Deliver WoW through service…

CQS Company Limited
Shenzhen China
Tel.:(0086)-755-2802 2253

CQS Supplier Assess Report

Presented to

Guangzhou Lin Electronic Technology Co. Ltd.
广州 XX 电子科技有限公司

Assessed Company Relationship:	☒ Self-owned ☐ Wholly Owned ☐ Shareholder/Partner ☐ Kindred between Owners ☐ Cooperation Partner
Company Address:	广州番禺大石街植村工业 X 路 XX 号 X 楼
City / Country:	**GuangZhou / CHINA**
Supplier Company Name:	广州 **XX** 电子科技有限公司 **Guangzhou Lin Electronic Technology Co. Ltd.**
Contact Person:	**Lily Ning**
Phone Number:	**+86-020-3923**
Email	**lily@Sp.com**
Website Address (URL):	**No website**

Service Provided by CQS Company Ltd.
Report No.:20200710_01

Report Number:	*20200710_01*	Assessment Type:	Production Assessment
Date of Assessment:	10/July/2020	Report Date:	10/July/2020
Assessor's Name:	**Andy Liu**	Reviewed By:	**Michael Tu**

Important Notes:

CQS's Disclaimer:

This report reflects our findings for the particularly concerned company on the date of our service only. This report does not discharge or release the factory/sellers/suppliers from their commercial, legal or contractual obligations with buyers in respect of products provided by the factory/sellers/suppliers. Any reader other than the party for whom this report has been specifically issued is hereby informed that the general conditions of service of CQS contain liability limitation provisions.

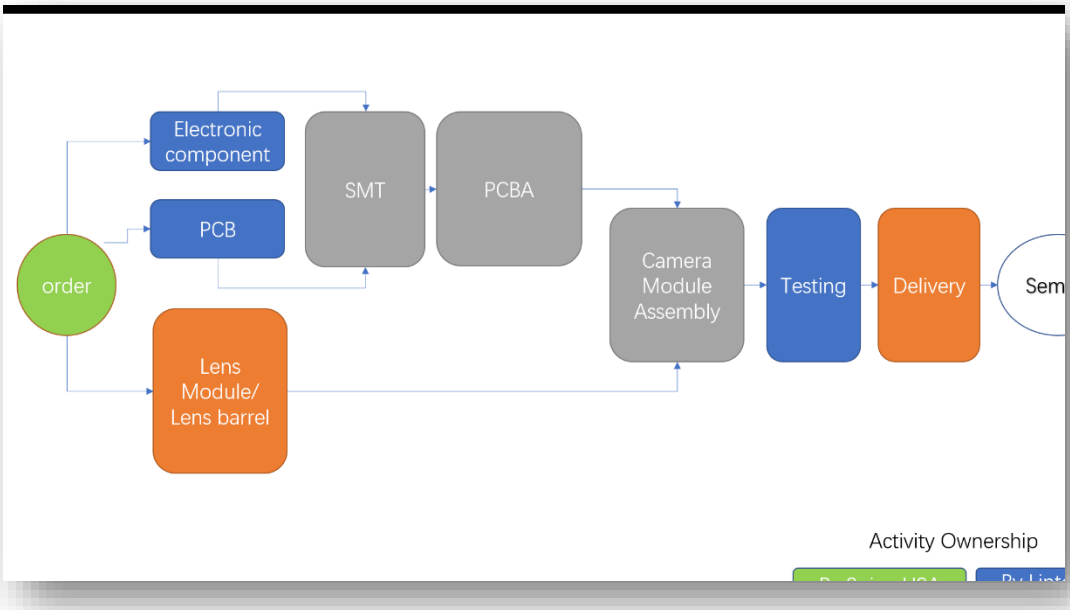
Risk Level:	25%	50%	75%	100%
	➢ 25%: supplier with general Quality management system ➢ 50%: Supplier without sufficient management system; ➢ 75%: Supplier without sufficient facilities or equipment's for client's order; ➢ 100% Supplier do not have legal business license			

Synopsis of Major Facts and Problem Found

Detail elaboration:

In this supply chain, from customer to the manufacturer, there are 4 legal entities included, they are:

1) **Lin USA**
2) **Lin China (Shenzhen representative office)**



3) **Guangzhou PUT communication Technology Co. Ltd.**
4) **Guangzhou Lin electronic technology co., Ltd.**

A) Their key role & responsibility in the chain:

5) **Lin USA – (Not Visit)**
   - mainly focus on business development & customer service
6) **Lin China – (Not Visit)**
   By interview with Lily (Lin China Representative),
   - Lin China mainly focus on order follow up, progress monitoring, QC, shipping
   - 3 staffs in Shenzhen Office
7) **PUT (Visited)**
   By visiting PUT and interview with Mr. Wu (PUT owner), PUT's role,
   - 10 staff in the office
   - camera development in hard ware & software,
   - subcontract SMT & assembly to Lin and monitoring progress
   - in-house camera assembly for order quantity less than 200pcs
   - for more than 200pcs order, PUT will subcontract to manufacturer Lin
   - Quality control

8) **Lin (Visited)**

- 77 operator and office staff
- There is no camera relevant production running in the factory during the visiting
- Lin's key role in this camera business is to do SMT
- In the future, Lin will assembly the camera module with technical supporting from PUT
- Lin only do SMT and assembly process, the raw material will be supplied by PUT (PCB & electronic component for SMT) & by Lin China (lens module and lens holder)
- Lin business including SMT(54%), DIP (40%), and assembly (6%). Camera business account for about 5%.
- Lin needs PUT's assistance in order to produce and deliver a full camera module.

B) Observation and findings

During the visiting, the parties been assessed are willing to cooperate,. And emphasized that they are willing to cooperate and adapt to client's needs, requirements.
And if there is special requirements by client, they are okay to follow.

The following is the key observation and findings:

9) People competency:

- People are basically capable to handle camera production by interviewing check.

10) Equipment:

- There is no overall equipment list in the factory, and there is no maintenance plan.
- Factory not able to submit equipment maintenance procedure for review. Found daily maintenance checklist on site, but not implement. This visiting is on 10th July 2020, but the check list was found date on Dec. 2019.
- Equipment is capable to do SMT & assembly
- In SMT process, found some machine only 1set in the factory, meaning if the machine is down, the shipment may impacted. (Reflow Oven*1, AOI*1)
- ESD (**Electro-Static discharge)** setup is not 100% secured in the workshop to avoid any product damage by Electro-Static discharge. For example, factory did not calibrate and verify if the ESD wrist-band is really working. And they have no answer while being asked how to verify this. In wire-cutting process, operator did not wear ESD wrist-band.
- There is no overall test equipment list, and annual calibration plan for the test equipment has not been established.
- Found test equipment are partially calibrated (caliper, LCR has been calibrated)

11) Material:

- Raw material is either supply by Lin China (lens module & lens barrel), or by PUT (PCB, electronical components)
- Incoming raw material won't be quality checked at Lin, they only validate quantity & part number and then deliver for production
- The lens module & lens barrel is purchased by Lin China, and then ship to PUT/ Lin. The Lens module was protected by transparent blister cover to avoid scratch and dust. Lin China to do random sampling visual check on lens module, but the sample size does not define.

12) Working Standard:

- Working standard is found on site but NOT implemented. For example, there is working instruction on each machine to guide operator sets machine parameter, but actual found nobody check and ensure the machine was set according to the parameter.
- Change management is basically controlled by product version number. There is no written change management procedure on site for reference. 1 day after the visiting, Lin China has sent a change management procedure on 11th July for review.
- The change management procedure received afterward are very generical, and does not define what change should be identified, managed and communicated. When, how and with whom?

13) Environment:

- The assembly process is done in a normal assembly workshop without cleaning dust-free environment setup
- In SMT workshop, humidity and temperature is defined, controlled and recorded.
- Some PCBA is found put on rack and then directly put on the ground.

14) Performance management:

- Line QC inspector to do 100% quality check on PCBA, and record the defect, but did not make analysis for CA/PA (corrective action/preventive action)
- During assembly process, the operator 100% check if any dust before assembly the lens.
- After assembly, the operator fixes camera focus by checking image quality.
- Other than above, there is no more image check at the factory by using image check chart.
- Lily from Lin China mentioned, random image quality check by standard image chart will be done in Lin Shenzhen office. Lily sent the document on 11th July after the visiting.

15) Lead time

- The lead time will be 4 weeks from order confirmation to ETD base on order of 1000pcs camera module. PCB/electronic component need 1 week to be ready, and SMT need 1 week to complete, then 1 week for assembly and testing in Lin, another 1 week for random check and shipment in Lin China office.

Camera Module Time Line

	Milestone	Driver	WK 0#	WK 1#	WK 2#	WK 3#	WK 4#	WK 5#	WK 6#
1	Order Confirmation								
2	Order PCB								
3	Order electronic component								
4	Order lens module								
5	Order lens barrel								
6	SMT								
7	Assembly								
8	Testing								
9	Random check								
10	ETD								

Litigation case:

Not found

Contents

Contents

Contents 6
Section 1: Company Overview 8
1.1 Legal validity 8
1.2 Company Building Information 8
Section 2: Human Resources 8
2.1 Company Chart 9
2.2 Employee Headcount 9
2.3 Management 10
Section 3: Production Capacity 10
3.1 Annual Production Capacity (Previous Year) 10
3.2 Production Capacity 10
3.3 Production Machinery 10
3.4 Equipment Maintenance Program 10
3.5 Testing Machinery 11
3.6 Subcontractors (Process or component) 11
3.7 Average Sampling Time 11
3.8 The Shortest Sampling Time 11
Section 4: Quality Assurance 12
4.1 Quality Assurance 12
4.1.1 Quality Management System Certification 12
4.1.2 Product Certification 12
4.2 Testing Report 12
4.3 Quality Control Management 12
4.4 Supplier Management 13
4.5 After Sales Service 14
Section 5: Production Process Management 14

5.1 Quality Control Management 14
5.2 Change Management (Product & Process) 15
Section 6: R & D Capacity 16
6.1 Current Situation 16
6.2 R&D Real Case Description 17
6.3 Design Process 18
Section 7: Company Development / Expansion Plans 18
Section 8: Production Flow 18
Section 9: Facilities & Warehouse Storage 19
9.1 Facilities 19
9.2 Warehouse & storage 19
Section 10: Certification & Photos 19
Section 11: Company and Product Samples 20
Section 12: Competitive Advantages 22
12.1 Product Group capacity 22
12.2 Real Case for Lower MOQ & Short Lead Time 22
12.3 Real Case for Large Contract 22
12.4 Overseas After Sales Service 23
12.5 After-sales Service Capacity 23
Section 13: Industry Focus 23

Section 1: Company Overview

Company overview			
1.1 Legal validity			
Does the company have a valid business license	☒Yes ☐NO	Business license number:	91440XXXX791043751F
Year Established:	2006	Validity Period:	2006
Export Experience:	None	Industry Experience:	14 years
Registered Address:	广州番禺大石街植村工业 x 路 X 号 X 楼 Dashi, Panyu, Guangzhou, China		
Company Address:	广州番禺大石街植村工业 x 路 X 号 X 楼 Dashi, Panyu, Guangzhou, China		
Annual review conducted by the industrial & commercial Bureau?	☒ Yes NO	Reviewed by:	Guangzhou Administration Management Authority
Registered Capital:	1 million RMB (143,000US Dollar)		
Corporate Legal Representative	Mr. Wu Xi (吴)		
Industry:	Manufacturing (OEM)		
Business Type:	☒ Manufacturer ☐ Trading company ☐ Manufacturer & Trading company		
Type of Ownership:	☒ Private owner ☐ Public owner ☐ Joint Venture ☐ State owned ☐ Sole Proprietorship ☐ Other		
Products/Service:	PCBA (SMT/DIP) & Assembly		

1.2 Company Building Information

Certification Type:

☐ Land Certification ☐ Real Estate Certification ☒ Lease Agreement ☐ Factory officer Claimed ☐ Other

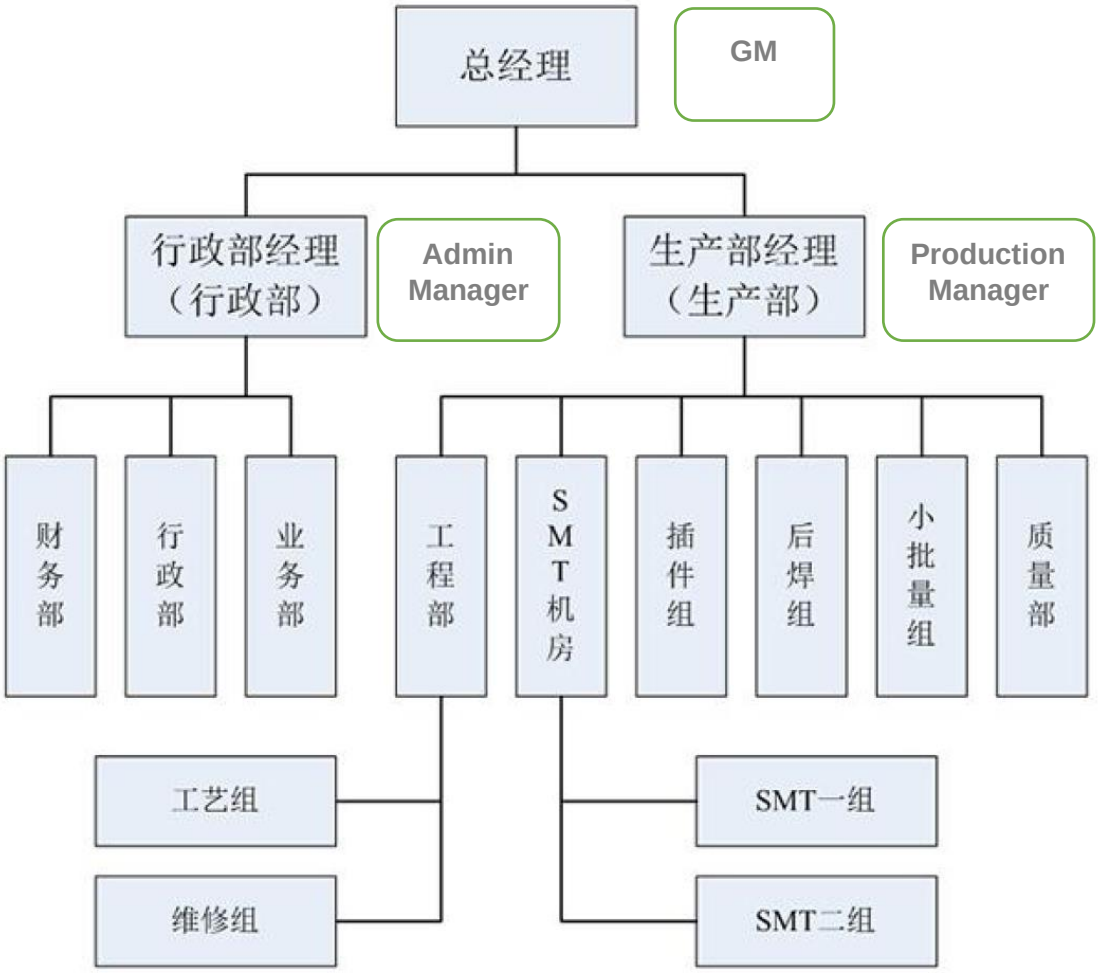
Total Building Size: _____1800____square meter

Number of Building(s):_____1 shop-floor_____

Section 2: Human Resources

Human Resources

2.1 Company Chart



2.2 Employee Headcount

Department Name	Full Time Employee(s)	Part-Time Employee(s)	Total
Factory Director	1	0	1
SMT	20	0	20
DIP/assembly	40	0	40
Office staff	3	0	3
Warehouse	3	0	3
Quality Dept.	10	0	10
Total Number:	77	0	77

2.3 Management

Department	Name	Title	Education	Year(s) in Current Company
Management Team	Mr. Lin	GM	College	12

Section 3: Production Capacity

Production Capacity

3.1 Annual Production Capacity (Previous Year)

8 million RMB (manufacturing Value)

3.2 Production Capacity

Product Name	Production Line Capacity (Daily)	Actual Units Produced (Previous Year)
SMT 54%%	200 million component	Not provide
DIP 40%	100 million component	Not provide
Assembly 6%	800 units	Not provide

3.3 Production Machinery

Machine Name	Brand & Model No.	Quantity	Number of Year(s) Used	Condition
SMT machine (H)	Yamaha/YS14	2	3	acceptable
SMT machine (H)	Sony/G200	1	2	acceptable
SMT machine (M)	Samsung/482Plus	1	2	acceptable
SMT machine (M)	Samsung/SM421	2	3	acceptable
Reflow oven	RiDong	2	3	acceptable
AOI	VCTA-A410	1	3	acceptable
Xray	-	1	2	acceptable
Wave soldering machine	RiDong	2	5	acceptable

3.4 Equipment Maintenance Program

Item	Content	Observation / Comments
3.4.1	Is factory has a written process/procedure to define equipment maintenance program?	No written maintenance procedure, and no record. Factory mentioned they are doing regular maintenance.
3.4.2	What will be maintained and at what frequency?	Verbally mentioned by factory but not able to validate because factory does not keep maintenance record. Routine maintenance: 1 times/15 days. 1 times/month
3.4.3	For critical equipment, does factory identify and manage critical consumable components? So the production won't be interrupted if the machine is down.	No
3.4.4	Does factory has preventive maintenance program?	No

3.5 Testing Machinery				
Machine Name	**Brand & Model No.**	**Quantity**	**Number of Year(s) Used**	**Condition**
AOI	VCTA-A410	1	3	Acceptable
Xray	-	1	2	Acceptable
Thermometer	Fluke F59E	1	2	Acceptable
Caliper	Toyoto	1	5	Acceptable
oscilloscope	RIGOL	1	2	Acceptable
LCR	RIGOL	1	2	Acceptable

Check points	**Observation/Comments**
Is there annual calibration plan been created for testing equipment?	Partially
Does the Annual calibration plan implement?	Partially
Is the testing equipment in using has been calibrated with record?	Partially

3.6 Subcontractors (Process or component)			
Subcontractor Name	**Product Subcontracted**	**Volume Supplied**	**Cooperation Period (Years)**
SMT	Lin	-	5
Outgoing Testing	PUT	-	5
Lens Module	Not disclosed	-	3

3.7 Average Sampling Time	
Product Category	Lead Time
PCBA	1 week

3.8 The Shortest Sampling Time	
Product Category	Lead Time
PCBA	1 week

Section 4: Quality Assurance

4.1 Quality Assurance

4.1.1 Quality Management System Certification

Certification	Certified By	Certificate no.	Business scope	Validity Date
ISO9001:2015	ARES International certification co, Ltd.	Ares/CN/G1808040Q	PCBA	2021.9.4

4.1.2 Product Certification

Certification	Certified By	Certificate no.	Product Name & model No.	Validity Date
N/A	-	-	-	-

4.2 Testing Report

Certification	Certified By	Certificate no.	Product Name & model No.	Validity Date
N/A	-	-	-	-

4.3 Quality Control Management

Item	Content	Observation / Comments
4.3.1	Is there quality control on all production line?	☐ Yes, all production lines have adequate quality control ☒ Yes, some production line have adequate quality control ☐ No
4.3.2	Do the QA/QC inspectors work independently from the production line?	☒ Yes ☐ No
4.3.3	Who does the QC manager/supervisor report to?	Factory manager
4.3.4	How many QA/QC inspectors in total?	10

4.3.5	Is there written quality control plan available for the product the buyer going to purchase?	☐ Yes, the product with detail control plan to define what to check, by what kind of tools, by whom, at what frequency with how many sample size. And how to reaction in case non conformity has been identified. ☐ Yes, Quality control plan or similar is available but not mature ☒ No Lily from Lin China has submit quality control plan the next day after factory visiting.

4.3.5 Average Guarantee Time

Product category	Guarantee time	Guarantee Type
Camera Module	2 Year	☒ Return ☐ Repair

4.3.6 The Longest Guarantee time

Product category	Guarantee time	Guarantee Type
Camera Module	2 Year	☒ Return ☐ Repair

4.4 Supplier Management

Item	Content	Observations / Comments
4.4.1	Does the company have a supplier assessment procedure?	☐ Yes ☒ No
4.4.2	Does the company have an updated list of approved suppliers?	☐ Yes ☒ No
4.4.3	Has the company established and implemented a standard procedure for purchasing contract review and approval?	☐ Yes, with written standard procedure ☐ Yes, with written procedure but lack of consistent standard ☒ No, rely on people experience
4.4.4	Does the company keep its supplier assessment reports?	☐ Yes, assessment reports are available for more than 3 years ☐ Yes, assessment reports are available for the last 1-3 years ☐ Yes, assessment reports are available for the previous 12 months ☒ No
4.4.5	Are the company's purchasing documents sufficient to ensure product safety control and their customers' requirements?	☐ Yes, the purchasing document includes all the information required ☒ Yes, however the purchasing document includes incomplete information

		☐ No
4.4.6	Is there a procedure to conduct random product inspections after final packaging?	☐ Yes, with clear standard and written inspection records ☒ Yes, with inspection records but no procedures ☐ Yes, with procedures but no inspection records ☐ No, inspections are not necessary

4.5 After Sales Service

Item	Content	Observations / Comments
4.5.1	Is customer feedback, including complaints, clearly recorded and maintained?	☐ Yes, with a standard feedback form and records ☒ Yes, with a standard feedback form but no records ☐ Yes, with records but no standard feedback form ☐ No
4.5.2	Are there any clear procedures for handling customer complaints?	☐ Yes, with clear procedures and written records ☐ Yes, with clear procedures but no written records ☐ Yes, with written records but no clear procedures ☒ No
4.5.3	Is there a closed-loop corrective action system in place?	☐ Yes ☒ No

Section 5: Production Process Management

5.1 Quality Control Management

Item	Content	Observations / Comments
5.1.1	Is the factory tidy and clean enough for production?	☐ Yes, very good ☒ Yes, acceptable ☐ No, needs improvement ☐ No, very poor
5.1.2	Are the following items /documents provided at the appropriate location?	☒ Work instructions, but not implement ☐ Approved sample ☐ Product picture ☐ No, the above-mentioned was not available.
5.1.3	Are written instructions available for onsite material inspection/testing? Are the relevant records maintained?	☐ Yes, with clear written instructions and records ☐ Yes, with written instructions but no records ☒ Yes, with records but no written instructions ☐ No
5.1.4	Are written inspection/testing instructions available for finished products? Are the relevant records maintained?	☐ Yes, with clear written instructions and records ☐ Yes, with written instructions but no records ☒ Yes, with records but no written instructions ☐ No
5.1.5	How are finished products inspected?	☐ 100% of products with detailed inspection ☒ Random inspection without defined process ☐ No inspection

		☐ No inspection necessary
5.1.6	Are units that failed inspection clearly marked and separated to prevent accidental dispatch?	☐ Yes, the units are separated and marked clearly ☒ Yes, the units are separated but not marked clearly ☐ No
5.1.7	How are finished products that failed inspection handled?	☒ Repaired and re-inspected ☐ Thrown away ☐ No inspection necessary

5.2 Change Management (Product & Process)		
Item	**Content**	**Observations / Comments**
5.2.1	Is the factory has written procedure/process to define change management for both process and product change during development & production stage?	☐ Yes, very good ☐ Yes, acceptable ☒ Yes, needs improvement (provide after visiting) ☐ No, very poor
5.2.2	Are the change management and the escalation process established in development phase? Are these processes effectively implemented? -Change management in development phrase, (change history, time schedules, feasibility study evaluation, approval, customer and supplier communication, implementation）	☐ Yes, with clear written instructions and records ☐ Yes, with written instructions but no records ☐ Yes, with records but no written instructions ☒ No
5.2.3	Any product/process validation has been done to proof the change won't bring negative impact to customer?	☐ Yes, validation has been done and records ☒ Yes, validation has been done but no records ☐ No

Section 6: R & D Capacity

R&D Capacity

6.1 Current Situation

There is/are 10 R&D engineer(s) in the company (PUT)

Education Level	Headcount	Work Experience	Headcount
Doctorate	0	Over 30 Years	0
Post-Graduate	1	21-30 Years	0
Graduate	4	11-20 Years	0
Junior College	5	6-10 Years	4
Technical School	0	2-5 Years	2
High School	0	Less Than 2 Years	4

Patent Situation

Patent No.	The Name of the Patent	The Patent Type	Available Date
-	Antenna for PCBA	-	-
-	Software （18 software）	-	-

Brand Situation

Registration/application No.	Brand Name	For Approval to Use Goods	Validity Date	Ref.
None				

The Average Time For New Products Launched

Product Category	Lead Time
Camera Module	6 months

The Average Time For New Products Launched

Product Category	Lead Time
Camera Module	6 Months
Does the company provide ODM service for others?	☒ Yes ☐ No
Are there relevant design input/output, review, and verification documents available for the assessment company?	☒ Yes ☐ No
Based on inspection, are R & D employees equipped with adequate specialized equipment?	☒ Yes

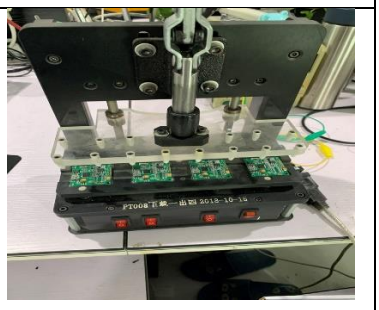
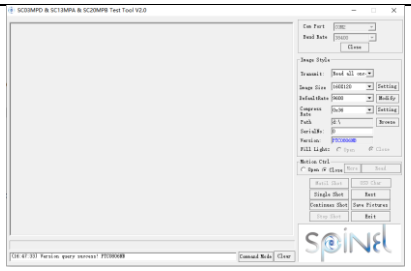
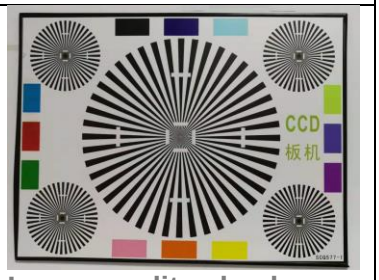
	☐ **No**
If yes, please list all key equipment used:	Cadence (PCB layout), Keil (coding), Linux
Do R& D employees use any specific software for designing new products?	☒ Yes ☐ **No**
If yes, please list the main software	Cadence (PCB layout), Keil (coding), Linux
Has the company established standard design procedures for new products?	☐ Yes, with clear written instructions ☐ Yes, without written instructions ☒ No
Have the designed products been internal verified or validated?	☐ Yes, with clear written records ☒ Yes, only part written records ☐ Yes, without written records ☐ No
Have the designed products been tested by a third-party inspection body?	☐ Yes, all designed products have been tested ☐ Yes, only part of designed products have been tested ☒ No
Have the designed products confirmed by the customers?	☐ Yes, all designed products have been confirmed ☐ Yes, part of designed products have been confirmed ☒ according to client's requirements ☐ No
Does the company have qualification requirements for designers?	☐ Yes, with written job description ☒ Yes, without written job description ☐ No, but at least two years design experience is needed ☐ No
Are the designers' qualifications recognized by the company?	☐ Yes, with written records ☒ Yes, without written records ☐ No
6.2 R&D Real Case Description	
Customer's Name	Confidential
Customer's Location	Confidential
Customer's Industry:	Confidential
Order's Requirement Description:	Confidential

6.3 Design Process		
Process 1	**Process 2**	**Process 3**
Confidential	**Confidential**	**Confidential**
6.4 Design Devices		
N/A	**N/A**	**N/A**

Section 7: Company Development / Expansion Plans

Company Development / Expansion Plans		
Item	**Company Development Action**	**Timeframe**
1	There is no development / expansion plan at this moment	N/A

Section 8: Production Flow

Production Flow					
No	**Production process**	**No**	**Production process**	**No**	**Production process**
1	Raw material	2	SMT	3	
4	Assembly	5	 Software testing	6	 Image quality check

7	 Packing	8		9	

Section 9: Facilities & Warehouse Storage

9.1 Facilities	
Is the facility share with other legal entity?	No, the factory building is only rent by Lin, and does not share any area with another entity.
Is the facility with adequate space to do production?	Yes.
Is the facility tidy and clean? And good enough to protect the product from damage by water/fire.	Yes
Is the premises secured with CCTV?	Yes
9.2 Warehouse & storage	
Are purchased materials and internal surpluses delivered and stored appropriately? (packaging, cleanliness, climatic conditions, protection from damage, dirt and corrosion, identification (traceability, inspection status, job sequence), prevention of mix ups, quarantine storage) (*Include also storage close to or on the production line)	Yes. The warehouse and storage are meet general needs. Observation on the production line, that some PCBA put on ground, due production area space issue.

Section 10: Certification & Photos

Certification & Photos

Certification & Photos – ISO9001 :2015 	**NIL**

Section 11: Company and Product Samples

Company and Product Samples		
Company Gate		**workshop**
Workshop		**Workshop**

CQS Company Limited
Shenzhen China
Tel.:(0086)-755-2802 2253

Section 12: Competitive Advantages

12.1 Product Group capacity		
12.1.1 Products Sold (within 12 Months)		
Products Name	**Quantity**	**Revenue (USD)**
Not disclosed	Not disclosed	Not disclosed
12.1.2 Suppliers Cooperated with (within 12 Months)		
No. of cooperation suppliers (total)	Not disclosed	
No. of suppliers (which cooperated over 2 times)	Not disclosed	
No. of provinces which cooperation suppliers belong to	Not disclosed	
Would the company like to provide design solution service for integration project?	☒ Yes ☐ No	
If yes, these project include	Camera design	
Would the company like to provide a total solution for purchasing?	☒ Yes ☐ Part_____ ☐ No	
If yes, please describe it	From product concept to product delivery	
12.1.2 Real Case Description		
Customer Name	Not disclosed	
Customer Country	Not disclosed	
Customer Region	Not disclosed	
Product Category	Not disclosed	
Order Value (USD)	Not disclosed	
Order Processing Process	Not disclosed	
Customer's Feedback	Not disclosed	

12.2 Real Case for Lower MOQ & Short Lead Time		
Product Name	**MOQ (within 12 Months)**	**Shortest Lead Time**
Camera Module	200pcs	4-5 days

12.3 Real Case for Large Contract		
Product Name	**MOQ (within 12 Months)**	**Shortest Lead Time**
Camera Module	1000	4 weeks

12.4 Overseas After Sales Service	
11.4.1 Average response time	**2-3 Days**
12.5 After-sales Service Capacity	
Does the company accept small order?	☒ Yes ☐ No
If yes, what is MOQ quantity	**200pcs**

Section 13: Industry Focus

13.1 Raw Material (FPC, lens, sensor, PCB, glue, wire)		
Material	**Check point**	**Observation/Comments**
FPC	a) There is written working instruction to define how to do FPC incoming material inspection. b) And the FPC should free of deformation, warp, broken, dirty on golden finger. c) Storage and handover should be properly packed to avoid damage d) Using gloves/ESD wrist when touch FPC material	**N/A** The camera does not including FPC material.
Lens	e) There is written working instruction to define how to do Lens incoming material inspection. f) Dimension, physical and optical property g) The lens should free of deformation, warp, broken, dirty, Scratch, dust and foreign material. h) Storage and handover should be properly packed to avoid damage i) Using gloves when touch lens	j) The lens module are purchased by Lin China from lens module manufacturer. k) There is no written inspection plan to define what to check, when and how many to check. **l)** Lin China only do random visual check on lens module and then deliver to PUT in Guangzhou.
PCB	m) There is written working instruction to define how to do PCB incoming material inspection. n) The PCB should free of deformation, warp, broken, dirty, Scratch. The printing should be clear. There is no rust on the soldering area. o) Storage and handover should be properly packed to avoid damage p) Using gloves when touch PCB	q) The PCB is design and purchased by PUT. r) There is no written inspection plan to define what to check, when and how many quantity to check. s) PUT deliver the PCB to Lin, and Lin does not to do incoming quality inspection, Lin only verify the PCB part number and quantity and then send to warehouse for future production.
Glue	t) There is written working instruction to define how to do Glue incoming material inspection.	N/A

	u) Storage environment should meet the requirement (humidity & temperature) which defined by glue manufacturer	
Wire	v) There is written working instruction to define how to do incoming material inspection. w) Free of deformation, warp, broken, dirty, rusty	x) The wire is purchased by Lin china. y) There is no written inspection plan to define what to check, when and how many to check. **z)** Lin China only do random visual check and then deliver to PUT in Guangzhou.
Plastic part (barrel)	aa) There is written working instruction to define how to do incoming material inspection. bb) should free of deformation, warp, broken, dirty, burrs cc) Storage and handover should be properly packed to avoid damage	dd) The lens barrel is purchased by Lin china. ee) There is no written inspection plan to define what to check, when and how many to check. ff) Lin China only do random visual check and then deliver to PUT in Guangzhou. gg) Lin focus on checking any dust on the barrel.

13.2 SMT

	Check points	**Observation/Comments**
	Does WI be define for each working station to guide production?	Yes, but not implemented
	Does WI be followed by the operator?	No, the WI not followed
	Does key production parameter (temperature, time, speed) be defined to avoid process/quality variation?	Yes, the parameter has been defined, but no one verify if actual production parameter comply with WI.
	is FAI (First Article Inspection) in place to ensure right line setup?	Does not see FAI sample and record on site. But factory verbally mentioned they are doing FAI to verify if the product meet standards.
	Is in-process quality control at every 2 hours in place to ensure stable production	Not implemented at regular frequency. Factory only do the QC check at final stage.
	Is there AOI in the production line for final check?	Yes, there is 1 set AOI to check PCBA. Factory was being asked, when to use AOI to check and when using manual check, factory reply, they use AOI when PO quality is big enough.(5000pcs)

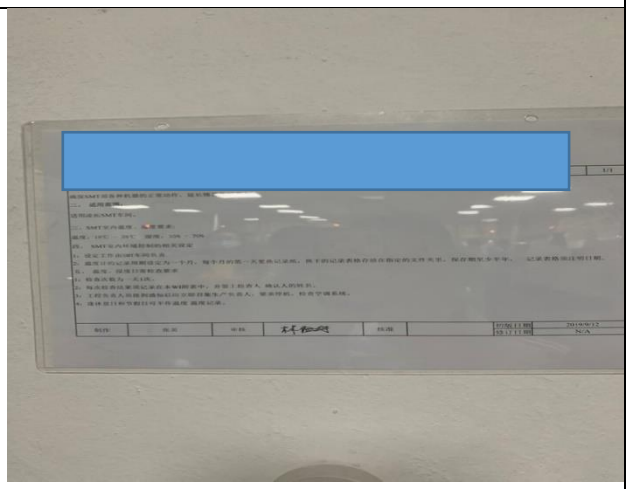
	Is PCBA checked according to IPC610 standard?	Yes. Partially follow IPC610.
13.3 Assembly		
	Check points	**Observation/Comments**
Shop-floor cleaning	Is the assembly shop floor a dust-free environment? And at which level (1000ppm?)	No, the workshop has no dust-free set up. It is in a normal assembly workshop without temperature and humidity control.
ESD	Is the assembly line with sufficient/properly ESD setup to avoid component damage? (Work station, package, storage & operator)	ESD has been set up in the workshop. ESD wrist-band is in place.
	Is there a regular check to ensure properly ESD setup on production line?	However, factory does NOT verify regularly whether the wrist band works well.
Operator	Does operator wear ESD wrist/gloves when necessary?	95% operator wearing ESD wrist band, and also seen operator without wearing ESD wrist band who are contact PCBA and doing component-lead-cutting process.
Equipment	Does key parameter be defined (temperature, speed, volume) to ensure process stability	Yes
	Does the equipment regular validate/calibrate to ensure accurate output	No
Working standard	Is there WI (working instruction) in each working station to guide production	Yes, WI is in workstation. But does not implemented.
	Is there golden sample/defect sample in the production line for operator's reference?	No, did not observe golden sample or defect sample on production line for reference.
	For critical process such as gluing, focus fix…etc, is there any jig/fixture to enhance process stability?	Yes
	Does line yield pass rate be collected, analyzed, and corrective/preventive action been taken to improve the defect rate?	No.
	is FAI (First Article Inspection) in place to ensure right line setup?	No, auditor does not see FAI report or sample. but factory verbally mentioned they are doing FAI to approve production.
	Is in-process quality control at every 2 hours in place to ensure stable production	No, only do at final stage.

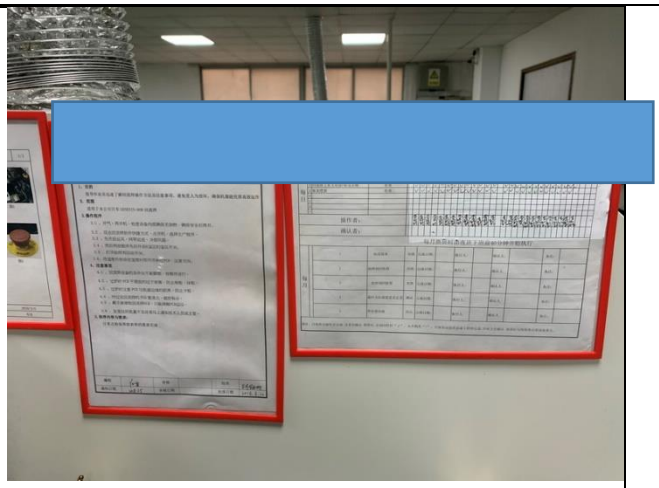
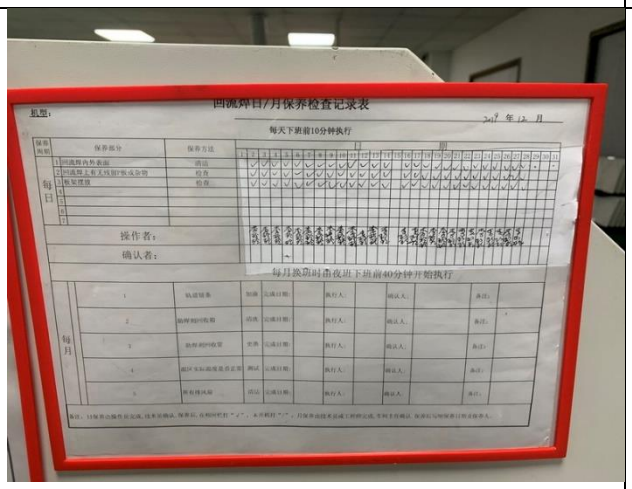
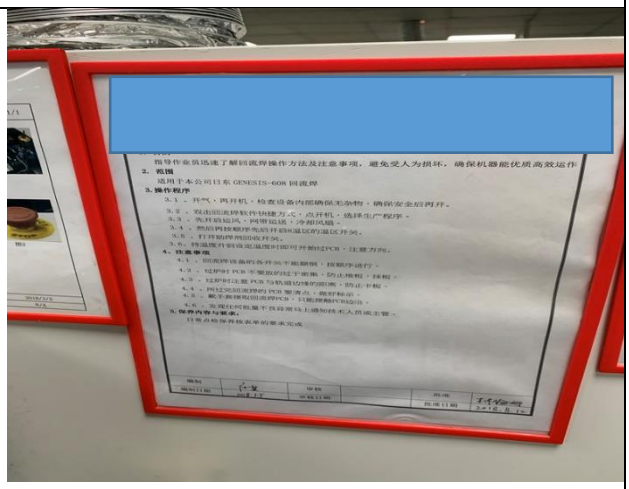
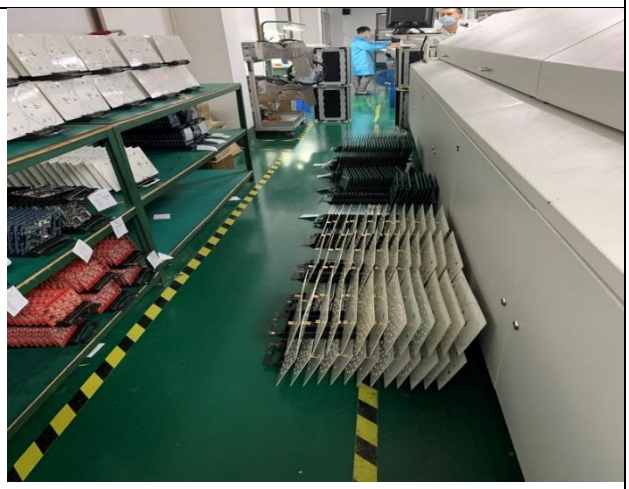
	In the production line, what is 100% checked and what is random checked?	The following is 100% checked on the production line. • Factory focus • Black dot/dust • Potter rate • TTL • Resolution • Working current • Visual
13.4 Testing		
	Check points	**Observation/Comments**
Image quality	Is following test been carry out in the factory? 1) Resolution check 2) color accuracy 3) auto white balance 4) Grey scale 5) Len Shading & color shading 6) Distortion 7) SNR (signal & noise ratio) 8) Skin 9) FOV 10) Flare & ghost	• Only resolution and focus check. • Does not see the rest check content in place.
Outgoing inspection	Is there WI to guide final outgoing inspection in the factory? Is inspection findings recorded, analyzed and CAPA initiated?	There is no control plan and WI to define outgoing inspection. The next day after visiting, Lin Lily submit the document for review. I have attached the file for reference.

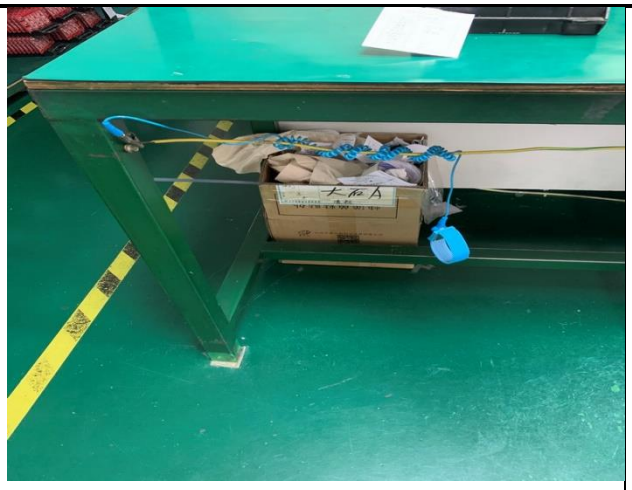
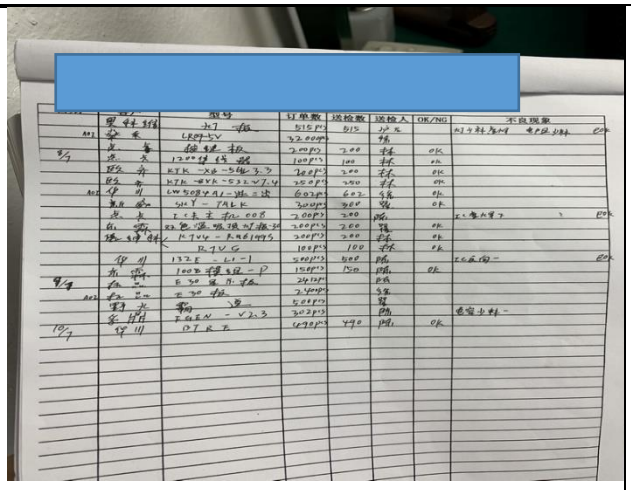
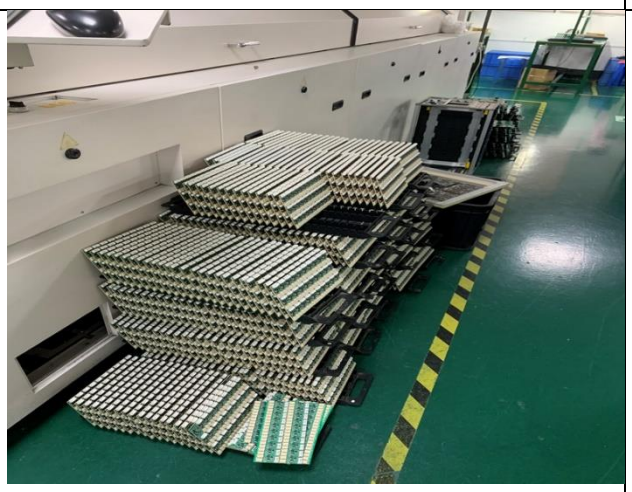
Appendix:

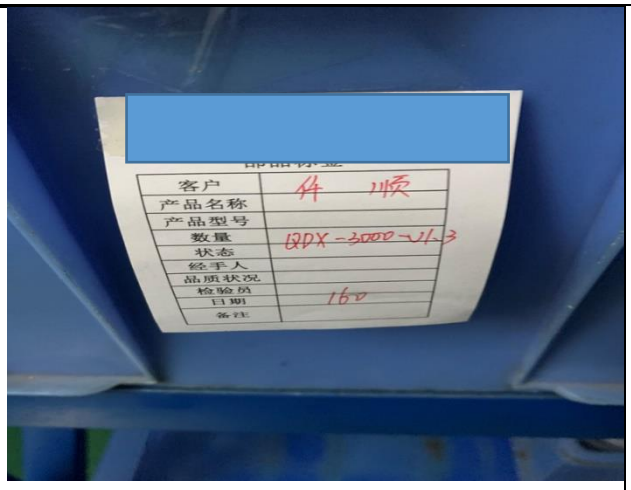
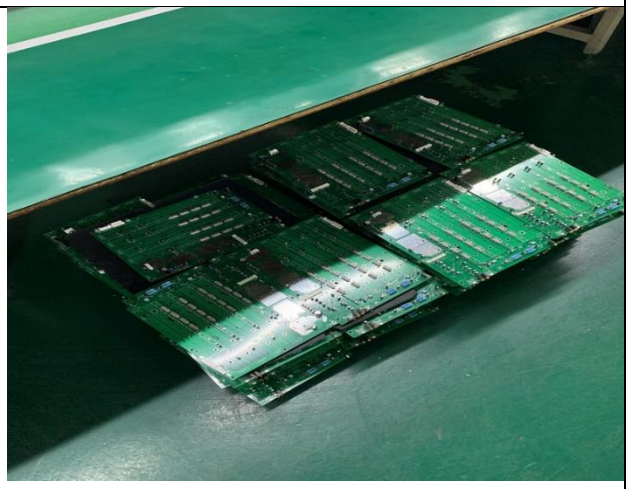
1) Photographs

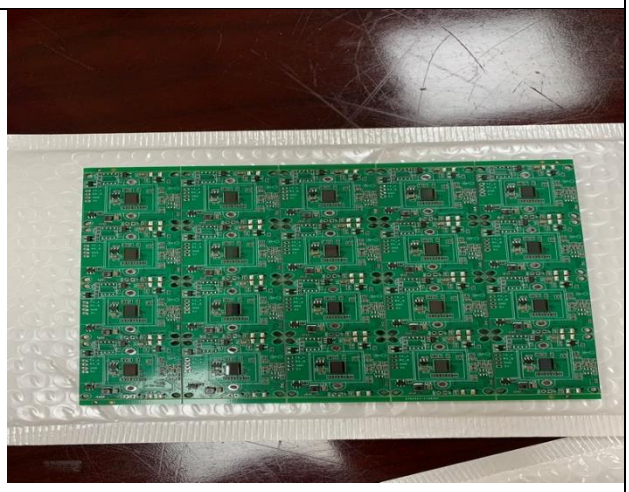
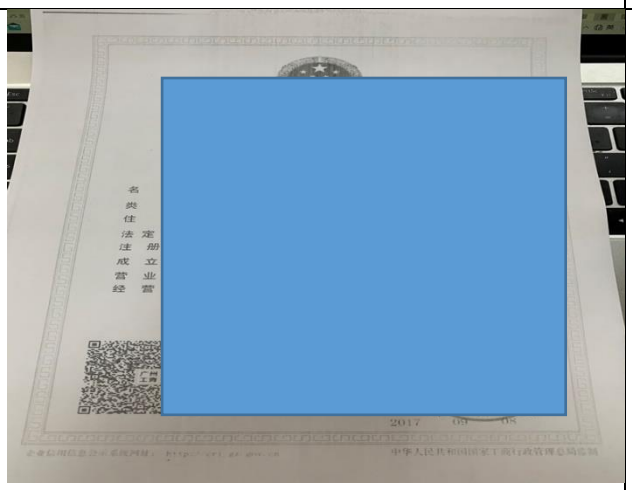
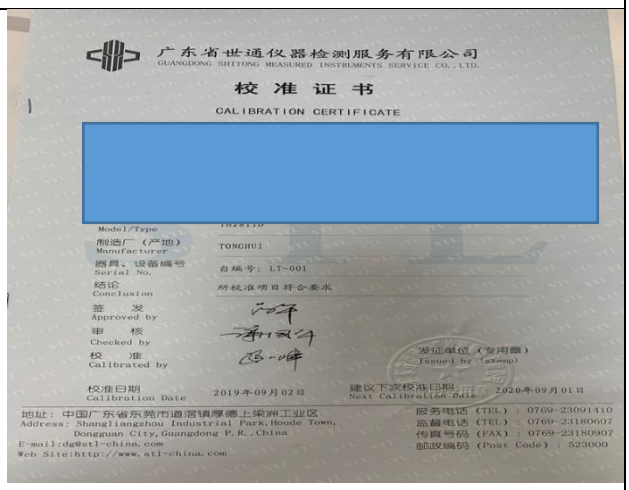
Factory Visiting Photos

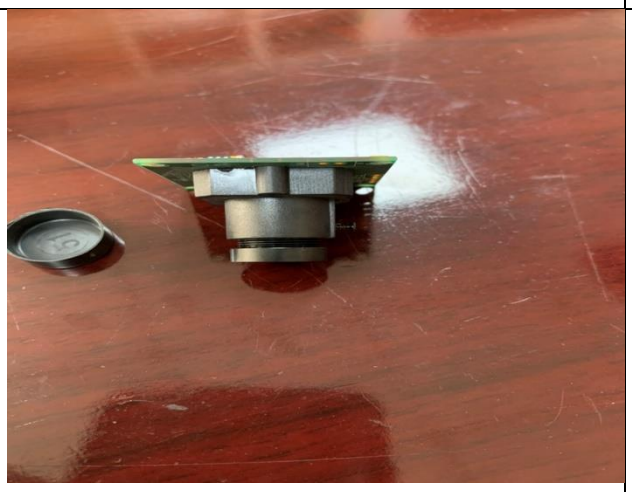
Dust-Removal Room (before entry SMT workshop)	**SMT workshop**
	
X-Ray machine to check soldering quality	**X-ray working instruction**
SMT room temperature/humidity control record	**Component part number label**

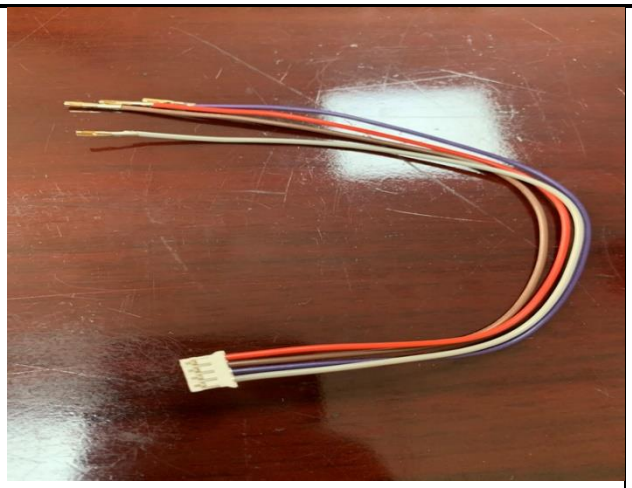
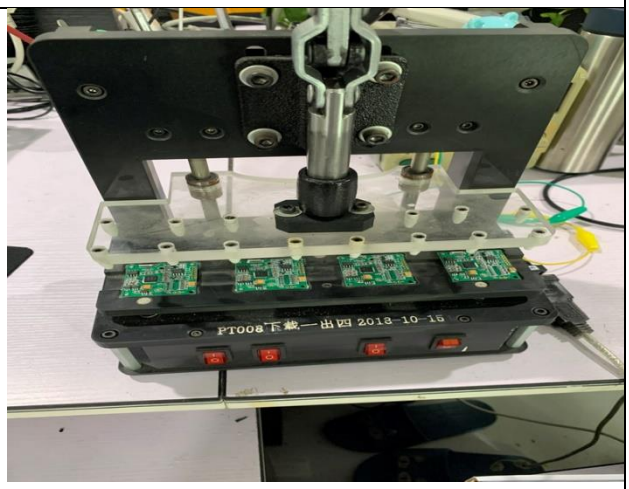
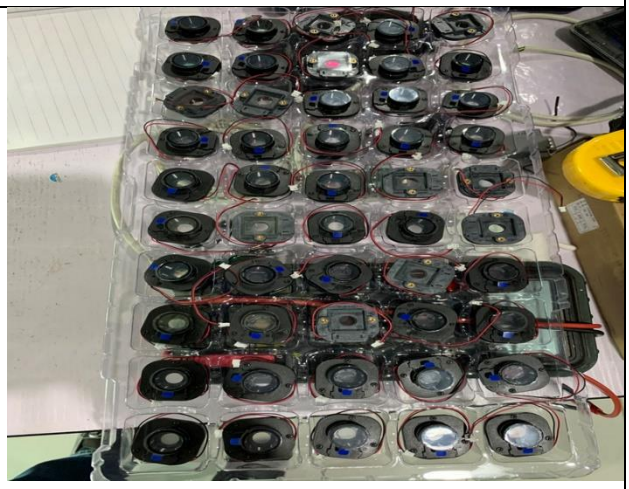
	
Component part number	**Reflow oven WI (working instruction)**
	
Reflow oven checklist (out of date, it is showing Dec, 2019)	**Working instruction (but not implement)**
	
Working instruction (but not implement)	**PCBA put on ground**

	
ESD wrist band (without regular confirmation)	**Final inspection record**
AOI machine check after SMT	**PCBA are put randomly for repairing**
	
PCBA put on ground	**SMT machine**

	
Manual silk-screen machine	**Raw component labeling**
Raw component in warehouse	**Temperature & humidity control in SMT room**
	
DIP/Assembly workshop	**Put PCBA on ground**

DIP/assembly line (a little bit messy)	Component-lead-cutting process (Does NOT wear ESD wrist band)
	
PCBA for camera module	PCBA for camera module
	
Business license for Lin	Calibration sheet for LCR

ISO9001:2015 certificate **but QMS implementation is weak in the factory**	**Camera module**
	
Camera module	**Lens module**
Lens module	**Lens module**

	
Wire	**Gate of Lin**
	
PCBA for Camera Module	**Flash Programming**
	
Camera focus adjustment/fix	**Barrel**

2) Document provide by Lin China

	File name	Submit date	Submit by	File
1	01_Lin Product change management	2020-July-11	Lily	**deleted**
2	02_Lin Quality Assurance System Chart	2020-July-11	Lily	**deleted**
3	03_Lin QC Process Chart	2020-July-11	Lily	**deleted**
4	04_Finished goods outgoing report	2020-July-11	Lily	**deleted**
5	05_Camera Test Report_Lin USA LLC	2020-July-11	Lily	**deleted**
6	06_ SC03MPD Work Instruction 2020	2020-July-11	Lily	**deleted**
7	07_Repairing report	2020-July-11	Lily	**deleted**

The above reflects our findings at time and place of inspection. This report does not relieve sellers/ suppliers from their contractual obligations with regard to quantity and/or quality of this delivery. This report is issued without prejudice to liability and the information contained herein is to the best of our knowledge and belief, true and correct. This document shall not be reproduced either in full or in part except with written approved by the Authorized Representative of CQS. This document is issued subject to the latest CQS General Terms and Conditions of Testing and Inspection Services, available on request or accessible at website www.chinaqualityservice.weebly.com this document shall not be reproduced except in full or with written approval by CQS.

********THIS IS THE END OF THE REPORT ********

CQS Company Limited
Shenzhen China
Tel.:(0086)-755-2802 2253

CQS is a company aim to *deliver wow through business service*.
CQS Registered in Shenzhen China since 1999.
We rely on professional, reliable and affordable business service to survive in the market.

We believe, CQS helps our clients sleep better, by representing you within 24 hours in your partners' facility to understand and solve issue.
We engage in the following area:

- **Product Design**
- **Product Development**
- **Engineering**
- **Product certificate**
- **Testing & Inspection**
- **Sourcing/Procurement consultancy**
- **Supply-Base readiness management**
- **Supply chain risk mitigation**
- **Contingency plan**

We believe the only way to develop business opportunity is put customer first.
CQS truly aware that, client staying with CQS only when value received bigger than money they paid.
We try to dig client's potential needs, deploy and cascade these need into day to day service activities.
We create flexible and tailor-made solution to help customer success.
CQS staff expected to be accountable and result-oriented to support client's success.
CQS staff expected to be open, polite, equity to our business partners.

CQS vision:
Reliable service provider to deliver wow through business service to help Importer and Exporter sleep better…

CQS values:
- Customer first
- Fact-based
- Embrace challenge
- Bring kindness
- Fun and Joy work place

CQS Foot Print:

- **China**
- **Viet Nam**
- **Pakistan**
- **India**
- **Malaysia**
- **Bangdelash**
- **Cambodia**
- **Sri Lanka**
- **Japan**
- **Taiwan**

Please send your inquiry to inquiry@cqsinspection.com
Suggestion/comments to Simon.liu@cqsinspection.com
Or give anonymous feedback here