



Connecting Wonderful Life
with Optic-Electric Network



TELECOMMUNICATION LITHIUM BATTERY SOLUTIONS

ZTT NEW ENERGY INDUSTRY GROUP

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ZTT GROUP

1992

Started in 1992 with fiber optic communication, now ZTT develops multi-industry deployment such as information communication, smart grid, new energy, submarine system, and new material

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Production bases in India, Brazil, Indonesia, Morocco, Turkey and Germany



76 subsidiaries

More than **16000⁺** staff

Export to **160⁺** countries and regions

Top **500** Enterprises in China

54 branch overseas offices

10 overseas market centers

Top **100** Electronic Information Enterprises in China

Top **100** Electronic Original Enterprises in China

Top **10** Most Competitive Companies for Submarine Cable in the World

Top **500** Listed Companies in China by Market Value

Top **10** Most Competitive Companies in Cable Industry in China

Top **10** Most Comprehensive Competitive Enterprises in Optical Communications Industry in China

More than **2000⁺** National Independent Intellectual Property Rights Patent Authorization

Top **100** Listed Companies on the Main Board of China

Top **10** Most Competitive Companies for Optical Fiber and Cable in the World

Presided over and participated in the formulation of more than **370** industry, national and international standards

INDUSTRY LAYOUT



Zhongtian Energy Storage Technology Co., Ltd.

Established in 2012 with a registered capital of 1.48 billion yuan. ZEST focuses on the R&D, production and sales of Power Back-up, Large BESS, and Household Energy Storage System. Customized system integrated solutions can meet different demands of the customers. Annual Production Capacity of LFP Batteries: **8GWh**



SCIENCE AND TECHNOLOGY INNOVATION

First "Intelligent Manufacturing Demonstration Enterprise" in the Domestic Lithium Battery Industry by MIIT

- Has a National enterprise technology center, a post-doctoral research station and an enterprise research institute;
- Establish an innovative cooperation platform with 5 institutes of the Chinese Academy of Sciences;
- Establish a R&D cooperation platform with 6 national research institutes;
- Establish industry-university-research cooperation relationships with 15 domestic key universities, including Tsinghua University and Zhejiang University;
- Provide intellectual support and talent guarantee in terms of technology development, market development, and talent training.



Undertake National Innovation Projects

- Undertake 4 "863" national high-tech research projects;
- Undertake 6 national key research and development projects during the 13th Five-Year Plan period;
- Undertake 570 national, provincial and municipal technological innovation projects;
- Core products fill the domestic gap and replace imports.

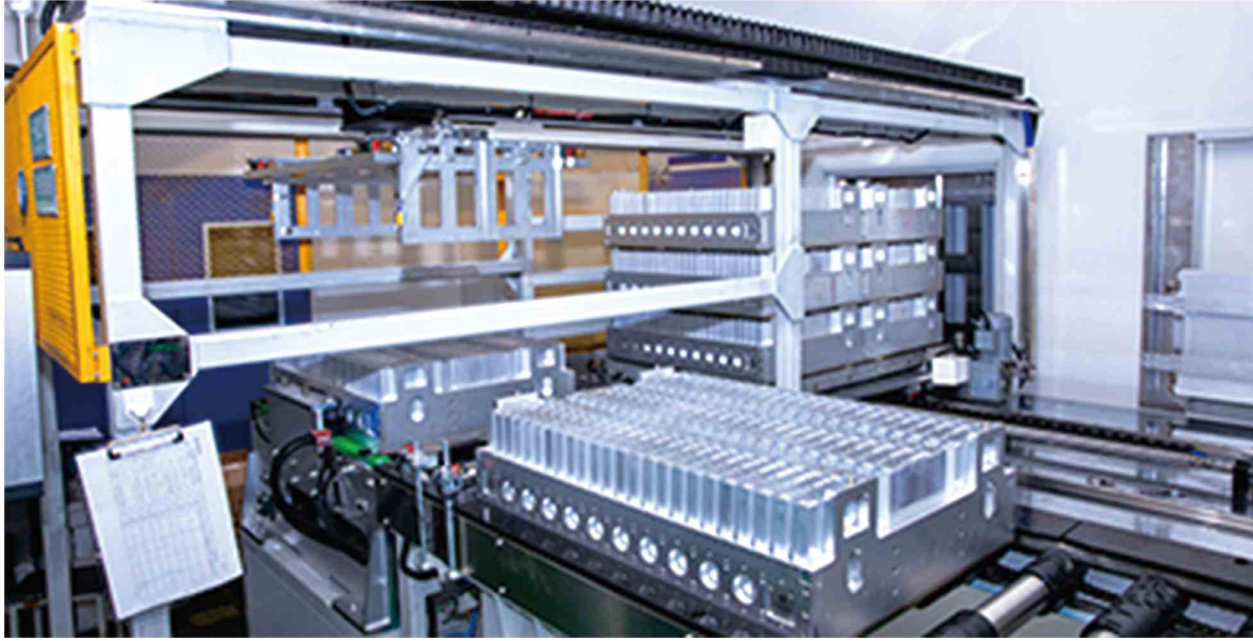


PRODUCT CERTIFICATION

- Pass ISO9001, ISO14000, OHSAS18001 Three-standard System Certification, SA8000 Social Responsibility System Certification, TS16949 System Certification;
- Certified by authoritative organizations in Europe and America, with UL, CE, MSDS, UN38.3 and other Safety and Transportation Certifications; the products have passed various tests of the new national standard, and equipped with CNAS Laboratories.



SMART WORKSHOP



HIGHLIGHT & ADVANTAGES

Product Highlight

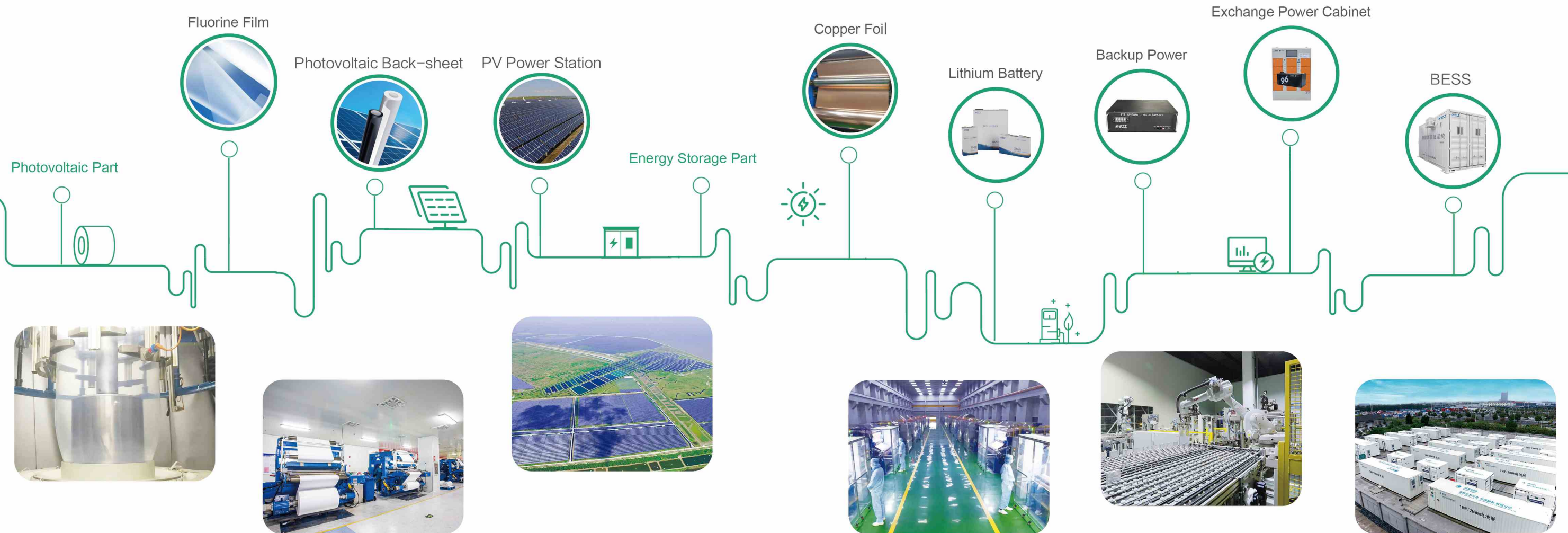
High Safety Using lithium iron phosphate materials to ensure the safety of positive part. Using ceramic coating technology to avoid physical damage and enhance the tolerance under thermal stability test.

Long Life Cycle Using conductive foil coating current collectors to improve the utilization of active materials in the cell and adhesion strength of electrodes. Combined with the good design, the cycle life is over 3000 times during 1C/1C charge-discharge cycles.

Good Consistency Strict control of temperature, humidity, and other environmental parameters in workshop. High standards of materials selection, preparation process, and requirements of equipment. First full automation production line of high capacity lithium-ion battery. Reduce the human influence at the maximum degree.

Strong Industrial Chain Advantage, Create Urban New Energy Operator

Deploy in the field of New Energy “ Led by distributed photovoltaic , Supported by microgrid core technology, Key material development as breakthrough , and Energy storage system application as highlight”. Provide customers with overall green energy solution, including Product design, Equipment manufacturing, Technical support, and Project service. ZTT is committed to be Urban New Energy Operator.



CELL PRODUCT

Spending 12 months and doing thousands of tests, we design long-life and high-safety cells for BESS products, which can meet the 10-year service life under the premise of ensuring product safety and reliability.



Prismatic LFP Cell Series

Item	Model 1	Model 2	Model 3	Model 4	Model 5
Application	Power Backup			Energy Storage	
Cell Model	29173200	30148135	2770135-E/S	29173200	54174200
Nominal Capacity	100Ah	50Ah	20/25Ah	105Ah	210Ah
Nominal Voltage	3.2V	3.2V	3.2V	3.2V	3.2V
IR	≤0.6mΩ	≤1.0mΩ	≤1.5mΩ	≤0.6mΩ	≤0.3mΩ
Mass	~2150g	~1180g	~500g	~2150g	~4500g
Rated Ratio	0.5C / 0.5C			1C / 1C	
Cycle life (25°C@100%DOD)	800~3000			>6000	

48V Battery Pack Series

Type	Model	Series	Spec.	Weight (kg)	Size W×D×H (mm)	Voltage range(V)
Power Backup	ZTT4820	15	48V 20Ah-2U	12±2	482 x 350 x 89±2	40.5-54
		16	51.2V 20Ah-2U	13	482 x 350 x 89±2	43.2-57.6
	ZTT4850	15	48V 50Ah-3U	24±2	482 x 430 x 131±2	40.5-54
		16	51.2V 50Ah-3U	30	442 (without hanger) x 400 x 133±2	43.2-57.6
	ZTT48100	15	48V 100Ah-3U	41±2	482 x 430 x 131±2	40.5-54
		15	48V 100Ah-5U	41±2	482 x 400 x 222±2	40.5-54

Type	Model	Series	Rated voltage(V)	Rated capacity(Ah)	Charge mode	Voltage range(V)
Power Backup	ZTT48200	15	48	200	CC-CV	40.5-54
		16	48	200		43.2-57.6
	ZTT48300	15	48	300		40.5-54
		16	48	300		43.2-57.6
	ZTT48500	15	48	500		40.5-54
		16	48	500		43.2-57.6

ZTT 48V50AH



Battery Module	ZTT 48V50AH
Dimension	19" rack; 3U
Weight	24 kg ± 2 kg
Maximum charge voltage	54 V ± 0.2 V
Charge voltage in floating mode	51...52 V ± 0.2 V
Final discharge voltage	40.5 V (adjustable)
Rated charging current	0.2C (10 A, adjustable)
Rated discharge current	0.5C (25 A, adjustable)
Maximum discharge current	1C (50 A)
Internal resistance	≤ 45 mΩ
Working temperature	-20 ~ +55°C
Permissible humidity of the environment during storage	5% ~ 95%
Self-discharge coefficient @ 25 °C (% / month)	≤3%
Maximum number of parallel-connected battery	16
Cycle life @ 0.2C, 80% DOD, 25°C	≥ 2 000 Cycles (≥80% SOC)
Design life	>10 years

ZTT 48V100AH



Battery Module	ZTT 48V100AH
Dimension (W x D x H)	19" rack; 3U/5U
Weight	41kg ± 2 kg
Maximum charge voltage	54 V ± 0.2 V
Charge voltage in floating mode	51...52 V ± 0.2 V
Final discharge voltage	40.5 V (adjustable)
Rated charging current	0.2C (20 A, adjustable)
Rated discharge current	0.5C (50 A, adjustable)
Maximum discharge current	1C (100 A)
Internal resistance	≤ 40 mΩ
Working temperature	-20 ~ +55°C
Permissible humidity of the environment during storage	5% ~ 95%
Self-discharge coefficient @ 25 °C (% / month)	≤3%
Maximum number of parallel-connected battery	16
Cycle life @ 0.2C, 80% DOD, 25°C	≥ 2 000 Cycles (≥80% SOC)
Design life	>10 years

ZTT 48V200AH



Battery Module	ZTT 48V200AH
Dimension (W x D x H)	19" rack; 6U
Weight	75.5kg ± 2 kg
Maximum charge voltage	54.75 V ± 0.2 V
Charge voltage in floating mode	51...52 V ± 0.2 V
Final discharge voltage	40.5 V (adjustable)
Rated charging current	0.1C (20 A, adjustable)
Rated discharge current	0.3C (60A, adjustable)
Maximum discharge current	0.5C (100 A)
Internal resistance	≤ 90 mΩ
Working temperature	-20 ~ +55°C
Permissible humidity of the environment during storage	5% ~ 95%
Self-discharge coefficient @ 25 °C (% / month)	≤3%
Maximum number of parallel-connected battery	16
Cycle life @ 0.2C, 80% DOD, 25°C	≥ 2 000 Cycles (≥80% SOC)
Design life	>10 years

GLOBAL REFERENCES

Our products have been exported to 4 continents -- Asia, Europe, America and Africa.

Asia: China; Japan; Bangladesh; Myanmar; Vietnam; India; Malaysia; Indonesia

Europe: Russia; Germany; Slovenia; Greece **America:** Peru; Brazil **Africa:** South Africa

