

協遠有限公司



TRICOMTEK INTRODUCTION



協遠有限公司
TRICOMTEK CO.,LTD

Committed to becoming a world's leading brand in the professional display industry. <https://tricomtek.co/>

About TRICOMTEK

協遠公司簡介



>>About TRICOMTEK

TRICOMTEK CO., LTD was established in 1996 in Taiwan and Headquartered in New-Taipei City. In 2011, factory in Baoan, Shenzhen, We are a manufacturer dedicated to the production and development of high-quality industrial-grade displaymodules, including TFT LCD modules, capacitive touch modules and the correlative LCD driving boards. We currently have more than 400 employees, and over 70 of them are engaged in R&D, quality control, project management and other customer service roles. Our products are exported to Europe, North America and Asia-Pacific region, and we have gained a good reputation in the industry.



We have production : Zhaoqing.

We also have offices in Hong-Kong, New Taipei City, Hui-Zhou.

Providing professional technical support and various products and services for customers in various regions.

>>Company History

2013 Plant Expansion

- ▲The factory area was expanded to 3000m².
- ▲In the same year, ISO9001:2008 certification was obtained.

2016 TS16949

After two-year fully preparation and hard work, we gained the ISO-TS16949 certification. Formally entered the field of high quality automotive display manufacturing.

2022 Set Up Zhaoqing Plant

At the beginning of the second decade, our production site in Zhaoqing, Guangdong with 20,000 m² passed the acceptance test and was officially put into operation in June, and now are operating efficiently.

1996 TRICOMTEK Established

TRICOMTEK Co.,LTD established.

2015 Increase Investment

- ▲Fully funded a 1,300m² CTP factory.
- ▲Investment holding in a 1500m² backlight factory.

2019 Planned A New Factory

- ▲Began planning on a new manufacturing base in Zhaoqing, and received strong support from the local government.
- ▲ Successfully renewed ISO 9001:2005 and IAF16949 certificates.

>>Organizational structure



>> Branches



Taiwan Taipei Headquarter(Domestic):

Responsible for customer business sending technical services in Taiwan.

Address: New Taipei City, Taiwan

Kaohsiung (Overseas & Domestic):

Responsible for customer business sending technical services in Taiwan.

Address: Kaohsiung City, Taiwan

Zhaoqing Factory (Industrial Base)

Responsible for R&D and production.

Address: Zhaoqing City, Guangdong Province

HuiZhou (Xinye)

Responsible for logistics and providing financial services. and sales. Serving China customers.

Address: HuiZhou City, Guangdong Province

Hong Kong (SINOTIME):

Responsible for logistics and providing financial services.

Advantage

我們的優勢



>>Automation Equipment Cluster

TRICOMTEK's production process is almost entirely completed by equipment, representing the advanced level in TFT LCD module manufacturing industry today.



Glass cutting and cracking



Ultrasonic glass cleaning



Auto polarizer attachment



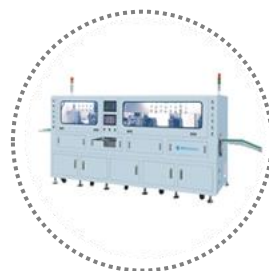
LCD step cleaner



Automatic 2-in-1 dispensing



FOG Auto bonding



COG Auto bonding



LCD automatic loading



Automatic backlight assembly



High temp. adhesive



Automatic spray coding



Vacuum packaging

>>Customized LCM&CTP

5000+

Customized items

500+

LCD+CTP total solution

900+

M/P items

Over the past ten years, TRICOMTEK has received more than 5,000 customization projects and has accumulated a wealth of experience and numerous solutions in LCD customization:

01

• The total solution for LCM+CTP

02

• Much thinner and narrower solution

03

• Solutions for increasing the viewing angle

04

• Sunlight-readable solutions

05

• Anti-shock and long-life solutions

06

• Solutions for saline touch

07

• EMI/EMC enhanced solutions

08

• Shaped LCD display solutions: bar, round, square, etc.

09

• Special resolution customized solutions

10

• Replace solutions for EOL products

>> Employees, supplies, products

01 | 400+ Employees



- Managements have an average of 15 years of industry experience
- 72 experienced engineers

02 | 5-10 years long-term supply



- Regular products can be supplied with a lead time of 5-8 years
- Some products are available for continuous supply for more than 10 years.

03 | Complete variety



- Up to 5,000 kinds of customized products
- More than 60 sizes, 40 resolutions



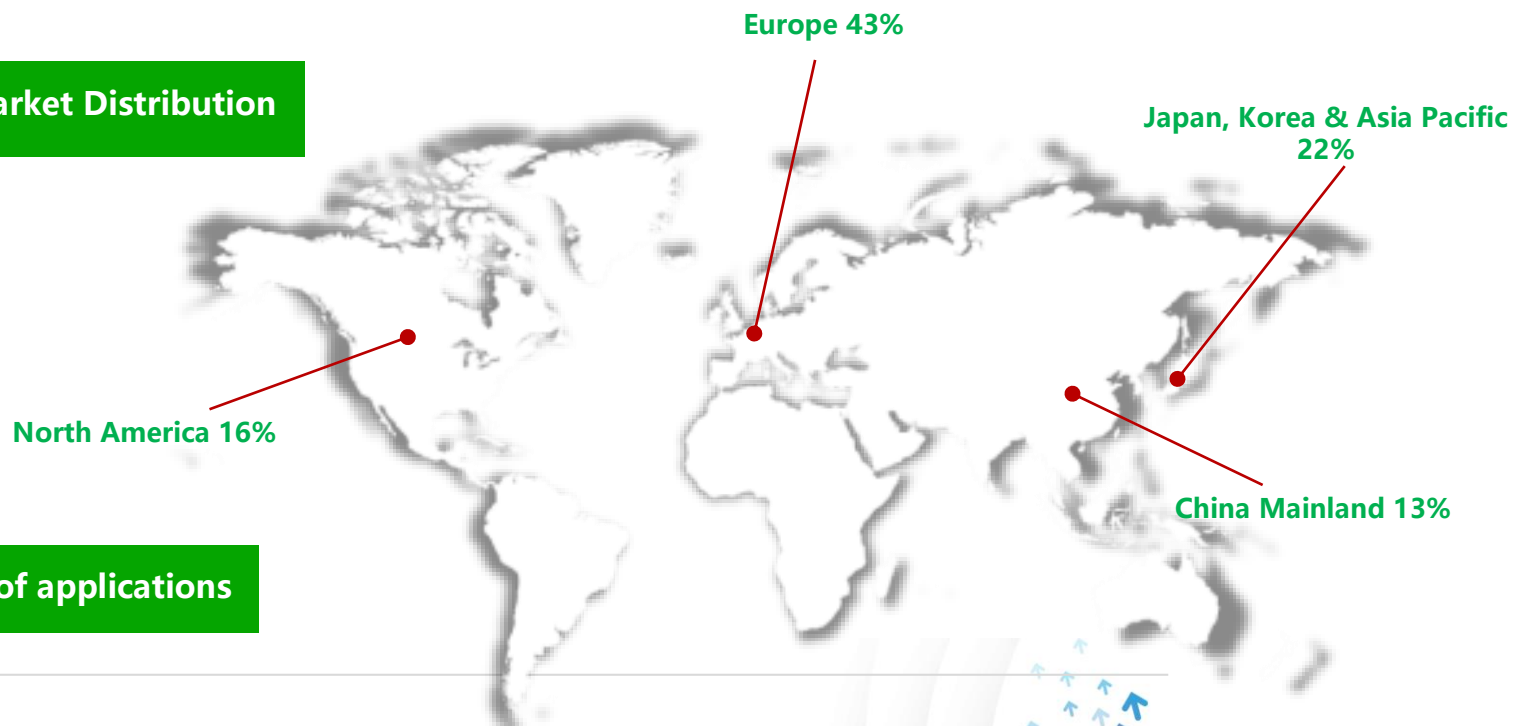
Market & Revenue

主要市場與營運狀況

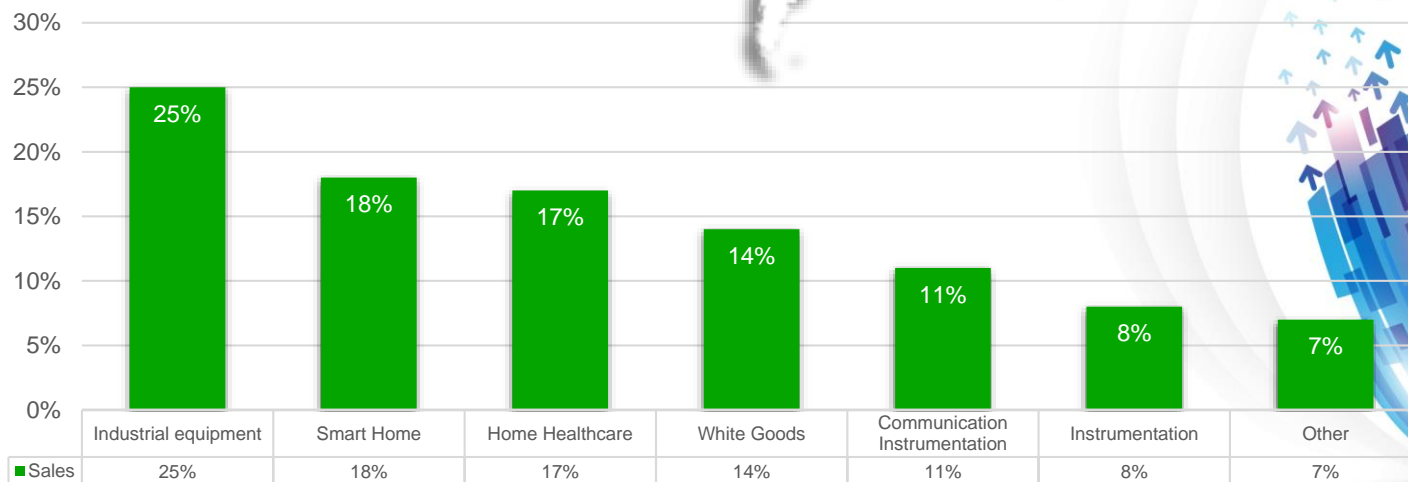


>> Market Distribution

Customer Market Distribution



Distribution of applications



>>Annual Output Value

We are a manufacturer with strong customization ability for TFT LCD module.

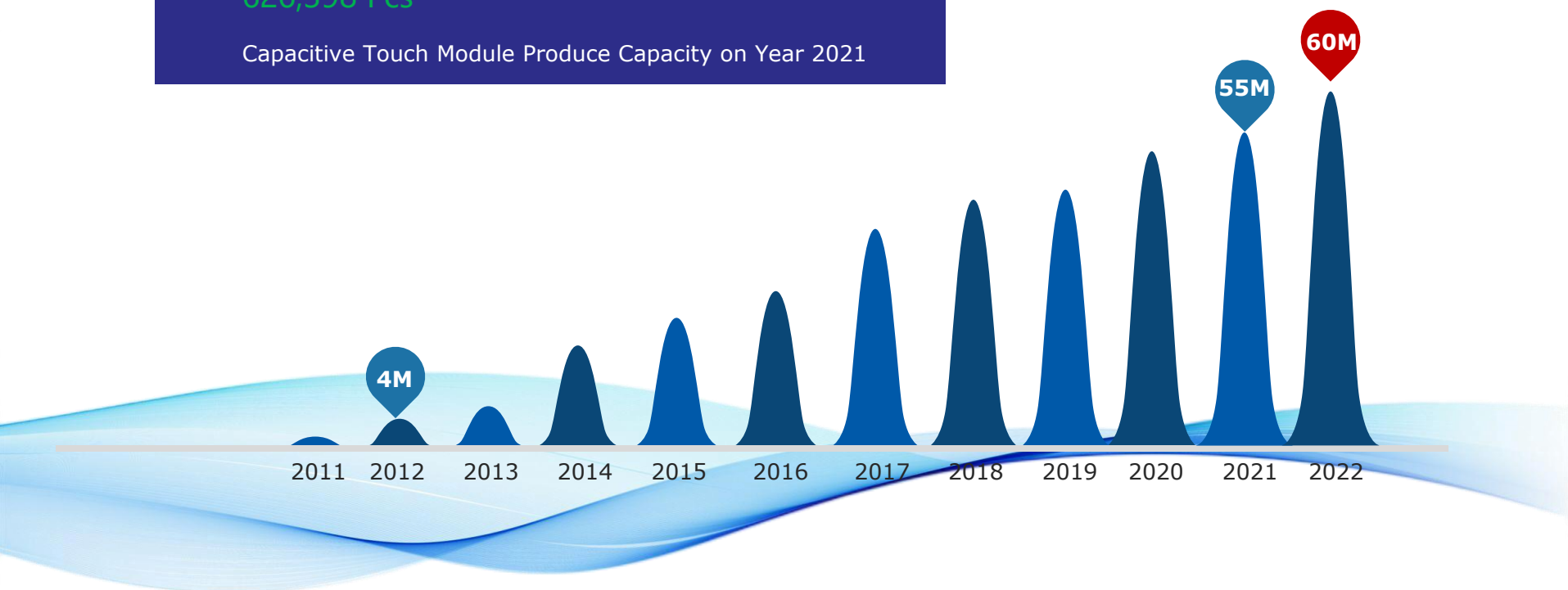
TIPS:

3,467,202 Pcs

TFT LCD Module Produce Capacity on Year 2021

626,398 Pcs

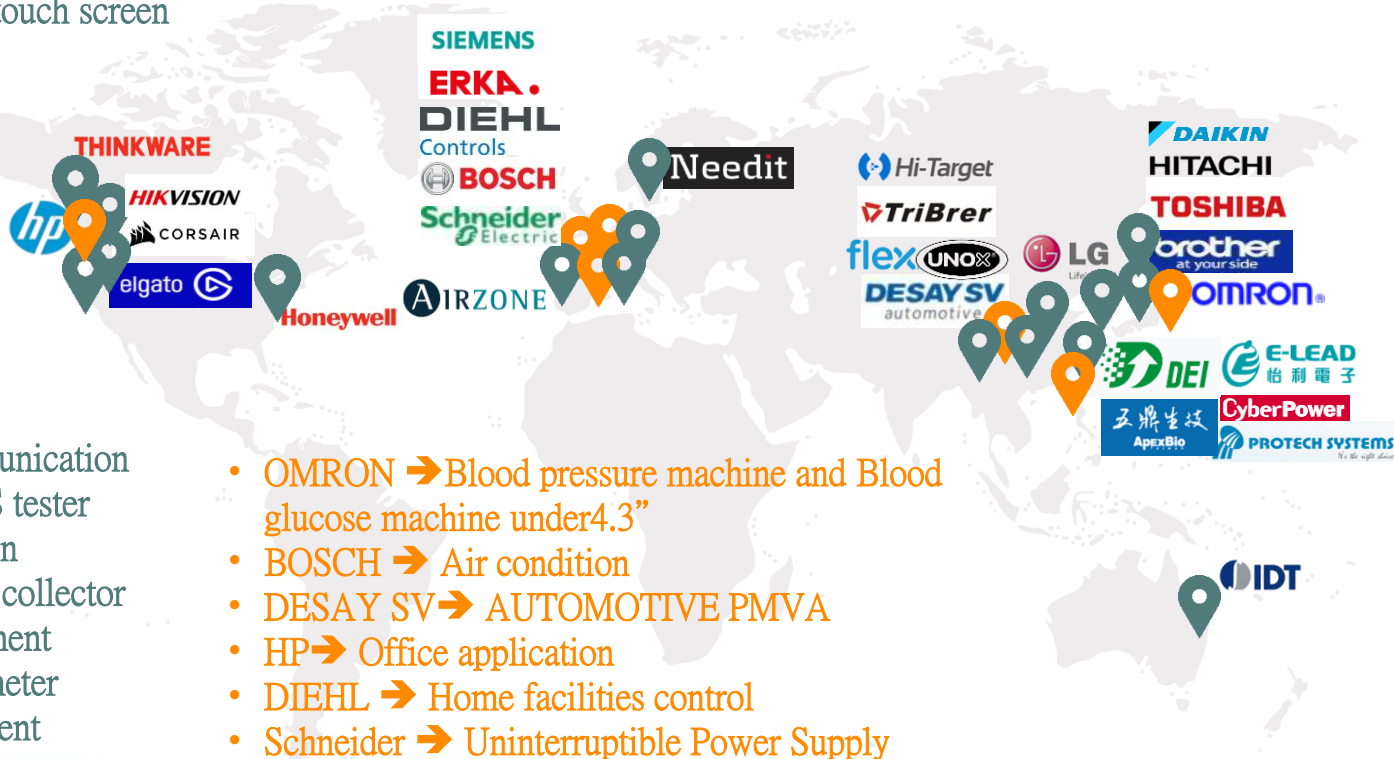
Capacitive Touch Module Produce Capacity on Year 2021



>>Worldwide Connection

📍 TFT & Touch | 📍 MONO

- Brother → Office application
- TOSHIBA → 7.0" Printer touch screen
- CORSAIR → Gaming
- Elgato → Stream Deck
- Airzone → Thermostat
- Needit → Parking Disc
- DEI → Thermostat
- Cyber Power → UPS
- E-LEAD → Vehicle
- ApexBio → Glucose meter
- PROTECH → POS
- Hi-Target → outdoor communication
- iDT → Outdoor station GPS tester
- ERKA → Stethoscope screen
- Honeywell → Outdoor data collector
- SIEMENS → Power equipment
- TriBrer → Optical reflectometer
- HITACHI → Water equipment
- Flex → In-car display
- THINKWARE → Car recorders
- HIKVISION → Infra-red pyrometer
- UNOX → Oven display panel
- DAIKIN → Air conditioning
- LG → Smart locks



- OMRON → Blood pressure machine and Blood glucose machine under 4.3"
- BOSCH → Air condition
- DESAY SV → AUTOMOTIVE PMVA
- HP → Office application
- DIEHL → Home facilities control
- Schneider → Uninterruptible Power Supply

We have been supporting these leading companies who have excellent reputation around the world as well as these young upstarts expanding rapidly in emerging markets. At present, we are working with more than 160 companies and providing them with our reliable TFT+MONO display modules.

Quality and System

品質與管理系統



>>Quality control measures

1

Main measures:

1. Develop products based on the industrial design principles.
2. 100% aging verification for new developed products.
3. OQC full inspection for small batch and mass production products.
4. Sampling aging for small or some batches products.
5. Every 15 days, the production line is maintained fluctuation tested to ensure its stability.
6. Industrial products can pass the industry's top double 85 °C, 240 hour test;
7. Annual TFT automatic bonding yield: 99.72%.
8. The quality department has a well organizational structure and adheres strictly to ISO standards.

2

A complete quality and environmental management system.

IQC

IPQC

OQC

OQC follows 100% full inspection of the goods.

>> Quality Certification System

2

TRICOMTEK has obtained TUV certificates with high gold content: including ISO 9001:2015 International Quality Management System, IATF16949 Global Automotive Quality Management System and other certifications.



ISO 9001:2015



IATF 16949

Tips: why do we choose TÜV?

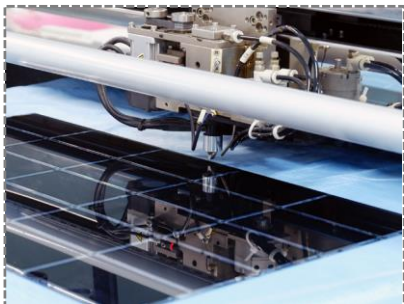


TÜV (Technischer überwachungs-Verein) is a German Technical Supervision Association, which enjoys a high reputation not only in Europe, but also in the world. 85% of its customers are overseas customers, and the destination market does not treat all certificates equally. Different certification bodies represent differences in the grasp of details and the rigor of certification, while TÜV enjoys a high position among global buyers. This is why we have chosen TÜV for so many years.

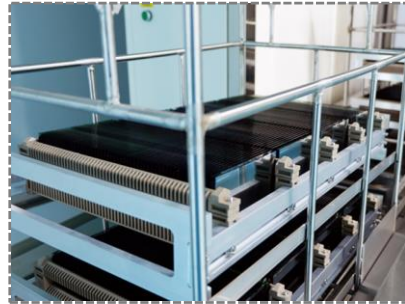
>>Automation Equipment Cluster for TFT Division

POG Process

TRICOMTEK's production process is almost entirely completed by equipment, representing the advanced level in TFT LCD module manufacturing industry today.



1. LCD substrate glass cutting



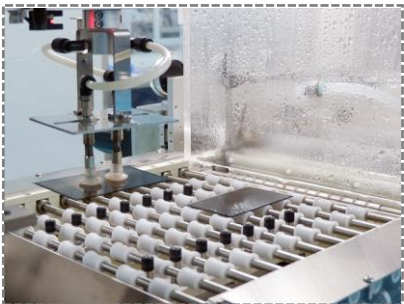
2. Small pieces glass put in baskets



NEW 3. Small piece glass 8 tanks washing + drying



4. LCD electrical test



5. LCD washing



6. Equipment Attached Polarizers



7. POG defoaming

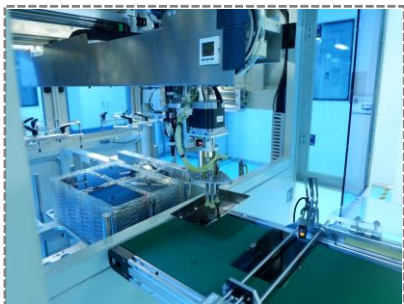


8. POG electrical test

>>Automation Equipment Cluster for TFT Division

FOG Process

TRICOMTEK 's production process is almost entirely completed by equipment, representing the advanced level in TFT LCD module manufacturing industry today.



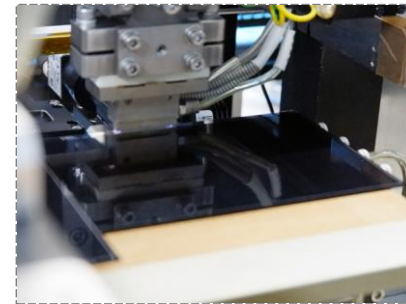
9. POG Loading equipment



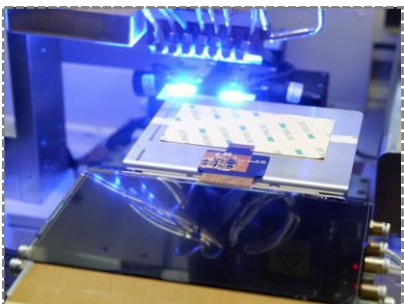
10. LCD step plasma washing



11. ACF attachment



12. IC bonding



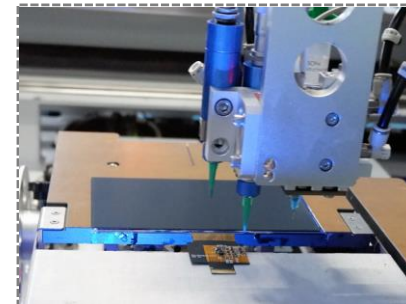
13. FPC bonding



NEW 14. AOI particle inspection



15. FOG electrical test

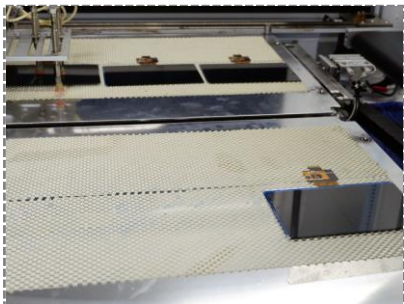


16. Equipment dispense glue

>>Automation Equipment Cluster for TFT Division

LCM Process

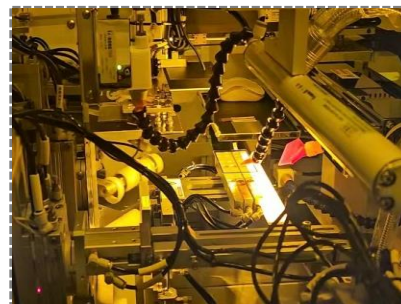
TRICOMTEK 's production process is almost entirely completed by equipment, representing the advanced level in TFT LCD module manufacturing industry today.



17. Automatic drying



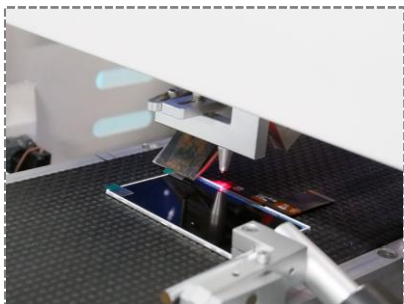
18. Automatic assembly backlighting



NEW 19. Automatic assembly RTP



NEW 20. Automatic soldering



21. Equipment pull handle



21. LCM finished electrical measurements



22. Testing in the darkroom

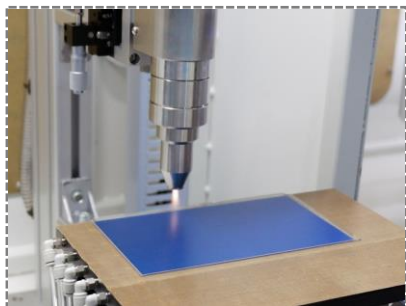


24. Product Coding

>>Automation Equipment Cluster for TFT Division

CTP Process

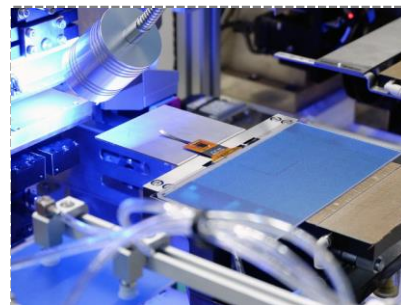
TRICOMTEK 's production process is almost entirely completed by equipment, representing the advanced level in TFT LCD module manufacturing industry today.



25. Sensor plasma washing



26. Sensor ACF attachment



27. Sensor FPA bonding



28. Capacitive screen FOG electrical test and program burning



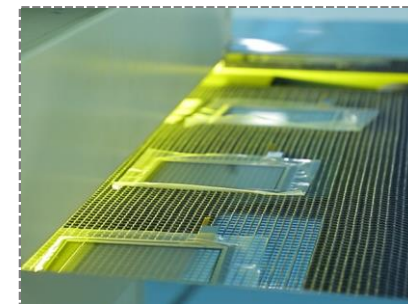
29. Cover lens OCA bonding



30. CTP defoaming



31. CTP scribing test



32. CTP UV solidify

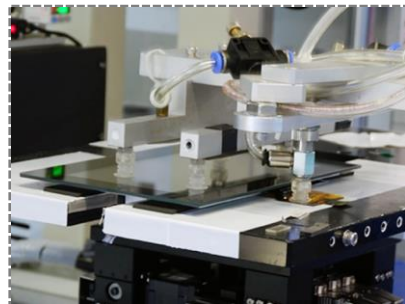
>>Automation Equipment Cluster for TFT Division

Packing Process

TRICOMTEK 's production process is almost entirely completed by equipment, representing the advanced level in TFT LCD module manufacturing industry today.



33. Cover inspection and cleaning



34. LCM optical bonding



35. Accessories assembly



36. OQC final quality control



37. Exterior cleaning and applying protective film



38. Wrapping the LCM



39. Packing



40. Warehouse

>>Testing equipment



Constant Temp. and humidity



Vibration table



High And Low Temp. Chamber



Drop-Impact Tester



Quadratic element



BM-7



Tensile testing

3

1. TRICOMTEK has a large number of professional testing equipment, which can verify the reliability of products to meet the performance of products in line with customer standards.

2. Planning the first phase of aging room, 300 pieces of products can be tested at a time by the capacity .

Products and Applications

產品與應用



>>TFT Product Line

2.0"	176*220 TN	
	240*320 TN	
	240*320 IPS	◎☆
	320*240 Transflective	◎
	480*360 IPS	◎
2.1"	480*480 IPS	☆○
2.2"	240*320 TN	
2.3"	320*240 TN	○
2.36"	320*320 IPS	○
	240*320 TN	☆
2.4"	240*320 IPS	◎
	240*320 Transflective	
	240*960 TN	○
2.7"	320*320 IPS	◎○
	240*320 TN	◇
2.8"	240*320 IPS	◎
3.4"	800*800 IPS	○

2.0"-3.4"

1.41"-1.77"

1.41"	128*128 TN	◇
1.44"	128*128 TN	
1.5"	240*240 IPS	◎
	320*320 IPS	◎
1.74"	240*180 Transflective	
1.77"	128*160 TN	
	128*160 Transflective	

3.5"	320*240 TN	☆
	320*240 IPS	◎
	240*320 TN/TN(Auto)	
	240*320 Transflective	
	320*480 TN	
	320*480 IPS	◎
	480*640 MVA	◎
	640*480 IPS	◎
	800*600 TN	
3.97"	480*800 IPS	◎
4.0"	480*480 IPS	◎

3.5"-4.0"

4.3"	480*272 TN/TN(Auto)	☆◇
	480*272 IPS	☆◎◇
	800*480 IPS	☆◎◇
	480*800 IPS	◎

4.3"

High Luminance TFT ☆
 Wide Viewing Angle TFT ◎
 Wide Temperature TFT ◇
 Special Size TFT ○

Representation of
 symbol have these
 special applications

5.0"

5.0"	480*272 TN	
	640*480 TN	☆
	800*480 TN	☆
	800*480 IPS	☆◎◇
	480*854 IPS	

7.0"

8.0"	800*600 TN	
	800*1280 TN	☆◎
	1024*768 TN	
8.4"	1024*768 IPS	◎
9.0"	800*480 IPS	◎
	1024*600 IPS	◎

8.0"-9.0"

7.0"	800*480 TN	
	800*480 IPS(Auto)	☆
	1024*600 TN	☆
	1024*600 IPS	☆◎◇
	1280*800 IPS	◎
	280*1280 IPS	◎

7.0"

5.6"-5.7"

5.6"	640*480 TN	☆○
5.7"	640*480 TN	☆○

10.1"	1024*600 TN	☆
	1024*600 IPS	◎
	1280*800 TN	◎☆
	800*1280 IPS	◎☆

10.1"

10.4"	800*600 TN	◎
13.3"	1920*1080 IPS	◎
15.6"	1920*1080 IPS	◎

10.4"-15.6"

>> TFT & Touch Display

Factory Overview

- Production Floor Space: 24000 m²
- Clean Room: Class 1,000

Main Process

TFT: substrate scribing, polarizer attachment, IC
COG bonding, FOG, backlight / RTP / CTP
assembly, OCA/LOCA lamination
CTP: Lens, G-Sensor, F-sensor, FPC Bonding,
GG/GF/GFF Lamination

Production lines

- TFT Lines (Auto): 7
- TFT Lines (Semi-Auto): 2
- GG & GFF lamination: 3
- TFT+CTP Full Lamination (OCA): 2
- TFT Module: TN/IPS 0.96"~21.5"
- CTP: G+G, G+FF, P+G
- Touch Display Module
- Air bonding : ~15.6" OCA: ~15.6"
- Meet Industrial/Automotive grade

Monthly Capacity

- TFT : 1KKpcs
- CTP: 300K PCS/Month
- Full Lamination: 300K PCS/Month



COG Production Line

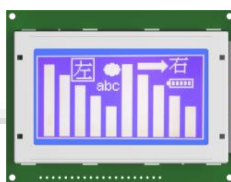


Glass Sensor Line



Full Lamination

>> Mono Display



Factory Overview

- 3 full automation LCD lines
- 6 Automatic COG production lines
- Multi assembly production lines
- Production floor space: 24,000m²
- Clean room level: 100~1,000 class

LCD Module

- COB
- COG
- Assembly

LCD Panel

- PMVA
- STN
- TN/HTN
- LCD Shutter

Monthly Capacity

- LCD: 125K sets of 370*470mm substrates
- COB Module: 300K pcs
- COG Module: 1,400K pcs



PI – Polyimide line



Liquid crystal
filling process



LCD PIN auto
assembly



COG bonding line



AOI inspection



COB Bonding Machine



Contact us

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THANK YOU!

