

ENF Solar Assessed Supplier

Assessment Report Presented to:

Jiangsu Haitian Microelectronics Technology Corp.
江苏海天微电子股份有限公司

Service Commissioned by:



Service Provided by:



August 9, 2022

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Introduction

This report has been commissioned by ENF Solar – the world's most visited solar website. Inspections have been undertaken by TÜV Rheinland – a testing service provider who have been testing solar components since 1985. TÜV Rheinland is part of TÜV Rheinland Group, a technical services company established in 1872 and employing 17,000 staff around the world.

To make these reports, TÜV Rheinland sends inspectors directly to the factories to collect data, take pictures and check documents.

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The objective of validating supplier information is to provide additional confidence to buyers so that they know the information has been verified by an independent third party.

The TÜV Rheinland "Supplier Capability Assessment" program is not designed to be a performance standard but rather an information validation program against an established criterion providing potential buyers with information on the establishments stated claims and capabilities.

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Company Overview

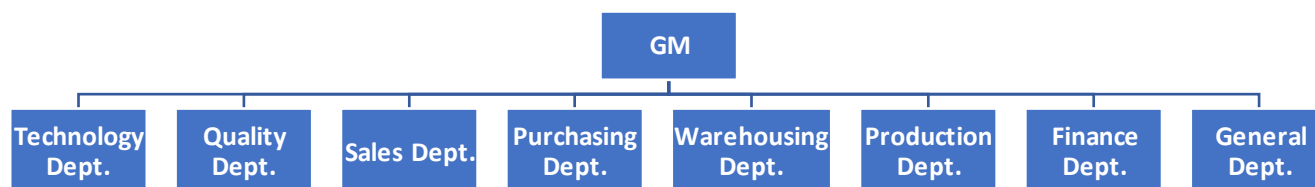
Identification	Details		
Company Name	Jiangsu Haitian Microelectronics Technology Corp.		
Facility address	No. 212200, SME Entrepreneurship Park, Baqiao Town, Yangzhong City, Zhenjiang City, Jiangsu Province, China		
	Contact Person:	Mr. Lin Li	
	Tel:	0086-15205284867	
	Fax:	N/A	
	E-mail:	marketing@jshtgf.com	
URL/Web Address	https://www.ensolar.com/haitian-microelectronics-technology		
Report Date	01/Aug./2022		
Expiry Date (24 months validity)	31/Jul./2024		
Name of Assessor	Tong Jiao		
Overall Turnover of Last Year	RMB 200,741,632		
Total Building Size	15,846 square meters		
Number of Buildings	3		
Office Size	3,000 square meters		
Working Day	Monday to Friday	Working Hours	8:30 -- 17:30

Legal Entity

Legal Entity			
Business License Number	913211005593482270		
Year Established	05/Aug./2010	Validity Period:	05/Aug./2010 -- 31/Dec./2049
Registered Address	No. 212200, SME Entrepreneurship Park, Baqiao Town, Yangzhong City, Zhenjiang City, Jiangsu Province, China		
Company Address	No. 212200, SME Entrepreneurship Park, Baqiao Town, Yangzhong City, Zhenjiang City, Jiangsu Province, China		
Registered Capital	RMB 12,000,000		
Corporate Representative	Mr. Yuanhai Kuang		
Industry	PV Related Products		
Products /Service	Junction Box		
Business Type	<input type="checkbox"/> Manufacturer	<input type="checkbox"/> Trading Company	<input checked="" type="checkbox"/> Combined
Type of Ownership	<input checked="" type="checkbox"/> Private Owner	<input type="checkbox"/> Public Company	<input type="checkbox"/> Joint Venture
	<input type="checkbox"/> Stated Owned	<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Other

Human Resources

Company Organization Chart



Department Name	Full Time Employee(s)	Part-Time Employee(s)	Total
GM	1	0	1
Technology Dept.	15	0	15
Quality Dept.	24	0	24
Sales Dept.	4	0	4
Purchasing Dept.	4	0	4
Warehousing Dept.	13	0	13
Production Dept.	409	0	409
Finance Dept.	6	0	6
General Dept.	2	0	2
Totals	478	0	478

Export Business Capacity

Current Export Situation

There are 4 foreign trading employees in the company.

Working Experience	Headcount
Over 30 Years	0
21-30 Years	0
11-20 Years	0
6-10 Years	4
2-5 Years	0
Less than 2 years	0

Accepted Language	Listening & Speaking	Reading & Writing
English	Yes	Yes
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Does the company have a valid export license?	<input checked="" type="checkbox"/> Yes Export License Registration No.: 02785556			<input type="checkbox"/> No
Trade Agents Employed Overseas	<input type="checkbox"/> Yes			<input checked="" type="checkbox"/> No
Nearest Port	Shanghai Port			
Accepted Payment Terms	<input checked="" type="checkbox"/> FOB	<input checked="" type="checkbox"/> CIF	<input checked="" type="checkbox"/> EXW	<input checked="" type="checkbox"/> CFR
Accepted Payment Types	<input checked="" type="checkbox"/> L/C	<input checked="" type="checkbox"/> T/T	<input checked="" type="checkbox"/> Credit Card	<input checked="" type="checkbox"/> Cash
	<input checked="" type="checkbox"/> West Union	<input checked="" type="checkbox"/> Money Gram	<input checked="" type="checkbox"/> Paypal	<input checked="" type="checkbox"/> Money booker
Average lead time from product order confirmation to production delivery (products exiting the company)	7 Days			

Market Distribution (Previous 12 Months)

Market	Main Product(s)	Total Revenue (%)
North America	Junction Box	1
South America	Junction Box	1

Eastern Europe	Junction Box	2
Southeast Asia	Junction Box	1
Africa	Junction Box	1
Oceania	Junction Box	1
Middle East	Junction Box	1
Eastern Asia	Junction Box	15
Western Europe	Junction Box	2
Central America	Junction Box	1
Northern Europe	Junction Box	2
Southern Europe	Junction Box	2
South Asia	Junction Box	5
Domestic Market	Junction Box	65

Product Capabilities

Production Capacity		
Product Name	Production Line Capacity (Monthly)	Actual Units Produced (Previous Year)
Junction Box	21,000,000 Sets / Month	24,000,000 Sets

Se

Production Machinery			
Key Machine Name	Brand & Model No.	Quantity	Condition
Welding Machine	CHA-400 N2-1460GF	4	Acceptable
Junction Box Assembly Line	No Information	24	Acceptable
Connector Assembly Machine	No Information	8	Acceptable
Automatic Terminal Pressing Machine	BW & BZW-3.0+GF	6	Acceptable
Cable Processing Line	No Information	2	Acceptable
Harness Processing Line	No Information	6	Acceptable
Injection Molding Machine	UN180-PE111	25	Acceptable
Injection Molding Machine	ZHEJIANG SHENDA & SE-130	39	Acceptable
Automatic Paste Brushing Machine	No Information	4	Acceptable



Key Testing Machinery			
Machine Name	Brand & Model No.	Quantity	Condition
Diode Forward Surge Current Generator	EASYSUN & ES-IFS-708D	1	Acceptable
Diode Comprehensive Performance Tester	Zealwe & ZW BD 0203 5010	1	Acceptable
Constant Temperature and Humidity Testing Machine	ASLI & TH-225DH	2	Acceptable

Electrostatic Discharge Generator	ESD61002TC	1	Acceptable
Electrostatic Discharge Generator	ESD-DESK	1	Acceptable
Salt Spray Test Chamber	60	2	Acceptable

Diode Forward Surge Current Generator



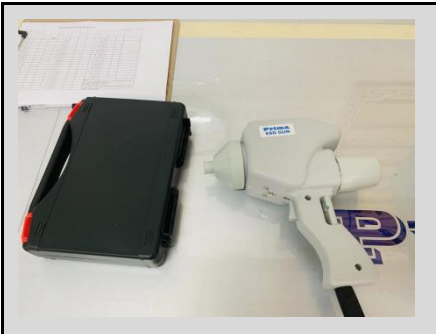
Diode Comprehensive Performance Tester



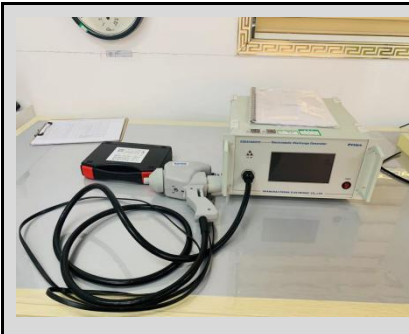
Constant Temperature and Humidity Testing Machine



Electrostatic Discharge Generator (ESD61002TC)



Electrostatic Discharge Generator (ESD-DESK)



Salt Spray Test Chamber



Production Flow (Junction Box)

Injection Molding

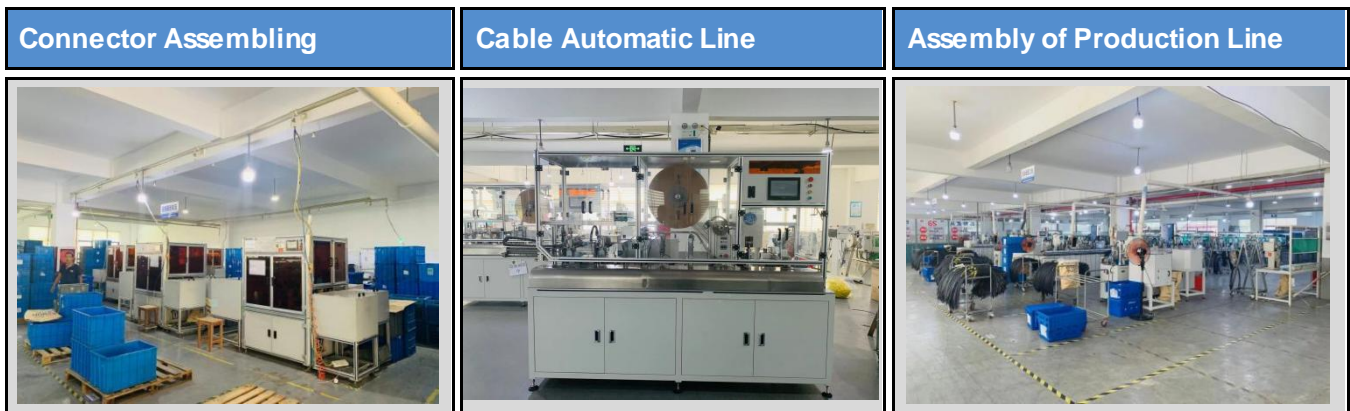


Cable Manufacturing



Welding





R & D Capacity

Current Situation

There are 15 R&D engineers in the company.

Education Level	Headcount
Doctorate	0
Post-Graduate	0
Graduate	15
Junior College	0
Technical School	0
High School	0

Work Experience	Headcount
Over 30 Years	0
21-30 Years	0
11-20 Years	0
6-10 Years	6
2-5 Years	5
Less than 2 years	4

Brand Situation

Registration/application No.	Brand Name	For Approval to Use Goods	Validity Date	Ref.
N/A	N/A	N/A	N/A	N/A

Patent Situation

Patent No.	The Name of the Patent	The Patent Type	Available Date	Ref.
ZL 2015 1 0724448.2	A metal piece with a diode	Invention Patent	23/Feb./2018	Photo in Certification & Photos (Patent Photos)

ZL 2015 1 0724449.7	A module for fast mounting of metal parts	Invention Patent	05/Jan./2018	Photo in Certification & Photos (Patent Photos)
ZL 2015 1 0735070.6	The utility model relates to an automatic SMT assembly line	Invention Patent	20/Apr./2018	Photo in Certification & Photos (Patent Photos)
ZL 2014 1 0110915.8	The utility model relates to a welding tool for metal parts assembly	Invention Patent	30/Mar./2016	Photo in Certification & Photos (Patent Photos)
ZL 2015 1 0729777.6	The invention relates to a new type of stop-back ring processing device	Invention Patent	29/Sep./2017	Photo in Certification & Photos (Patent Photos)
ZL 2015 1 0724955.6	The utility model relates to a positioning tool for a dispensing machine	Invention Patent	23/Feb./2018	Photo in Certification & Photos (Patent Photos)
ZL 2015 1 0730744.3	The utility model relates to an electronic device taking tool	Invention Patent	13/Nov./2018	Photo in Certification & Photos (Patent Photos)
ZL 2014 1 0421068.7	The invention relates to a diode shaping device	Invention Patent	18/Jan./2017	Photo in Certification & Photos (Patent Photos)
ZL 2015 1 0730772.5	A thrust module	Invention Patent	30/Jun./2017	Photo in Certification & Photos (Patent Photos)
ZL 2015 1 0725179.1	A winding fixture for a junction box	Invention Patent	18/Jul./2017	Photo in Certification & Photos (Patent Photos)
ZL 2015 1 0735044.3	The invention relates to a dispensing device on an automatic patch assembly line	Invention Patent	03/Nov./2017	Photo in Certification & Photos (Patent Photos)
ZL 2015 1 0735139.5	A dispensing and detection device on automatic chip mounting assembly line	Invention Patent	29/Jun./2018	Photo in Certification & Photos (Patent Photos)

Does the company provide OEM/ODM service for others?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are there relevant design input/output, review, and verification documents available for the assessed company?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Based on inspection, are R&D employees equipped with adequate specialized equipment?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Do R&D employees use any specific software for designing new products?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Development Devices

Diode Forward Surge Current Generator	Diode Comprehensive Performance Tester	Salt Spray Test Chamber
		

Management Systems & Quality Control Management

Quality Management System Certification				
Certification	Certified By	Certificate No.	Business Scope	Expiry Date
ISO 9001:2015	Bid winning United (Beijing) Certification Co., Ltd.	18520Q11146R0M	Research, development and production of photovoltaic modules (junction boxes)	06/Oct./2020 -- 05/Oct./2023
ISO 14001:2015	Bid winning United (Beijing) Certification Co., Ltd.	18520E10532R0M	Research and development, production and related management activities of photovoltaic modules (junction boxes)	06/Oct./2020 -- 05/Oct./2023
ISO 45001:2018	Bid winning United (Beijing) Certification Co., Ltd.	18520S10482R0M	Research and development, production and related management activities of photovoltaic modules (junction boxes)	06/Oct./2020 -- 05/Oct./2023

Product Certification

Certification	Certified By	Certificate No.	Product Name & Model No.	Expiry Date
N/A	N/A	N/A	N/A	N/A

Test Report

Test Report	Certified By	Product Name & Model No.	Expiry Date
Test Report	TÜV Rheinland (Shanghai) Co., Ltd.	Junction Box for PV Module	14/Jan./2022

Quality Control Management

Content	Observations / Comments		
Does the company set up any inspection standards for raw materials?	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No
Has the company set up necessary quality inspection standards in the process of production?	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No
Does the company have any measures to control the management of unqualified materials after sampling, to avoid mixing up or wasting?	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No
Are work instructions available at the location where the processes take place?	<input checked="" type="checkbox"/> Total line	<input type="checkbox"/> Parts of the line	<input type="checkbox"/> No
Is personal protective equipment (PPE) needed in the production line?	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No
Is the management and usage of production materials as well as the production process executed by staff who are appropriately trained and qualified or by senior staff?	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No

Supplier Management

Content	Observations / Comments	
Does the company have a supplier assessment procedure?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Does the company establish and implement a standard procedure for purchasing contract review and approval?	<input checked="" type="checkbox"/> Yes, with written standard procedures	<input type="checkbox"/> Yes, with written procedure but lack of consistent standard		<input type="checkbox"/> No
Does the company keep its supplier assessment reports?	<input checked="" type="checkbox"/> Yes, Keep for 1 year available			<input type="checkbox"/> No
Are the company's purchasing documents sufficient to ensure product safety control and their customers' requirements?	<input checked="" type="checkbox"/> Yes, the purchasing document includes all the information required	<input type="checkbox"/> Yes, however the purchasing document includes incomplete information		<input type="checkbox"/> No
Is there a procedure to conduct random product inspections after final packaging?	<input checked="" type="checkbox"/> Yes, with clear standard and written inspection records	<input type="checkbox"/> Yes, with inspection records but no procedures	<input type="checkbox"/> Yes, with procedures but no inspection records	<input type="checkbox"/> No, inspections are not necessary

After Sales Service				
Content	Observations / Comments			
Has the company set up any procedure for customer feedback, including complaints, clearly recorded and maintained?	<input checked="" type="checkbox"/> Yes, with a standard feedback form and records	<input type="checkbox"/> Yes, with a standard feedback form but no records	<input type="checkbox"/> Yes, with records but no standard feedback form	<input type="checkbox"/> No
Are there any clear procedures for handling customer complaints?	<input checked="" type="checkbox"/> Yes, with clear procedures and written records	<input type="checkbox"/> Yes, with clear procedures but no written records	<input type="checkbox"/> Yes, with written records but no clear procedures	<input type="checkbox"/> No
Does the company have the SOP (Standard Operation Procedure) for after-sales service? Does the company provide after-sales consulting services?	<input checked="" type="checkbox"/> Yes			<input type="checkbox"/> No
Does the company implement the provisions of the National Three Warranties (warranty for repair/replacement /return) for their products?	<input checked="" type="checkbox"/> Yes			<input type="checkbox"/> No

Corporate Social Responsibility

Child Labour & Forced Labor		
Content	Observations / Comments	
Is it clarified that there's no child labor in the company?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the company have an explicit job management program, and take corresponding measures to check the age of the employees?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are the staff clearly aware of the terms of labour contract, regulations of the company and the right of free employment?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Have the staff been forced to work overtime? Will they be fined or fired if they refuse to?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Health and Safety		
Content	Observations / Comments	
Has the company set up a safety responsibility system, and distributed to all levels of supervisor and provided them with corresponding training?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the company conduct regular inspection of the plant and equipment, to ensure the health and safety of the workshop at least in accordance with the law?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the company regularly provide necessary safety and health training, to make the staff understand that there might be occupational hazards in their work, and take appropriate protective measures when necessary? (For example, how to use personal protective equipment safely, etc.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the company hold regular fire drills, including fire drills and evacuation drills? Do the staff clearly know how to raise an alarm, how to evacuate and how to use the fire extinguisher?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No (No regular fire drill was conducted by the factory)
Does the company have the approval report issued by the local Fire Bureau?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the company provide sufficient first aid equipment? Are first-aid kits and trained first-aiders available in each workplace?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No (No qualified first aider available in workshop)

Does the company provide clean lavatories, separating men's and ladies'?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the company provide clean drinking water to the staff? Is there unrestricted access to the drinking water?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Development / Expansion Plans

Company Development / Expansion Plans	
Company Development Action	Timeframe
The company has experienced foreign trade team and perfect after-sales service, strictly implement the requirements of quality management system, and provide customers with high quality products.	1 Year

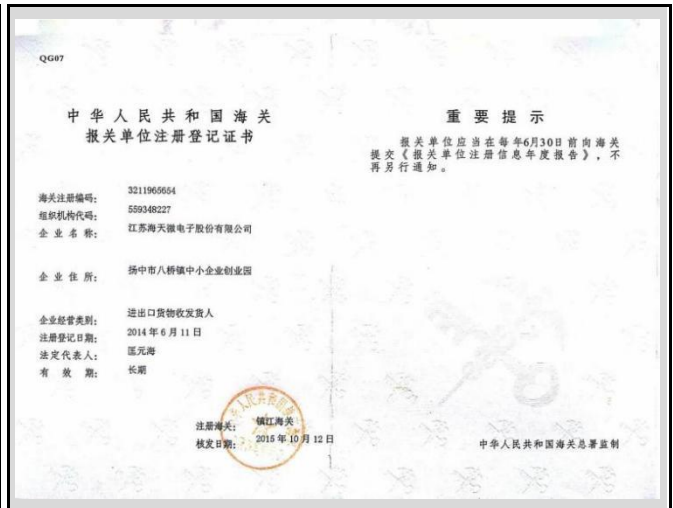
Certification & Photos

Certification

Business License



Certificate Photo -- Custom Clearance Registration Form



Certificate Photo--Foreign Trade Import And Export Filing Registration Form



Certificate Photo--ISO 9001:2015



Certificate Photo--ISO 14001:2015



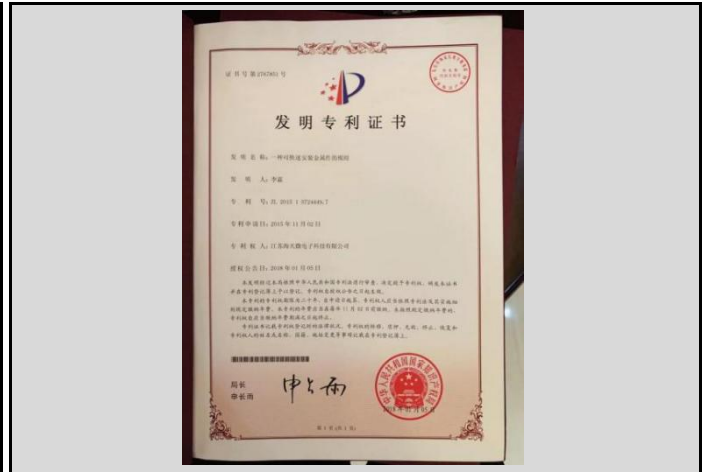
Certificate Photo--ISO 45001:2018



Certificate Photo – Invention Patent 1



Certificate Photo – Invention Patent 2



Certificate Photo -- Invention Patent 3



Certificate Photo -- Invention Patent 4



Certificate Photo -- Invention Patent 5



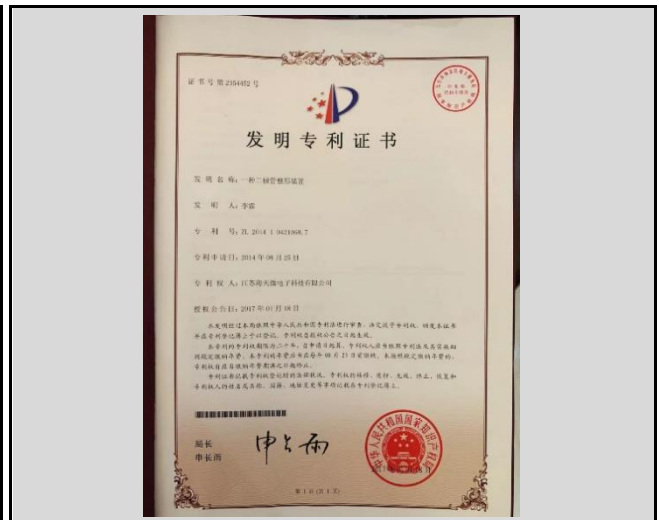
Certificate Photo -- Invention Patent 6



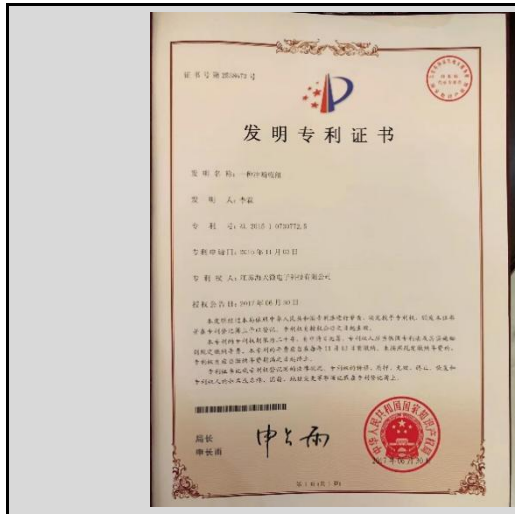
Certificate Photo -- Invention Patent 7



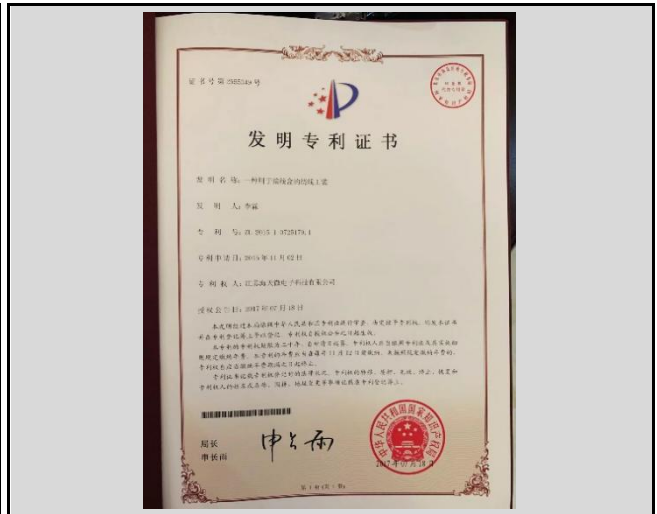
Certificate Photo -- Invention Patent 8



Certificate Photo -- Invention Patent 9



Certificate Photo -- Invention Patent 10



Certificate Photo -- Invention Patent 11



Certificate Photo -- Invention Patent 12



Certificate Photo -- High Tech Enterprise



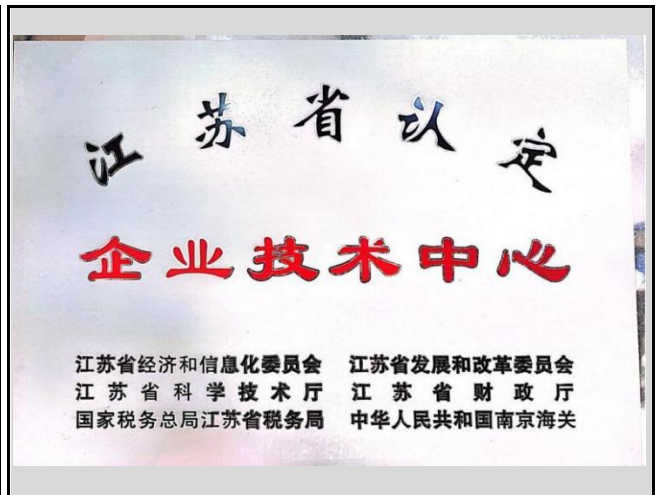
Certificate Photo -- Honor



Certificate Photo -- Honor



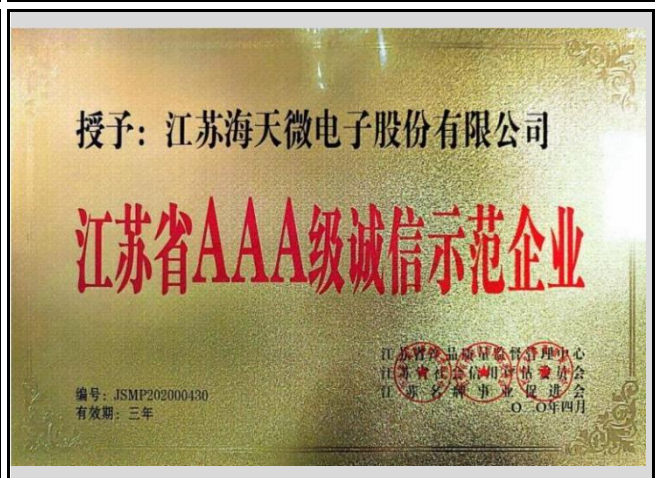
Certificate Photo -- Honor



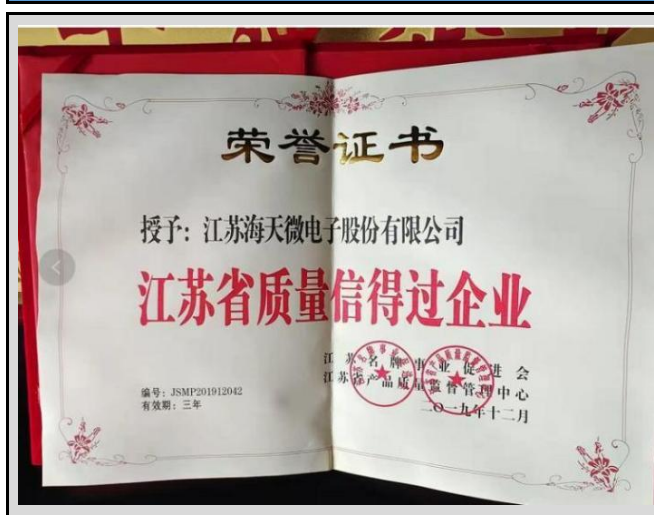
Certificate Photo -- Honor



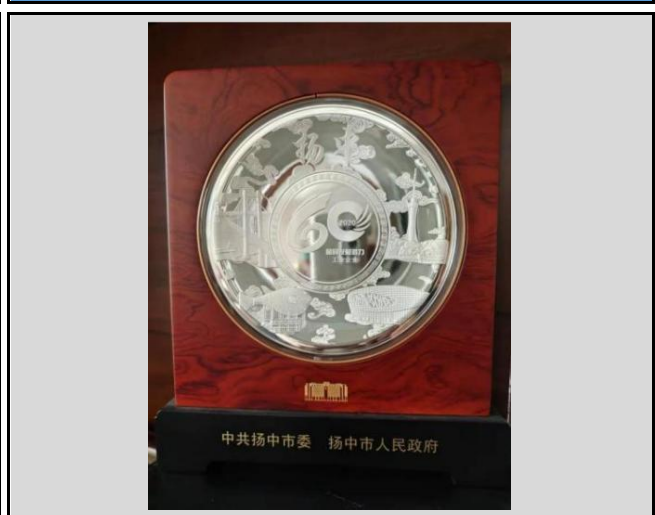
Certificate Photo -- Honor



Certificate Photo -- Honor



Certificate Photo -- Honor



Company Gate



Office



Office



Workshop



Workshop



Warehouse



Test Room	Show Room
	
Product Photo	Product Photo
	
Product Photo	Product Photo
	

Product Photo



Product Photo



-- The END --