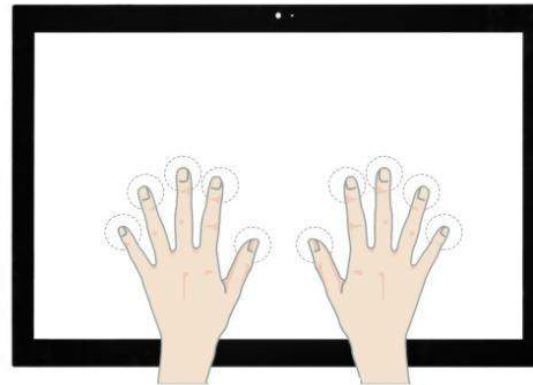




多·普·触·控



**TOUCH 触屏工匠
CONTROL**

DOPO TECH GROUP LIMITED

深圳市多普泰克科技有限公司

Company Profile 公司简介



Established in 2012, DOPO is a professional designer and manufacturer of touch panels and touch display. We can provide customers with the high quality and good competitive touch solutions to meet the needs of diverse applications and custom-made items. Currently, the main items include PCT (projected capacitive touch panel), 4Wire resistive TP, 5Wire resistive TP, touch monitors and some touch application devices. The final device fields are kiosks, financial devices, medical apparatus and instruments, smart home, game machines, industrial control, education, conference and other special fields.

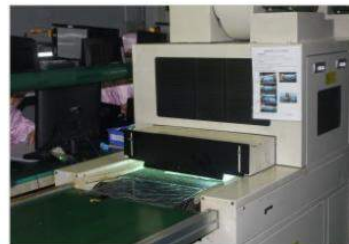
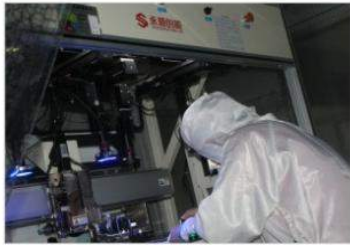
With years of development, now we have professional producing machines, high level engineers and skilled workers (the total staff is more than 400 persons). Our strict quality management system under ISO14001:2004, ISO9001:2008, ISO/TS16949:2009 management system, which makes our products high quality to reach customers' requirements. And our items have got CE, FCC, ROHS certifications.

DOPO items have entered the international market and got more and more customers' trust, the main customers include Bosche (Germany), Uniwell (Japan), Satel (Poland), M4B (Poland), Algra (Switzerland) and others. We pay more attention to quality control and technology innovation, and hope to offer better service to customers.

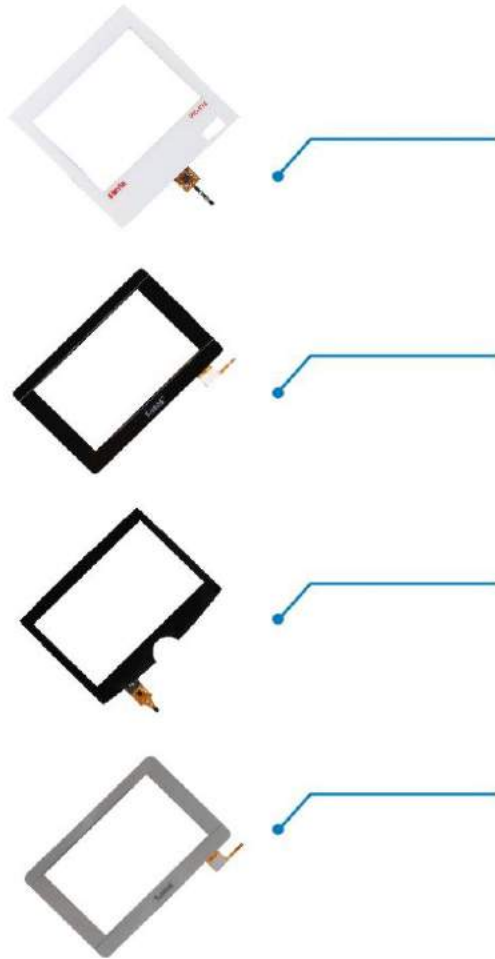
Application fields 应用领域



The workshop 车间



Projected capacitive touch panel 投射式电容屏

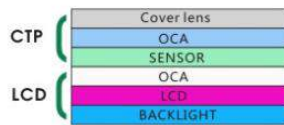


Product feature 产品特性

Operating voltage : 2.8V~5.5V DV		3.3~5V DV,35mA	
Transmittance : 86%~88%	Structure : G(glass)+G or G+F/F(film)	Life time:>20 million times	
Input : conductive metal pen or finger	Contact chatter time : <3ms	Operating pressure : Capacitance induction without operating pressure	
resolution : 4096*4096(according to the resolution of the ICD)	linear<1.5%	Operating temperature : -20°C~+70°C	
Type of glass : common , chemical strengthening , tempering	Contact number : max 10	Storage temperature : -30°C~+80°C	
		Glass thickness : 0.55mm-10mm	
		interface : IIC/USB	

工作电压 : 2.8V~5.5V DC		表面硬度 : 6H	
透光度 : 86%~88%	结构 : G(glass)+G or G+F/F(film)	寿命 : 大于2千万次	
输入方式 : 导金属笔或者手指	触电抖动时间 : <3ms	操作压力 : 电容感应, 无需操作压力	
分辨率 : 4096*4096 (根据LCD分辨率调整)	线性 : <1.5%	操作温度 : -20°C~+70°C	
玻璃各类 : 普通玻璃,化学强力玻璃,钢化玻璃	触点数量 : 最大可支持10个	储存温度 : -30°C~+80°C	
		玻璃厚度 : 0.55mm-10mm	
		通讯接口类型 : IIC/USB	

Capacitive touch panel & bonding(optical/frame) 电容屏贴合

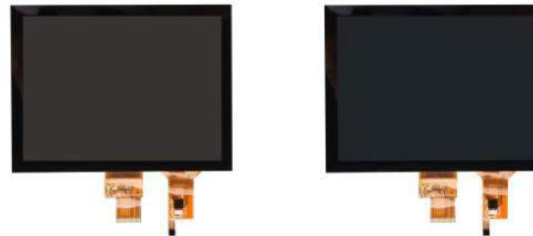


Optical(No air-layer)Bonding

Surface light reflection and
intra panel reflection

losses: <0.3%

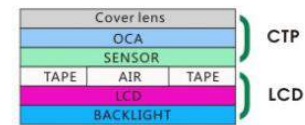
- ✓ Touch Display Integration
- ✓ High Contrast Ratio
- ✓ Thinner & lighter
- Difficult To Assemble
- High Cost



Used In Outdoor



With Optical Bonding With Frame Bonding



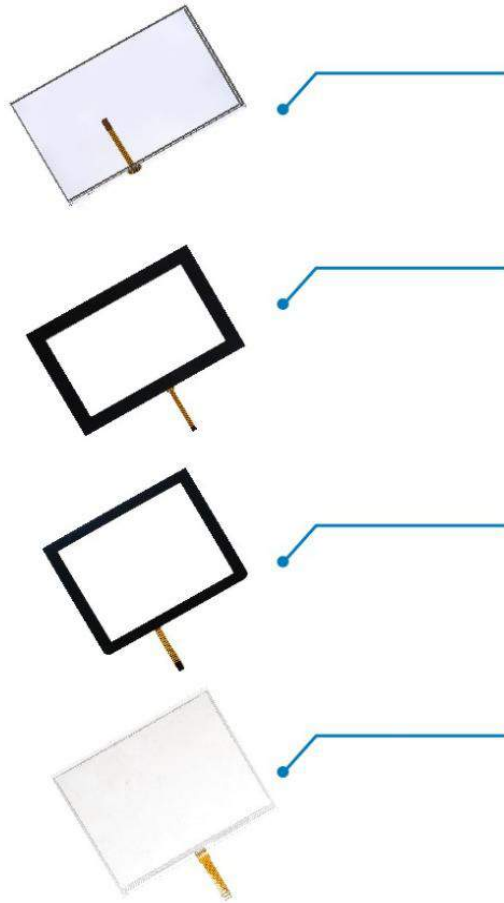
Frame(air-layer)Bonding

Surface light reflection and
intra panel reflection

losses: <5%-20%

- ✓ Touch Display Integration
- ✓ Easy to Assemble
- Slight Reflection

4Wire/5Wire/8Wire Resistive touch panel 电阻屏

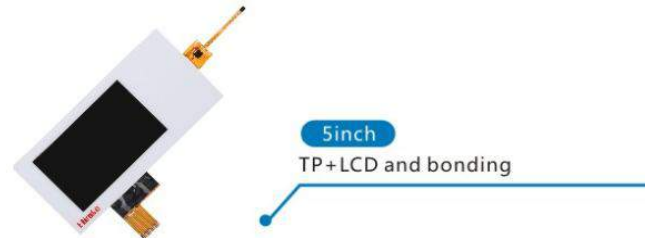


Product feature 产品特性

Circuit grade : 5V DC ,35mA		3.3~5V DV,35mA
transmittance	FILM+FILM+GLASS>78%	Life time of click : 100million times 5 wire>3500moillion times Life time of cling : 10million times 5 wire>500moillion times
	FILM+FILM>80%	
	FILM+GLASS>83%	
	panel+OCA+FILM+FILM+OCAZ+plates>78%	
Contact chatter time : <10ms		Operating temperature : -20°C ~+70°C
Resolution : 4096*4096		Storage temperature : -30°C ~+80°C
Linear<1.5%(special requirements<1.0%)		Glass thickness : 0.55mm/0.7mm 1.1mm/1.8mm/3.0mm
Operating pressure : 60g~150g		Type of glass : common/chemical

电路等级:5V DC ,35mA		3.3~5V DV,35mA
透光率	FILM+FILM+GLASS>78%	敲击寿命 : 大于100万次 其中5线大于3500万次 笔划寿命 : 大于10万次 其中5线大于500万次
	FILM+FILM>80%	
	FILM+GLASS>83%	
	面板+OCA+FILM+FILM+OCAZ+承托板>78%	
触点抖动时间 : <10ms		操作温度 : -20°C ~+70°C
分辨率 : 4096*4096		储存温度 : -30°C ~+80°C
线性<1.5%(特殊要求<1.0%)		玻璃厚度 : 0.55mm/0.7mm 1.1mm/1.8mm/3.0mm
操作压力 : 60g~150g		玻璃种类 : 普通玻璃/化学强化玻璃

Case show 案例展示

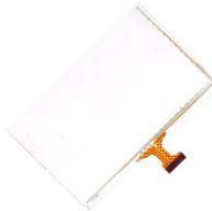


Case show 案例展示



7inch

G+FF capacitive TP (COF) with IIC



7inch

Capacitive touch panel(COB)with USB



7inch

Customized TP with AG glass



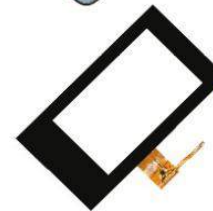
7inch

Customized CTP (COF) with IIC



7inch

Touch panel for car navigator



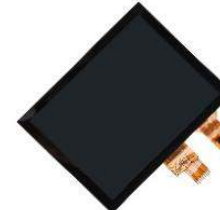
7inch

Customized 7inch CTP (IC On FPC=COF)



8inch

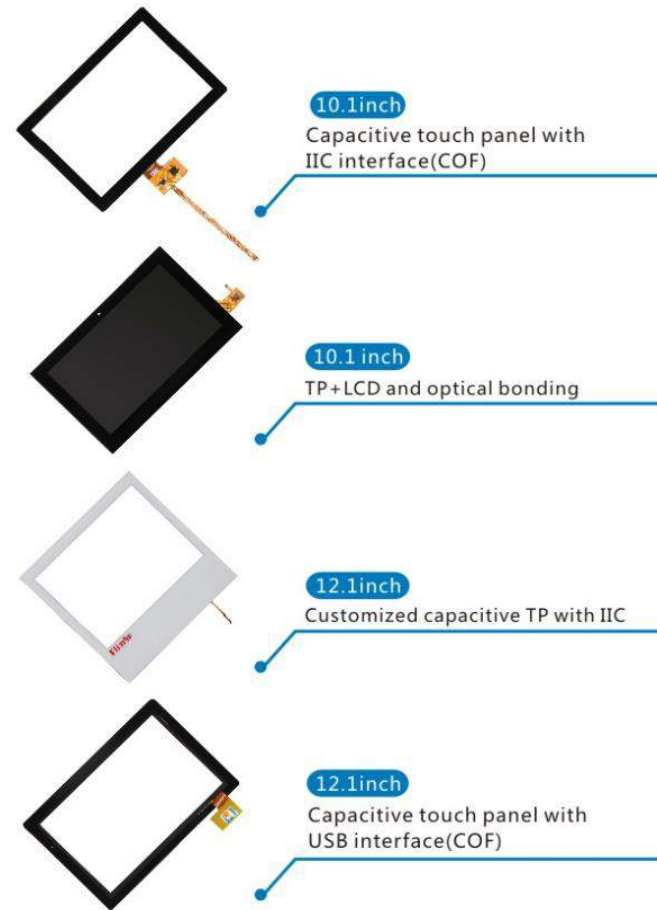
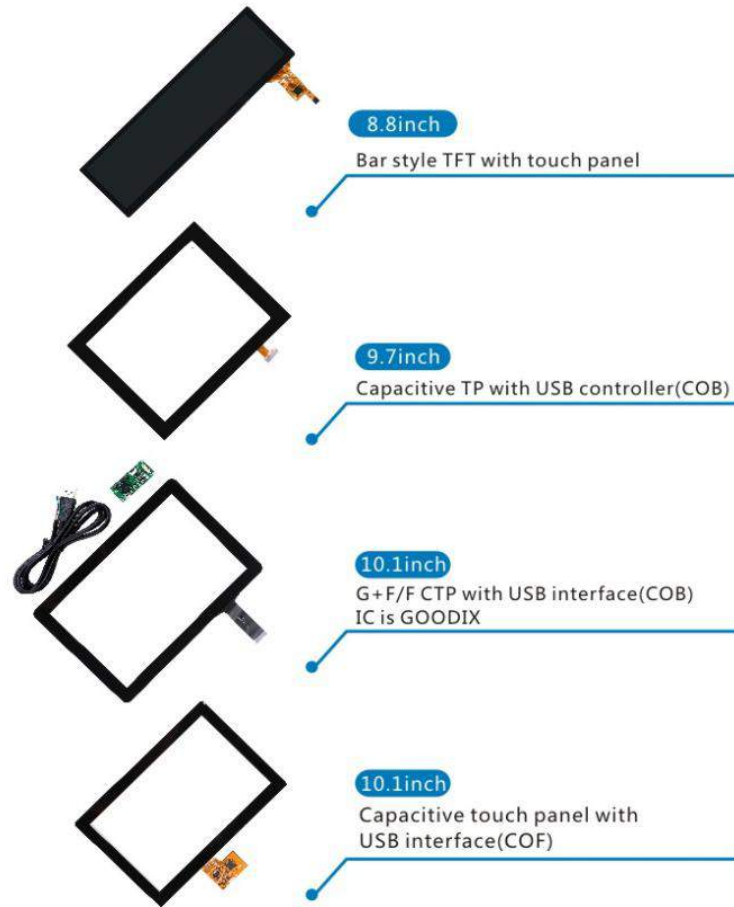
Customized TP with controller and cables(IC On Board=COB)



8inch

TP+LCD and optical bonding

Case show 案例展示



Case show 案例展示



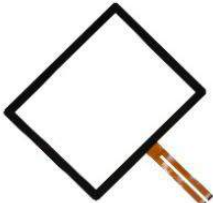
15inch

TP+LCD and optical bonding



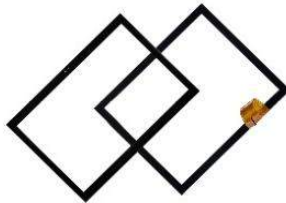
15.6 inch

Cover glass is AG(anti-glare) optional
AF(anti-finger print) optional
AR(anti-reflection) optional



17inch 4:3

Capacitive TP IC on board(COB)



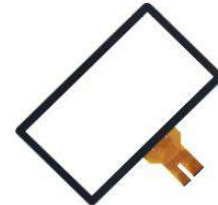
19inch 4:3 16:9

Capacitive TP with controller
(COB)and USB cable



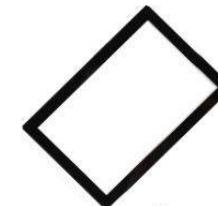
21.5inch

Waterproof surface TP and LCD with
tape (frame)bonding
IC=ILITEK or EETI or WEIDA
Or customized



23.6inch

Capacitive TP with controller
(COB)and USB cable



27inch

Capacitive TP with controller
(COB)and USB cable



32inch

Industrial touch panel with EETI
controller board

Case show 案例展示



43inch

Capacitive touch mirror display



55inch

Customized CTP



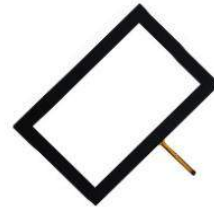
65inch

Capacitive TP (COB) with
USB cables



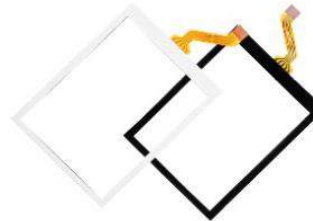
sensor

Glass sensor and film sensor



4W RTP

4Wire resistive TP with balck frame



5W RTP

Customized 5Wire resistive TP



8W RTP

Customized 8Wire resistive TP



4.3inch

5inch

480x320 TFT-LCD Match
customizaed TP (option)
800(RGB)x480LCM IPS (optional)

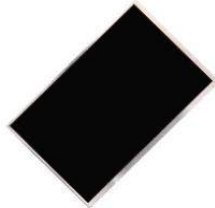
Case show 案例展示



7inch
800(RGB)x480LCM IPS (optional)



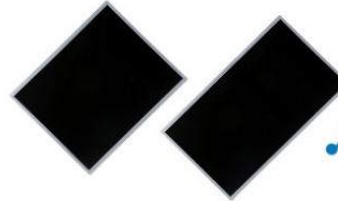
8.8inch
Bar-style TFT - LCD1280x320
Customized size



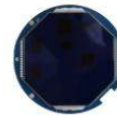
10.1inch
1920x1200/1280x800LVDS/MIPI
/EDPCustomized backlight



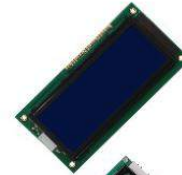
12.3inch
Bar-style TFT LCD Modular
1024x768/LVDS/450nits
1920x720 IPS /500-1000nits



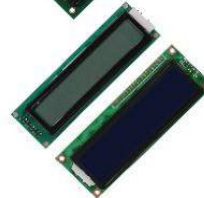
12.1inch-86inch
These size touch panels come
with matching displays



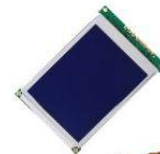
Customized LED display
Segment LCD



Blue backlight LCM
240X128 Dot -matrix LCD module



Yellow Backlight pixel LCD
3.3-5V and -20 to 70°C working

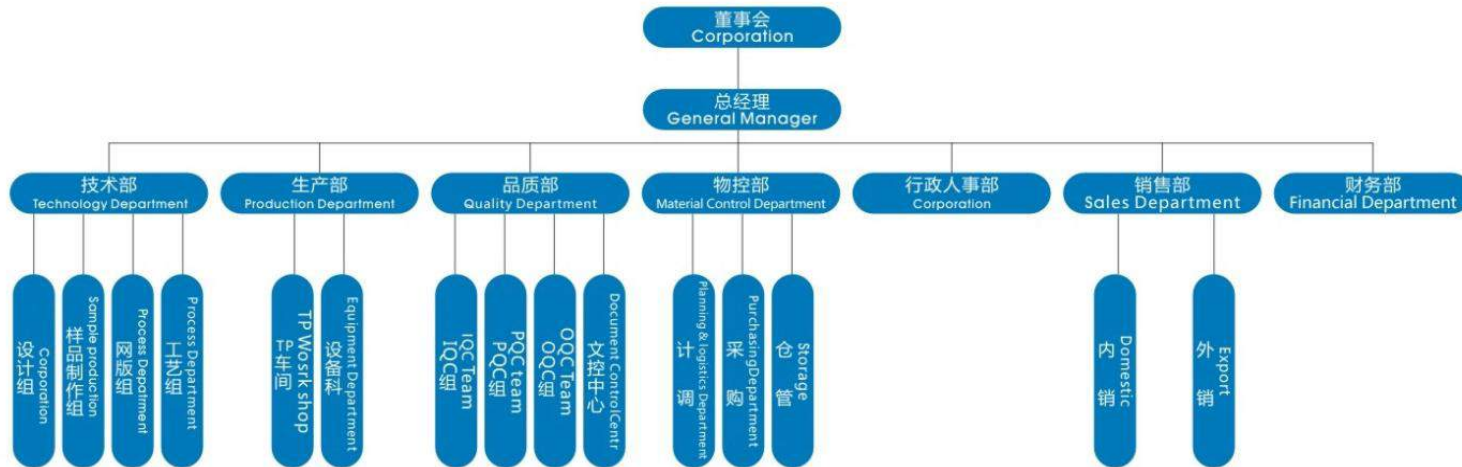


6inch Blue backlight dot-matrix LCM



2.8 inch TFT with Resistive touch panel

Organizational structure 组织架构



Company quality objectives 公司质量目标

- 1、The customer return rate : within 2000PPM
- 2、Customer promise rate : 100%
- 3、Customer satisfaction : $\geq 98\%$
- 4、The qualification rate of the manufacturing process : $\geq 90\%$
- 5、The rate of customer,s complains : 100%

- 1.客户退货率：2000PPM以内
- 2.客户承诺实现率：100%
- 3.客户满意度： $\geq 98\%$
- 4.制造过程合格率： $\geq 90\%$
- 5.客户有效投诉处理率：100%

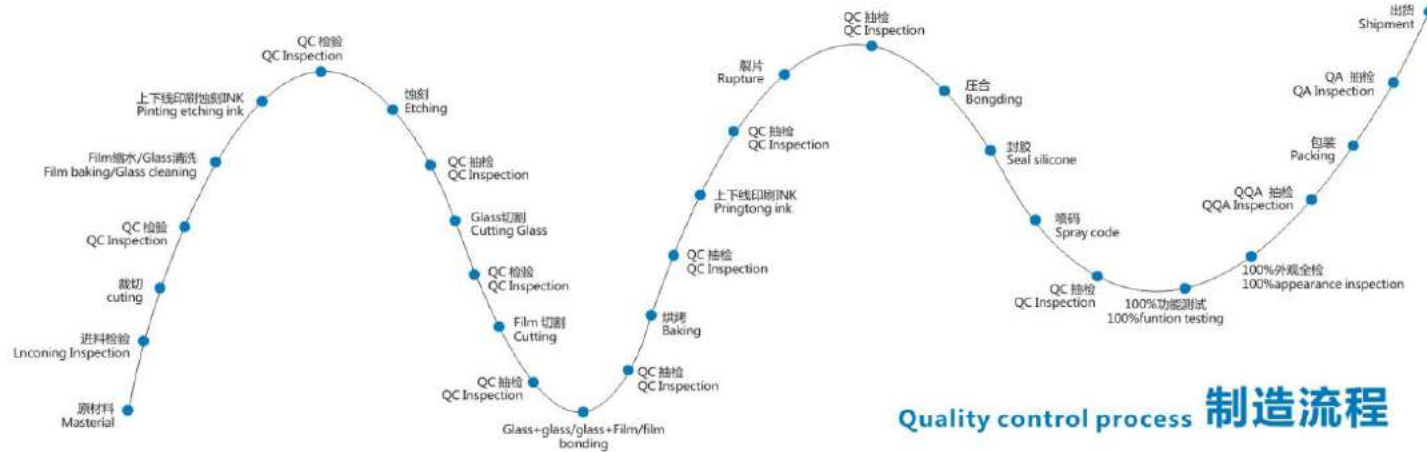
Quality policy 品质政策

Popularize the quality consiousness,to carry out the management authorities and responsibilities clear,accurate delivery establish documented procedure of quality records,
普及全员品质意识，落实管理权责分工与整合，准确供货，掌握需求。
保存准确及清楚的品质记录，持续改善。

Formula quality policy 公司质量方针

Quality first,reputation first,management is base,service first
质量为先、信誉为重、管理为本、服务为先。

Manufacturing Process 制造流程



Quality control process 制造流程

Quality control prcess 品质控制流程

Process	Control Process	Method	Content	Department
1	TQC Material for processing	Sampling inspection	1. New material: ITO rawmaterial, ink, all purchased from famous foreign manufacturer (like Asahi, Nitto, Toyoko) in order to make sure about inspection the quality of the material, confirm the samples and small Batch trial-produce. The inspector must check every single part before product.	IQC QA
2	The production process inspection	All inspection	IPQC monitor the production process and quality maintenance.	OQC
		Sampling inspection	Each working procedure have operator self-inspection, QC require 100% inspection accuracy	IPQC
		Patrol inspection	Patrol inspectors do patrol inspection during production PPAP + MSA, inspection FMEA, SPC is the inspection methods.	IPQC
3	Inspection of finished product	Sampling inspection	1. A functional test: 100% use the linear test machine; before delivery multimeter confirm again. 2. Visual inspection: 100%.	IQC QA
4	Reliability test		1. New development (new material, new technology, new structure) must do reliability test 2. The product of main customers will do reliability test every quarter. Environment reliability testing (High- low and constant temperature/humidity chamber) & Life reliability test (Life-span test machine)	QA
5	Customer Complaint handling		The customer in the province we will send the specialists to confirm analysis and improvement measures. 3D report form feedback customers in 3days.	QE

流程	控制工序	方式	工作内容	部门
1	IQC 来料控制	抽样检验	1. 新开物料: ITO 原材料, 油墨等关键物料, 必须跟供应商 (Oke, Asahi, Nitto, Toyoko) 采购, 先做可靠性测试, 再批量测试, 用批量测试, 确保材料品质。 1. 批量采购的主要物料 (QC 按 QA 2018-2003) 正常检验抽样方案, 一检检验水平按标准进行检验, 产线使用 100% 全检。	IQC QA
2	生产制程检验	全数检验	操作工每道工序对生产过程进行监控及品质维护, 每工序对每一产品的外观和功能进行严格检查、测试, 确认合格后才允许流到下一工序。	OQC
		抽样检验	首件确认: 每个工序均由操作者自检, 质检员和带班干部进行首件确认, 要求首件确认正确率达到 100%。	IPQC
		巡查检验	质检员在生产过程中进行不间断巡查, 并填写巡查记录, 在班前、班中、班后, 对正班合等每 4 小时巡查点进行 QC 七大手法, PPAP, MSA, FMEA, SPC 等进行管控。	IPQC
3	成品检验	抽样检验	1. 功能测试 (线性测试机照片): 100% 用线性测试机测试电阻, 绝缘阻抗及线性出货前再用万用表测试短路。 2. 外观检验 (按检相关照片): 按检验标准 100% 外观检验	IQC QA
4	可靠性测试		1. 新开开发新物料, 新工艺, 新结构产品必须进行可靠性测试。 2. 大客户产品每年度进行次外可靠性测试, 环境可靠性测试 (恒湿恒压测试), 寿命可靠性测试 (寿命测试机)	QA
5	客诉处理		省内客户在 24 小时内派专人去客户现场核实, 原因分析及改善措施 3 天内以 8D 报告形式反馈客户。	QE



多·普·触·控

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