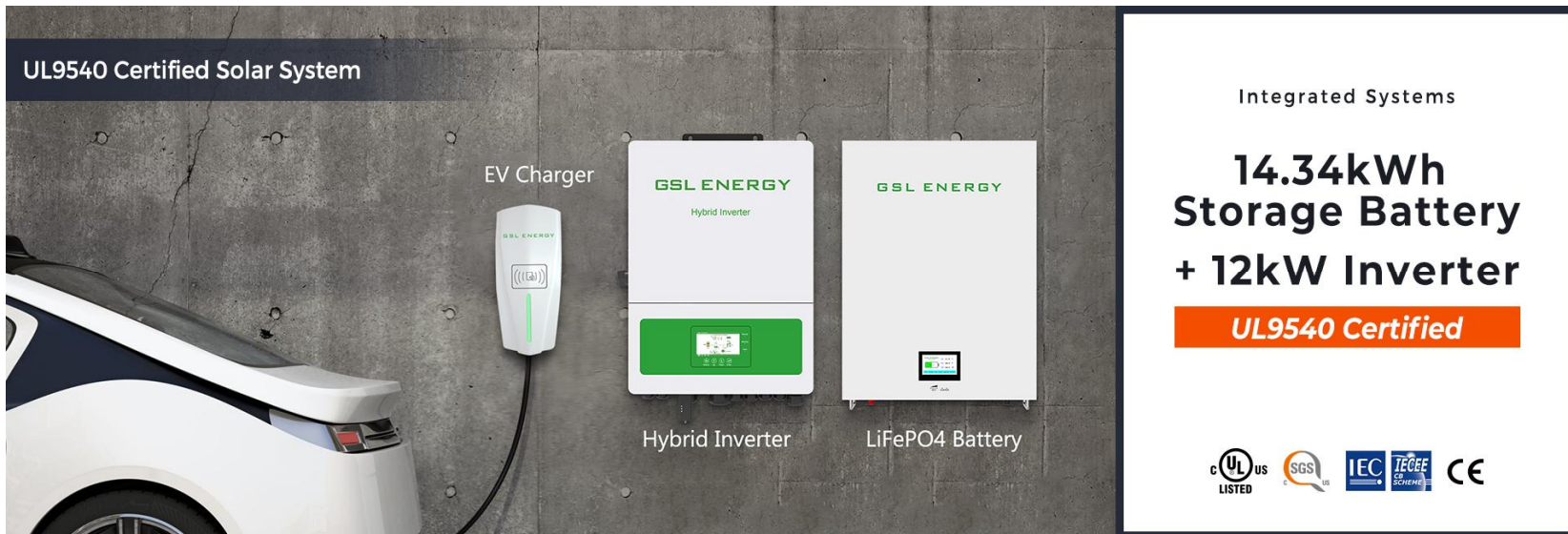


# GSL ENERGY

— SINCE 2006 —

## GSL ENERGY 14.34kWh Wall Battery



UL9540 Certified Solar System

EV Charger

GSL ENERGY Hybrid Inverter

GSL ENERGY LiFePO4 Battery

Hybrid Inverter

LiFePO4 Battery

Integrated Systems

**14.34kWh Storage Battery + 12kW Inverter**

**UL9540 Certified**

UL LISTED US SGS IEC TEGEE SCHEME CE

## US Standard Certification

- **UL1973 UL9540A / CEC** Listed for US
- **CE/IEC/ CEI021 Certification** for Europe
- Transportation Certification: **MSDS/UN38.3**
- Key Certification for Lithium battery shipping: **DG Package Certification**

**CERTIFICATE OF COMPLIANCE**

Certificate Number: **SGSNA/22/SZ/00275**

Contract Number: 800785  
Certificate Project Number: SZ-CERT221002684

Certified Product: Rechargeable LiFeO<sub>4</sub> Battery  
Trademarks: GSL ENERGY  
Model: GSL051280A-B-GBP2  
Model #: 51.2V/280Ah

Technical Data:  
Max. charging current: 150 A; Max. charging voltage: 56 V;  
Max. discharging current: 150 A; End of discharging voltage: 46 V;  
Charging temperature range: 0 °C to 45 °C;  
Discharging temperature range: -20 °C to 55 °C

Certificate Holder: Shenzhen GSL Energy Co., Ltd.  
A503 Building 1, Tianan Cyber Park, Longgang Central City, Shenzhen, 518172, Guangdong, China

This certificate applies to the product(s) listed with the same certificate number. Certification is valid when product(s) are indicated on the SGS directory of certified products at [www.sgs.com](http://www.sgs.com) regarding the Certificate Search. The product is certified according to ISO/IEC Guide 17007, Conformity assessment - Fundamentals of product certification, System 3, and its addendum with:  
ANSI/UL 1973-2018, Second Edition, Dated February 7, 2018



Authorized by: *Jason Wei* Effective date: 10 October 2022  
Jason Wei  
Certifier




**Test Report**

For **ANSI/CAN/UL9540A**  
**Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems [Unit Level]**

Report Number: **CQES220800018401**  
Date of issue: 2022-10-25  
Total number of pages: 29 Pages  
Test object / Model: **GSL051280A-B-GBP2**  
Applicant's name: Shenzhen GSL Energy Co., Ltd.  
Address: A503 Building 1, Tianan Cyber Park, Longgang Central City, Shenzhen, Guangdong, 518172, China

Project No.: CQES22080001840A  
TRF\_UL\_9540A UHLV.0 Page 1 of 29

**SGS**

To: Shenzhen GSL Energy Co., Ltd.  
A503 Building 1, Tianan Cyber Park, Longgang Central City, Shenzhen, 518172, Guangdong, China  
Date: 2022-12-13

**Notification Letter**

Thanks for your application test service of SGS-CSTC Safety Laboratory Guangzhou for the following appliances:

Project No.: SHES2211020326PV  
Product type: 51.2V 280AH WALL MOUNTED LIFEPO4 BATTERY  
Model: GSL051280A-B-GBP2



The products have been tested according to **CEC listing**. The tests have been completed, all the results are positive, the report and related documentation are under preparing.

If you have further queries, please do not hesitate to contact us.

Best Regards,  
*Sunny Lin*  
Sunny Lin  
Project Engineer

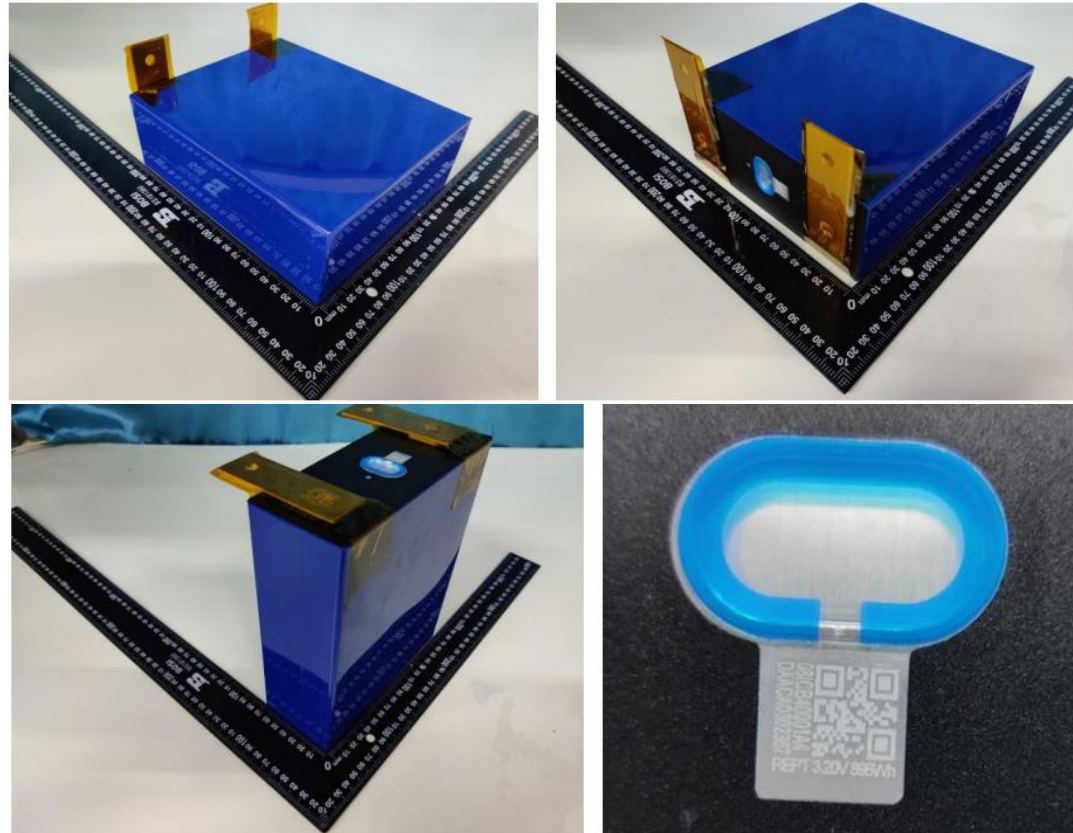
*Roger Hu*  
Roger Hu  
Technical Reviewer

SGS-CSTC Standards Technical Services Co., Ltd. - Safety Laboratory Guangzhou

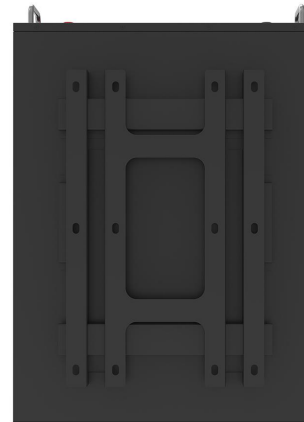
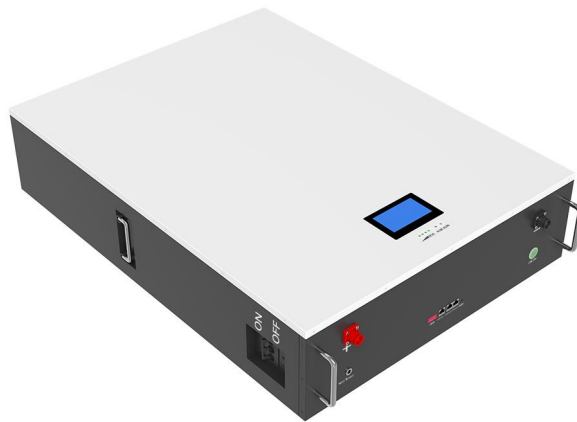
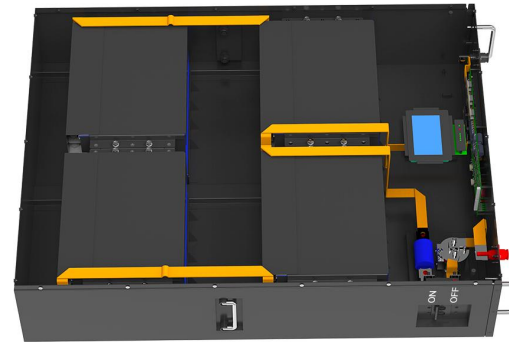



## GRADE A REPT CELL

Cell/电芯 (REPT 3,2V 280Ah 896Wh)



## Product Pictures

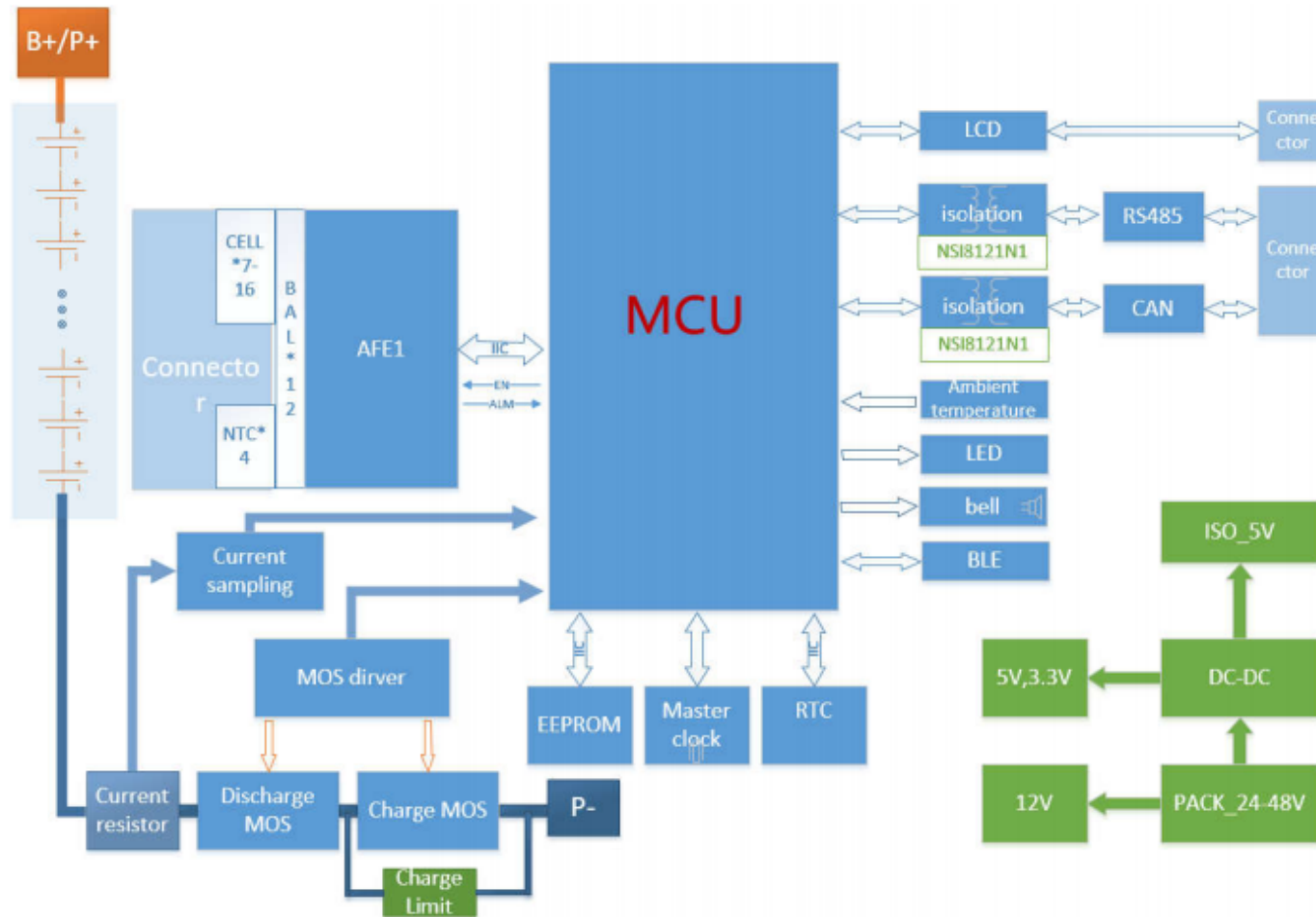


## Product Design



- **Touch Screen** ( Choose Inverter protocol on Screen)
- With Built-in **DC Breaker**

# BMS



# BMS

- Support 16 batteries connect in parallel
- Compatible with below inverter brands:

**ALL TESTED**

Inverter Brand		Inverter Type	Communication				
1	SMA Solar Technology AG	Sunny Island 6.0H / 8.0H(EU)	CAN		Sunsynk	3k, 3.6k, 5k, 6k	
					Sol Ark	5k, 8k, 12k, 15k	
2	Victron Energy	Multiplus 48V 3kva 5kva 8kva 10kva (via Venus OS) Quattro 48V 3000VA, 5000VA, 8000VA, 10000VA, 15000VA (via Venus OS)	CAN	8	LUX POWER	LXP series, LXP-ACS, SNA series	CAN
				9	Magerevo	R3KL1-R6KL1,R6KH1NA- R12KH1NA	CAN
3	Schneider Electric	SW4048, Conext XW+ 5548 NA Conext XW+ 5548 6848 NA		11	Sofar	ME3000SP	CAN
						HYD series	CAN
4	Growatt	SPH series SPF series		12	TBB	RIIO, RIIO SUN, APOLLO MAXX series	CAN
						13	SOROTEC
5	Goodwe	ES SERIES, EM Series, SBP series					
6	Solis	RHI series	CAN	14	Voltronic Power	AXPERT VM series, MKS series , King series, Max series.	RS485
		RAI series	CAN				
7	Deye	SUN-3/3.6/5/6K-SG04LP1   3-6KW	CAN	15	MPP SOLAR	InfiniSolar series	RS485
		SUN-3.6/5/6K-SG03LP1-EU   3.6-6KW				5048MGX, 8048MAX Series	RS485
		SUN-3.6/5/6/7.6/8K-SG05LP1-EU   3.6-8KW		16	SRNE	ASF 48V, HF-48V series, HFP-48V series, HT-48V, HES Series	RS485
		SUN-5/6K-SG01LP1-US SUN-7.6/8K-SG01LP1-US/EU   5-8KW	CAN			Sunforce BP series, Sunicom MHP series, Sunrino MLP SP series, Sunlenty MLS , SPS series	CAN
		SUN-5/6/8/10/12K-SG04LP3   5-12KW   Three Phase		17	SAC SOLAR		
		SUN-12/14/16K-SG01LP1   12-16KW   Single Phase				SE 4.6/5/6K AC	CAN
		SUN-6/8/10/12/15/20K-SG01HP3-EU-AM2   6-20KW   Three Phase		18	Senergy		

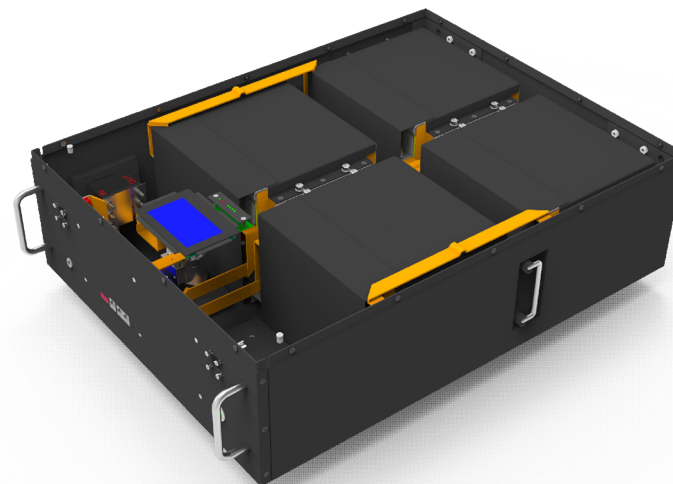
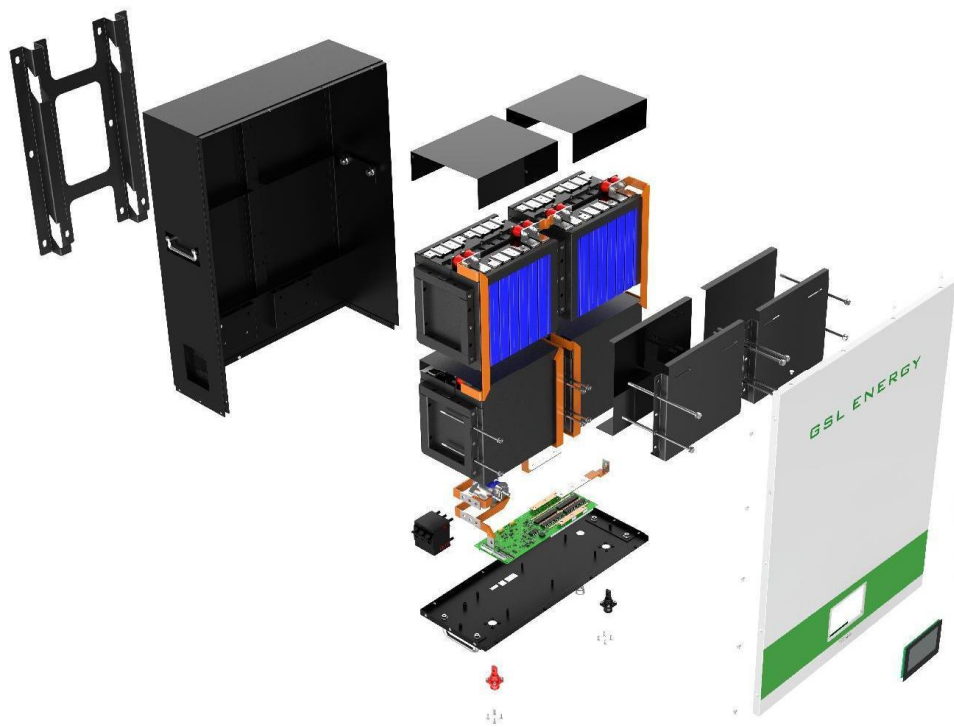
## Communication Testing with Main Inverter Brands





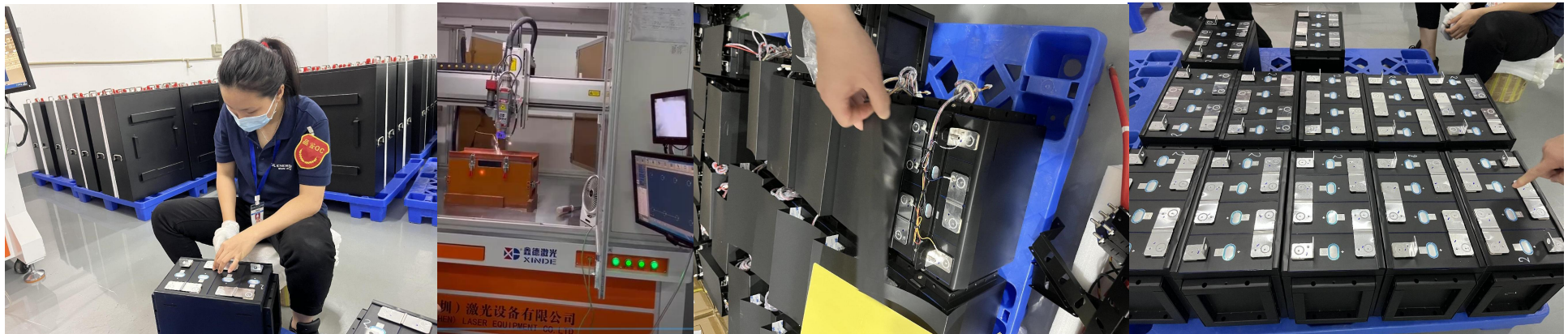
## Cell To Pack(**CTP**模组工艺)

GSL adopt **Laser welding** technology to weld cells into modules, and then connect into battery pack.

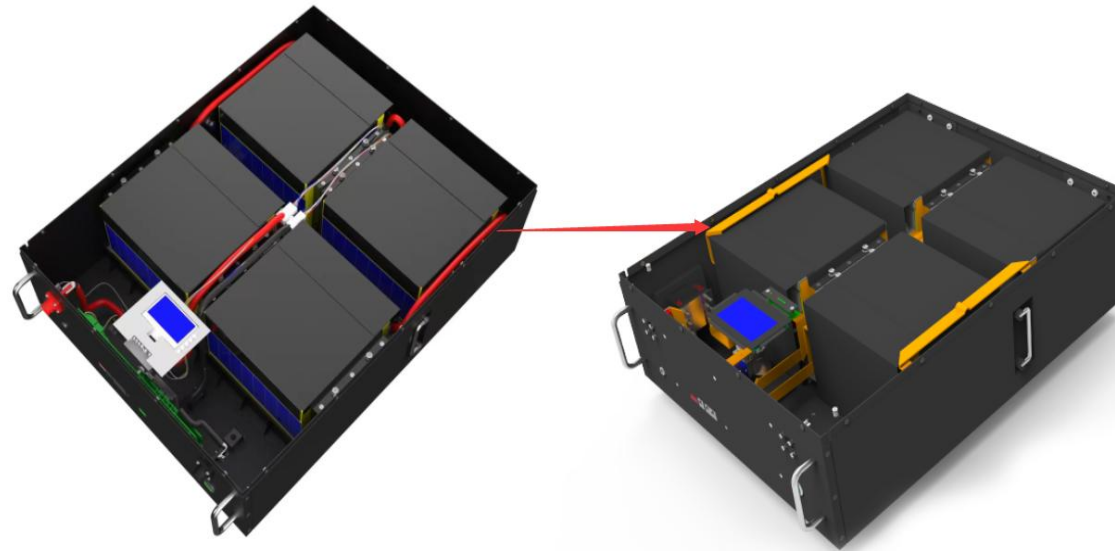


# Cell To Pack(CTP) Production Craft Advantage

1. **Laser Welding Tech** lower battery **IR**(Inner Resistance), result in less heat during system operating. So this can prolong battey lifespan.
2. Laser welded cells are **more fixed and stable**, not easy to loose during transportation.
3. Modules are easy for distributors and dealers to change when battery has any warranty issue. And will not change battery performance during module replacing. We can also ship modules **by air quickly**.



## Cooper Busbar replace Silicone Cables



Silicone Cable

Upgraded to

Copper Busbar

**#1 Upgrade: Upgrade silicone cable to copper barbus**  
**To protect battery from over-heating and make sure Safety.**

防止电池过热，不易起火，延长电池寿命

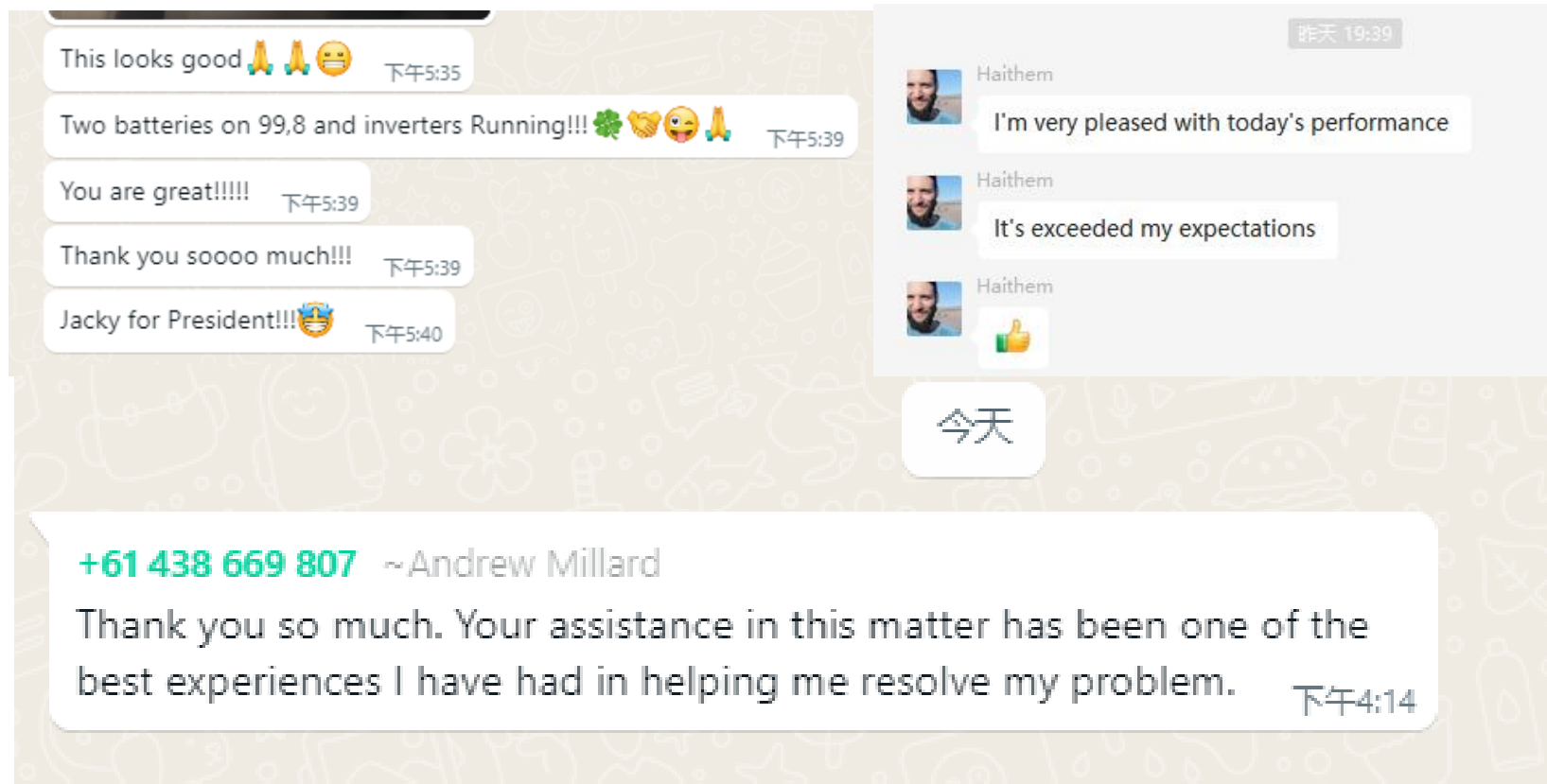
## 成品 Aging Testing(老化)



## Axcellent After-sale Support

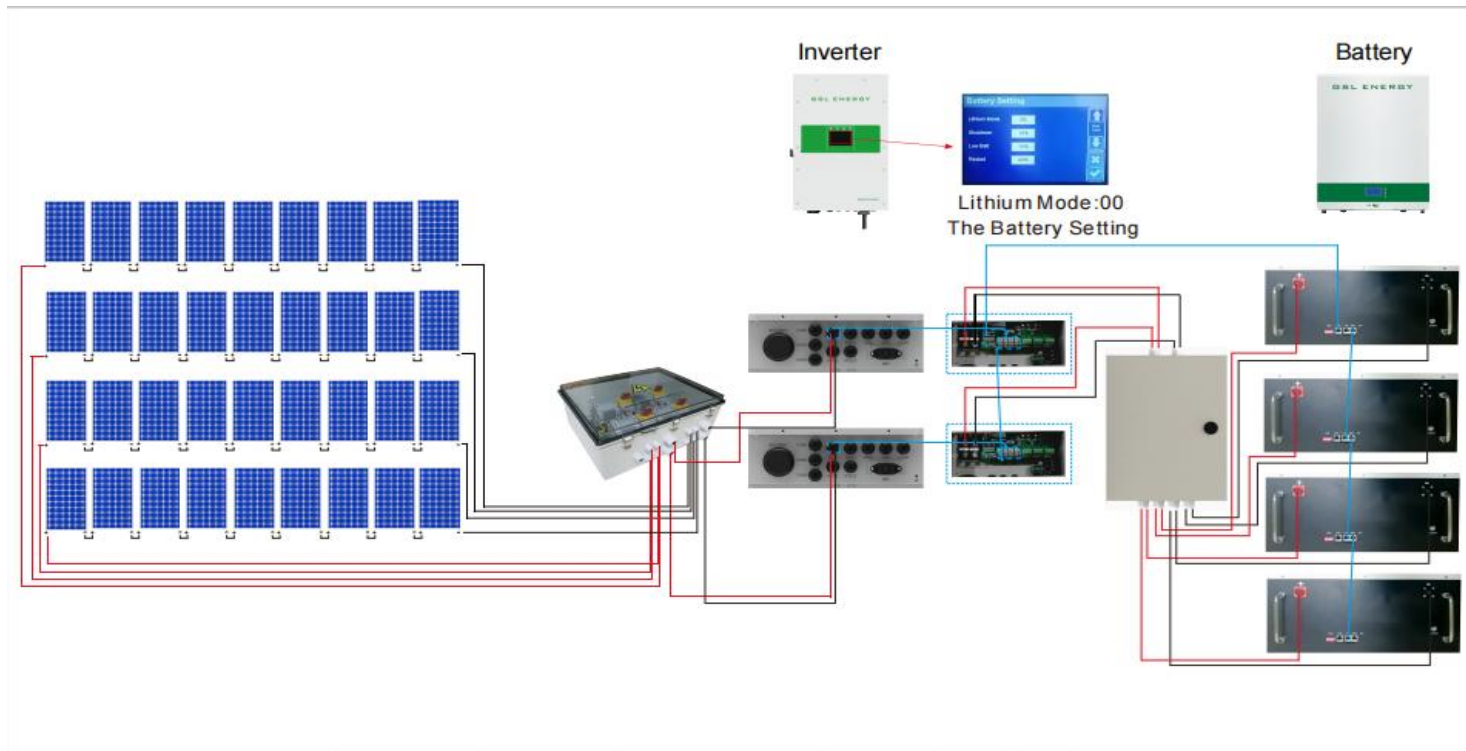
Warranty: 15 Years

Tech Support: **Professional Engineer Team**



# System Connection Diagram

To help users do better installing.



<p>— Red Line: Positive Cable</p> <p>— Black Line: Negative Cable</p> <p>— Blue Line: Communication Cable</p>			UNLESS OTHERWISE SPECIFIED:	NAME	DATE	SHENZHEN GSL ENERGY CO.,LTD		
			DIMENSIONS ARE IN INCHES TOLERANCES:±1 ANGULAR:±5 TWO PLACE DECIMAL THREE PLACE DECIMAL	DRAWN DAVID	11-01-2022	<p><b>GSL ENERGY</b> — SINCE 2006 —</p>		
			INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED DAVID	11-01-2022			
			MATERIAL	ENG APPR. JIM	11-01-2022			
			FINISH	MFG APPR. JIM	11-01-2022			
<p>PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SHENZHEN GSL ENERGY GROUP. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SHENZHEN GSL ENERGY GROUP IS PROHIBITED.</p>	NEXT ASSY	USED ON	COMMENTS:			SIZE	DWG. NO.	REV
						<b>A</b>	36Pcs panels+2Pcs inverter +4Pcs battery connection	
	APPLICATION		DO NOT SCALE DRAWING			SCALE: 1:1	SHEET 1 OF 1	