

公司简介

COMPANY PROFILE

| 专注 | 品质 | 诚信 | FOCUS | QUALITY | INTEGRITY



FIRISH

马来西亚火锐斯科技有限公司

FIRISH SDN. BHD.

Talents come from diligence,
and knowledge is gained by accumulation



WELCOME

— 欢迎页 —

FIRISH Technology Sdn. Bhd. providing professional testing solutions for 3C electronics industrial, medical industrial and other industries, including strain testing, force testing, electrical functional testing, tools & Jig fabrication, Precision manufacturing, process consumable supply and indirect material supply.

Contents

1. About Us
2. Core Competencies
3. Project Experiences
4. Consumable parts & Agents
5. Key Customer

About Us



FIRISH Technology Sdn. Bhd. specializes in automation equipment R&D, manufacturing, and technical services, offering customized testing solutions for industries like **3C electronics (computers, communications, consumer electronics) and automotive electronics**.

The company excels in **integrated mechanical, electrical, and software systems**, delivering both standardized and tailored solutions. With a **highly skilled R&D team**, advanced manufacturing, strict quality control, and strong OEM partnerships, it ensures cutting-edge technology and reliable performance.

Guided by values of **unity, innovation, and business acumen**, Shenzhen Fenghuo focuses on **continuous improvement** in product quality and service, aiming to deliver value to customers and partners through a seamless **R&D-manufacturing-sales** approach.



01

• **Strength & Competence.**

- Culture
- SW Development
- EE Development
- ME Development
- Manufacturing

FIRISH Technology Sdn. Bhd | Corporate Culture



The company aims to be a leading intelligent equipment manufacturer with strong competitiveness. It focuses on solving customer challenges by delivering high-quality products and services while creating unique value. Core values include prioritizing people, excellence, innovation, and customer success. The corporate spirit emphasizes unity, development, pragmatism, and innovation.

Key policies include:



• **Customer First** – Market-driven approach.



• **Service Priority** – Value through service.



• **Standardized Management** – Balance macro principles with micro precision.



• **Quality Assurance** – Quality as the foundation.



• **Continuous Improvement** – Optimizing markets, teams, and quality.

FIRISH Technology Sdn. Bhd | Mechanical Design.



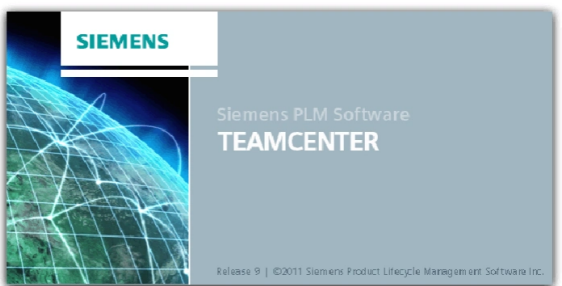
Mechanical Design.

Siemens PLM Management System

Mechanical Design Platform

Tolerance Analysis Platform

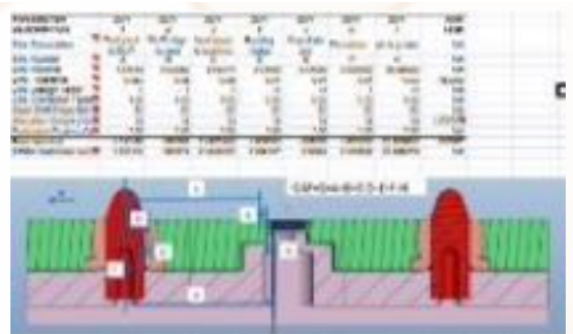
Needle Plate Module



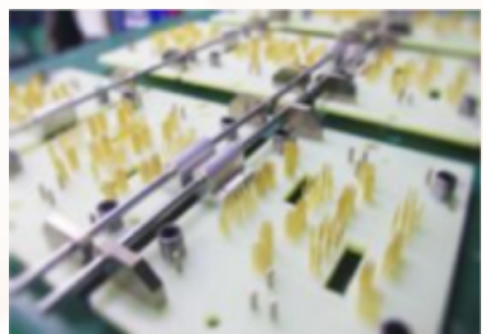
CAD drawing management, each mechanical design drawing is traceable.



Multiple mechanical design platforms, providing comprehensive solutions to enhance R&D efficiency.



A mil-level high-precision tolerance analysis platform ensures the quality of every piece of equipment upon delivery.



High-precision test modules for PCBA testing, capable of covering the vast majority of testing requirements.

* 1 mil = 0.0025 mm

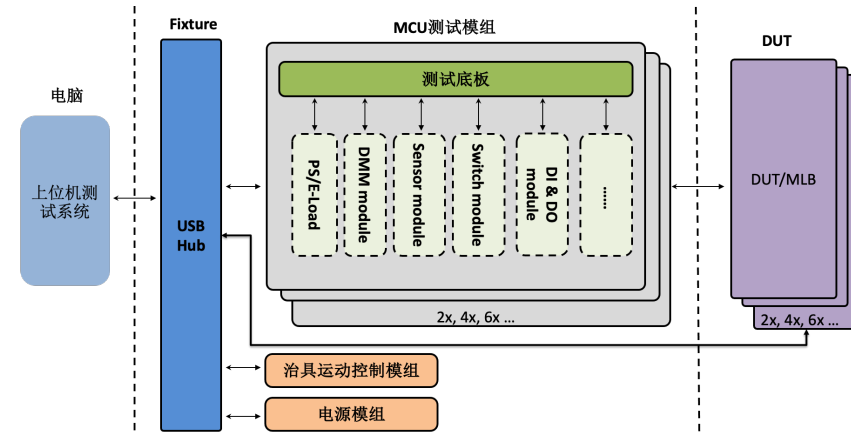
FIRISH Technology Sdn. Bhd | Electrical Design



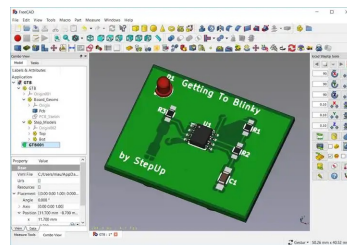
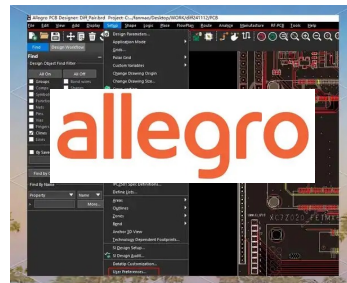
FIRISH

Electrical Platform

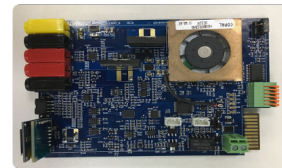
- Mature EE test boards platform
- Integrated and modularize PCB layouts.
- Known how used different function test boards.
- Switch boards design to many multiple channels support.
- Capable design standard test boards for customer.



PCB layout



ECAD-MCAD



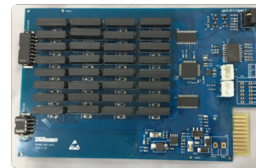
PS/E-Load 模组



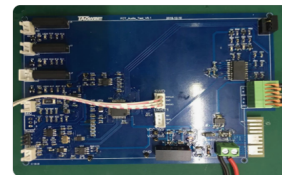
频率测量模组



DI/DO 模组



矩阵开关模组



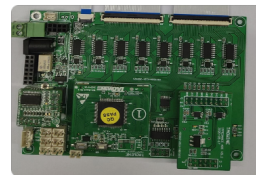
音频测试模组



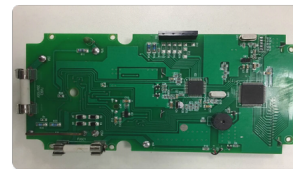
CVCC 模组



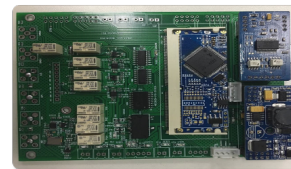
信号切换开关模组



控制板模组



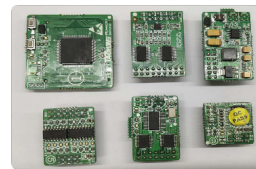
DMM 模组



LCR 模组



传感器模组



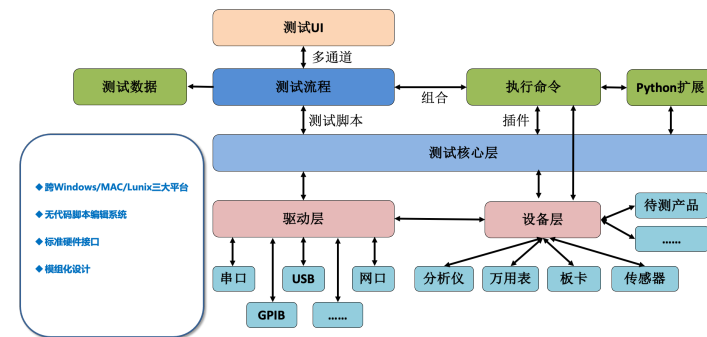
即插即用功能单元模组

Software platform.

- Compatible Window / Mac / Lunix 3 major platform
- CSV test code only. Support engineer no need deep coding
- Standard all hardware IO support drivers.
- Capable for module design.



Compatible with multiple operating systems

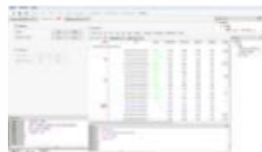


Real-time monitoring and management of production lines can be performed.

Compatible.

Management

Programing



Test Manager



AutoMachine

Programmable standard R&D platform

FIRISH Technology Sdn. Bhd Core Business



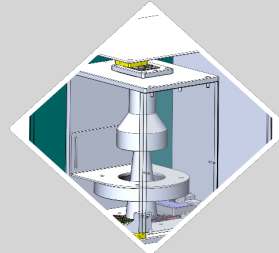
FIRISH



Consumable parts.



Precision Machining



Industry solution



Automation



Standard parts
Keys Agent

Consumable.

- Cables (USBC, USBA, HDMI and etc..)
- Blade Pins & Balde connectors.
- Flex (LCD flex, Industrial flex and etc..)
- Acoustic foam.
- Stain & Gauge sensors.
- PCBA Tray

CNC

- Metal products.
- Plastic products.
- Sheet Metal products.
- Anodizing products.
- Metrology capabilities.

Testing

- FCT (PCBA Functional Tester)
- Flex & sub-assembly Tester
- QT (Quick Tester)
- Acoustic (Sound Tester)
- Magnet-hall Tester.
- LED Tester.
- Burn-in Tester.

Assembly

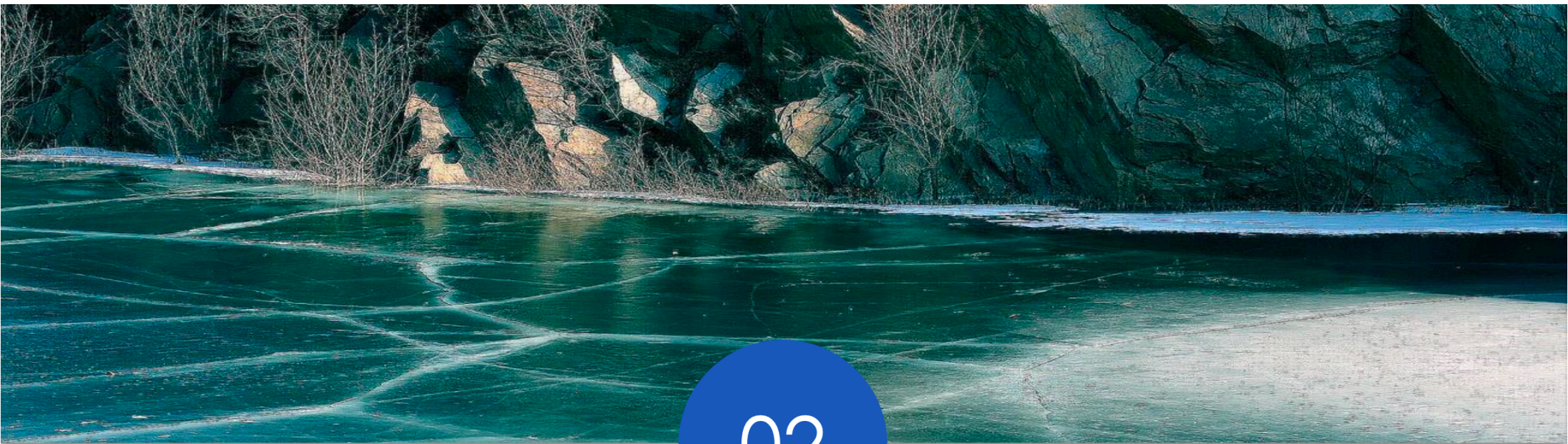
- Pressing fixture.
- Assembly carriers.
- Sub-assembly carriers.
- Laser printing machine.
- Go & non go gauge.
- AOI fixture.

Automation

- Load & unload Automation.
- Auto-screw machine.
- Auto-glue machine.
- Pack-out automation line.

Standard Part Agent

- SuperLead
- Vanguard Screw Drivers.
- AKUSENSE
- Anodizing



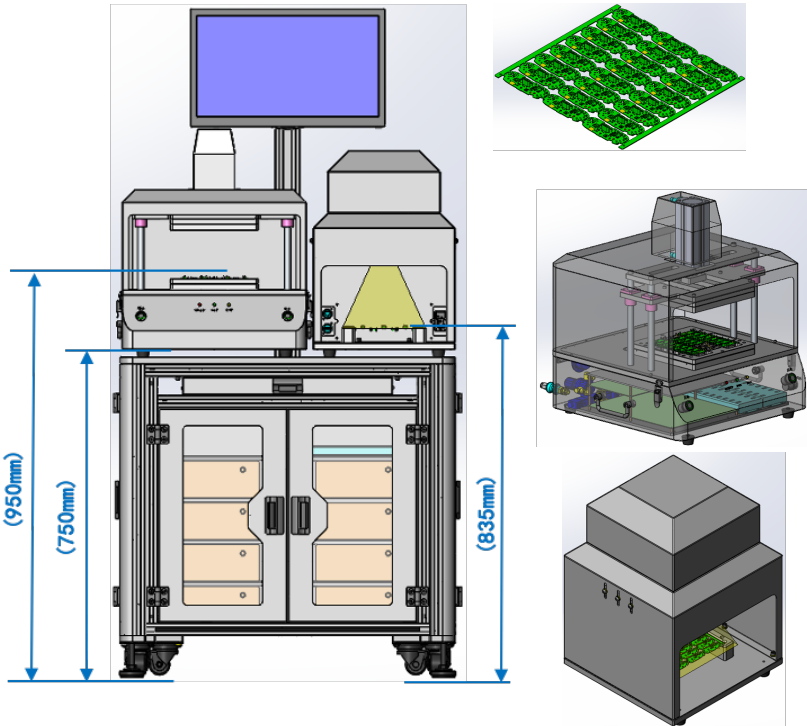
02

• **Projects Experiences**

- SW Projects
- HW Projects
- Assembly Projects
- Automation Projects

FIRISH Key Experience | PCBA Functional Test

Headset Bud - FCT Tester



• Feature.

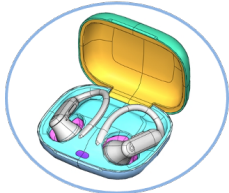
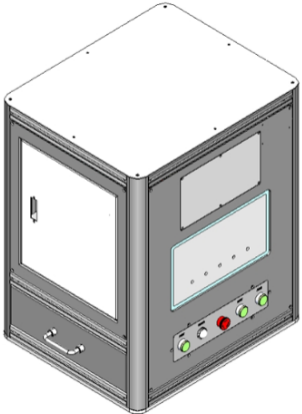
- Modularized multi-up & multi products model FCT tester design.
- Customized 8 to 24 up DMM, power sequence module boards.
- Drivers Hall, LED, charging and discharging testing.
- Drivers 8 to 24 up PCB panels barcode SN scans by 1 camera module.
- PCB Panel design testing, improved efficiency.
- Connected to MES system.

	680/691	701	24283	Q77	Steel	Sharp
Download Charging test PW	✓	✓	-	-	-	✓
Underwriting Test	X	X	DNA-20kA	-	-	-
Normal Charge current	400-600mA	-	400mA-200mA	300mA-450mA	400-550mA	400-400mA
Error DUT (Test mode)	✓	✓	✓	✓	-	✓
Battery Level Check	✓	✓	50%-95%	✓	-	✓
SN Write	✓	✓	✓	✓	-	✓
Read SN	✓	✓	✓	✓	-	✓
Read battery current	-	-	-	20kA-100kA	DNA-50kA	50kA-40kA
Reverse voltage check	✓	✓	✓	✓	-	✓
ADC check	ADC电压	0.7V-3.0V	0.700V-10V	-	0.7V-3.0V	0.8kV-0.1V
Battery NTC ambient check	✓	✓	✓	15-40k	DNA-9kA	✓
Hot Sensor Check	✓	✓	✓	✓	✓	✓
Battery Check	✓	✓	✓	✓	✓	✓
LED check	LED灯	ESD 喇叭 灯	白、红、绿、黄灯	ESD 灯	-	ESD 喇叭灯
Life Turn on SV	喇叭SV输出	0V-0.2V	0V-0.2V	0V-0.20V	-	✓
Left Load voltage	充电电压	4.7V-5.2V	0V-0.2V	4.50V-0V	4.7V-5.2V	4.8V-0.2V
Left Load current	充电电流	100mA-1000kA	100kA-1000kA	80kA-100kA	300kA-600kA	100kA-100kA
Right Load voltage	充电电压	4.7V-5.2V	0V-0.2V	4.50V-0V	4.7V-5.2V	4.8V-0.2V
Right Load current	充电电流	100mA-1000kA	100kA-100kA	80kA-100kA	300kA-600kA	100kA-100kA
Bricktest SW	喇叭测试电压	✓	✓	✓	✓	✓
Left Life Voltage	充电充电电压	-	-	0V-0.20V	-	-
Right Life Voltage	充电充电电压	-	-	0V-0.20V	-	-
Left Life Current	充电充电电流	-	-	DNA-10kA	-	DNA-50kA
Right Life Current	充电充电电流	-	-	DNA-10kA	-	DNA-50kA
Battery Check	左右充电电压	-	-	0.7V-0.8V	-	-
Step / Step battery check.	按原板充电电压	0kA-15kA	5kA-15kA	0kA-15kA	0kA-25kA	0kA-15kA
MES system				✓		

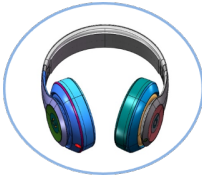
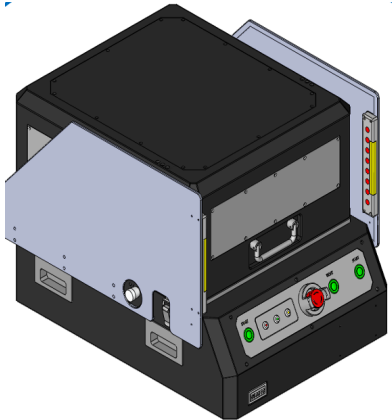
Items	Spec
Application	Earbud charging PCB
Cycle time	60s-90s
Yield & Retest	98% 3%
Load / Unload	Manual (subjected automation ready)

FIRISH Key Experience | Headphone Quick Test (FATP) Tester

Quick Function Tester



Over-ear headphone Products QT Tester



Headphone Products QT Tester

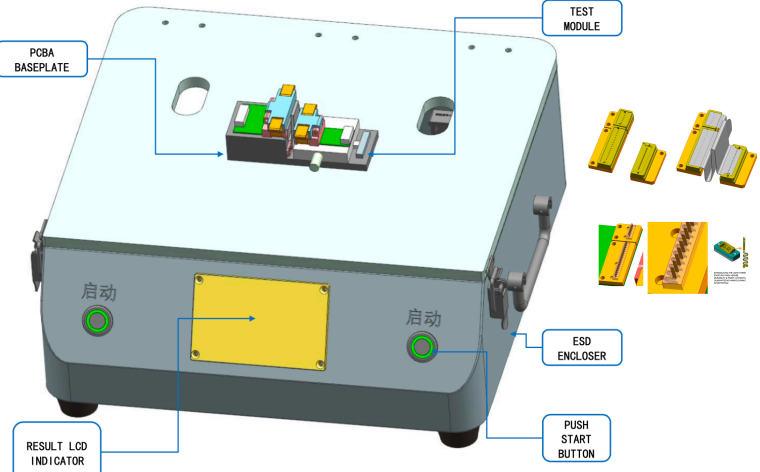
• Feature.

- Customized FATP products quick test testing.
- Drivers the products competed foundation subsequent precision testing.
- Covers button, Hall, LED, Accelerometer, Touch sensor, current and voltage testing.
- Provide sensors /LEDs calibration capabilities designs.
- Contact resistance testing between earbuds and charging cases. .
- Connected to MES system.

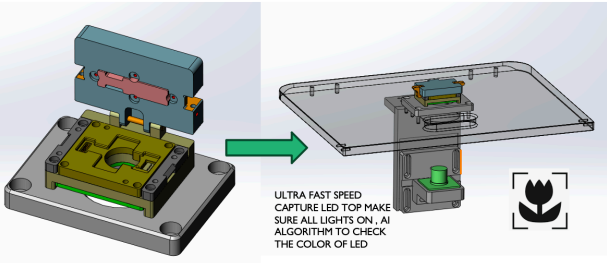
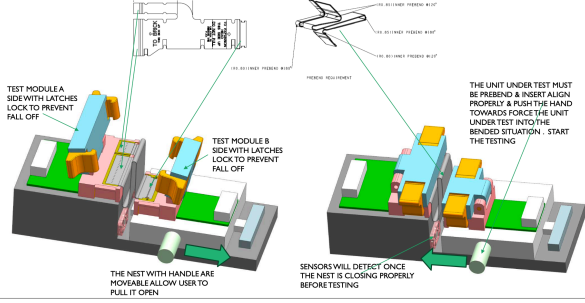
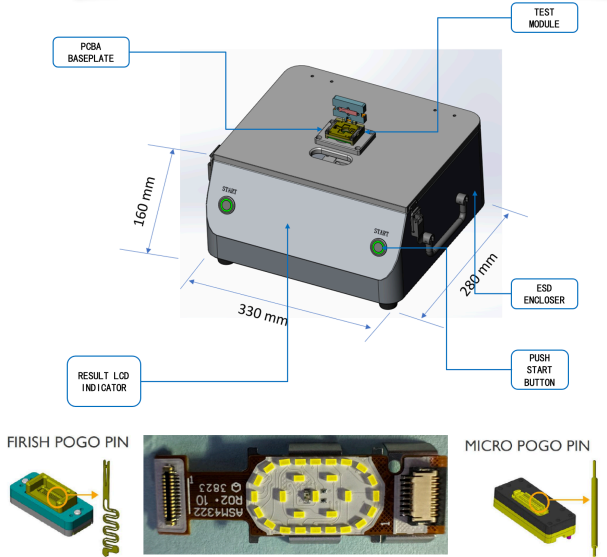
Items	Spec
Application	Headphone products
Cycle time	90s-120s (depending on test coverage)
Yield & Retest	98% 3%
Load / Unload	Manual (subjected automation ready)

FIRISH Key Experience | Blade Pins Flex Quick Tester

Bending Flex Design Function Tester



28 LEDs Flex Function Tester



FLEX HODLER DESGIN.

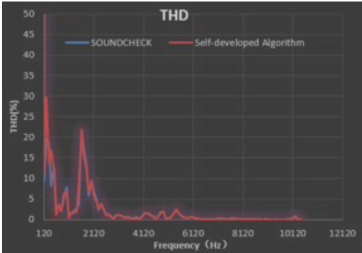
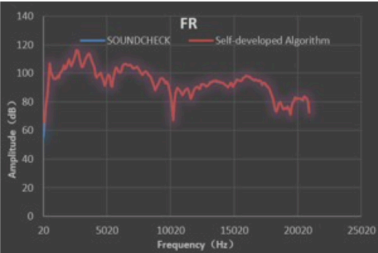
• Feature.

- Customized all kinds of different flex continuously connectivity testing.
- Drives high precision blade Pins design to have good connectivity design. (Bend design.)
- Drivers LED luminous, Demo switch testing.
- LCD Panel design testing, improved efficiency.
- Connected to MES system.

Items	Spec
Application	PCBA flex
Cycle time	60s
Yield & Retest	99% 1%
Load / Unload	Automation ready

FIRISH Key Experience | Acoustic Tester

Acoustic Function Tester



MAC & Windows PC



SoundCards



Reference Mic PS



Power Amplifier



Ear Simulator
(Speaker & Receiver)



Reference
Microphone
(Mic Tests)



Impedance Box (Listen)
Speaker & Mic (Receiver)



Chamber & Fixture



• Feature.

- Utilizes the latest soundproofing material with excellent sound isolation and absorption capabilities.
- Provided superior noise-blocking performance.
- Features a stainless steel enclosure and multi-layer sound proof cotton combination, ensuring a sturdy and reliable design.
- Customized integrated interfaces for easier compatibility with testing instruments.
- Supports frequency band testing from 20Hz to 20kHz, with sound insulation reach up to 40dB.
 - Fast swept sine (long chirp) diving signal.
 - Step sine driving signal
 - Measure frequency response and harmonics simultaneously.
 - Harmonic distortion 1K sensitivity test.
 - Calculate delta FR, THD, Rub & Buzz
 - Correlation with sound check > 95%

Items	Spec
Application	Audio electronic products, (motors speakers, phone audio and etc..)
Cycle time	60s
Yield & Retest	99% 3%
Load / Unload	Automation ready.

FIRISH Key Experience | LED Tester

LED Tester

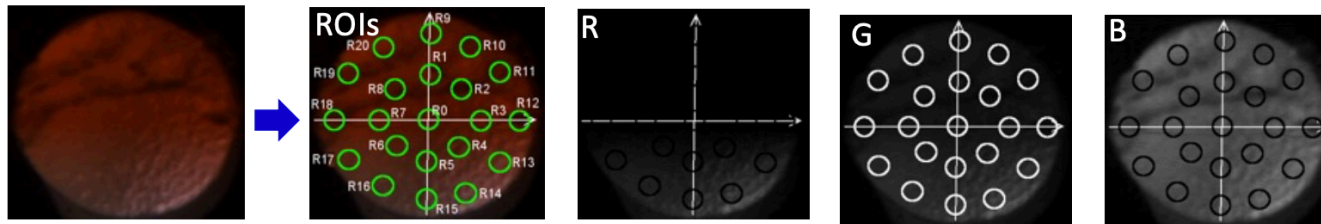
- **Feature.**

Relative intensity (RI): 40% radius(R1-R8), 80% radius(R9-R20) & all the ROIs, $RI = \text{average}(Ri) / \text{average}(R0)$, $i = 1, 2, \dots, 20$

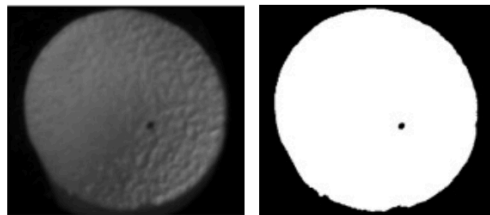
$\Delta v = v_{\text{max}} - v_{\text{min}}$ of @ 40% & 80% radius and all the ROIs

- Relative uniformity (RU): @ 40% & 80% radius and all the ROIs, $RU = 0.5 * \Delta v / \text{average}$

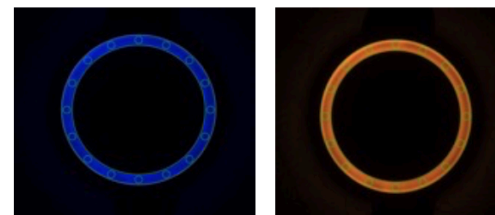
- LED Defect Test: Self-developed algorithm, miss < 0%, Overkill < 10%



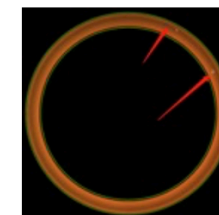
LED RI & RU test



Defect test



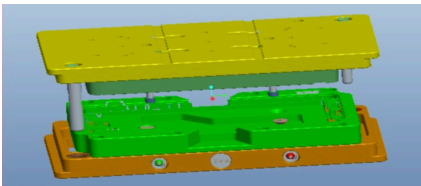
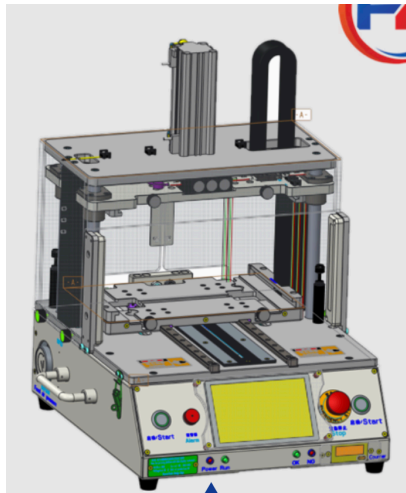
LED Ring RI & RU test



LED Ring Defect test

FIRISH Key Experience | Assembly Pressing Fixtures

Assembly Pressing Fixture



- **Feature.**

- Deliver pressure-holder fixture platform with real-time pressure display & monitoring function.
- Drivers adjustable pressing time.
- Automatic fixture platform movement (in / out)
- Connected to MES system.

Equipment Dimensions: 650480500 (MM)
Equipment Power: 220V (10A)
Pressure Range: 0.05-0.65Mpa

Fixture Function and Parameters

Application: Assembly and pressing platform for 5C product PCBA shielding covers and other components.
Mold Configuration: 4 cavities per mold.

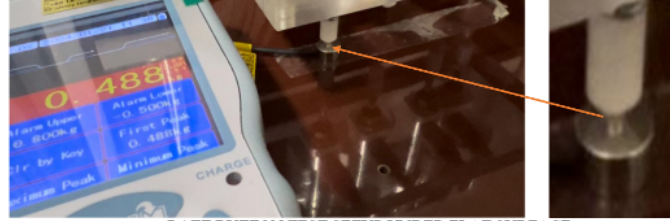
Service Life: 1 year or 100,000 pressing cycles.

Fixture Functions:

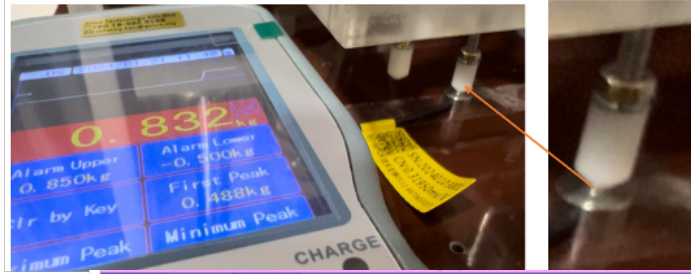
- Product pressure-holding fixture with real-time pressure display and monitoring.
- Adjustable pressing time.
- Automatic fixture platform movement (in/out), supporting both unidirectional and bidirectional (forward-in/backward-out) modes for convenient robotic loading/unloading.

FIRISH Key Experience | FORCE TESTING SOLUTION

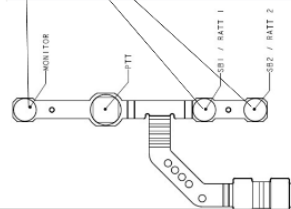
FORCE TESTING SOLUTION



RATT BUTTON TEST SETUP UNDER FLAT SURFACE



Tester name:	14236 TACTIL	Company:	QDOS MALAYSIA					
Tester No.:	14236	Department:						
Object:		Project Title:	14236 DOME 1					
Object No.:		Saving Path:	D:\PRIUS FORCE METER\14236					
Meter S/N:	9708046	Speed:	50 Hz					
Capacity:	2.000 kg	Force Area:	1 cm ²					
Readability:	0.002 kg	Upper Limit:	0.5 kg					
		Triggering:	0 kg					
		Capture Time:	5 sec					
		Lower Limit:	0 kg					
No.	Date	Time	Begin/kg	End/kg	Max/kg	Min/kg	Average/kg	Alarm Type
001	2024.1.22	11:31:16	0.000	0.000	0.498	0.000	0.303	No
002	2024.1.22	11:41:47	0.000	0.000	0.492	0.000	0.304	No
003	2024.1.22	11:42:40	0.000	0.000	0.486	0.000	0.312	No
Total			Min	0	0	0.486	0	0.303
			Average	0	0	0.492	0	0.306
			Max	0	0	0.498	0	0.312



PRIUS PPS-PS2 SMART FORCE METER

手持彩屏测力仪表

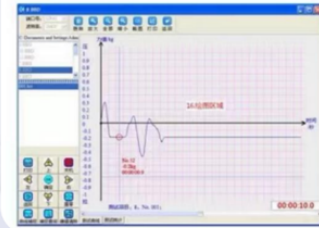
提供专业选型技术指导

送PC端测力软件

可永久保存100组测试报告 自动计算峰值 谷值 平均值等

测试曲线

通过 PC 配套专用的测试曲线软件 存储、传递、追溯、打印测试曲线



FIRISH Key Experience | VANGUARD INTELLIGENT SCREWDRIVER

INTELLIGENT SCREW DRIVER



Optional cable can be used to save the data with a PC application

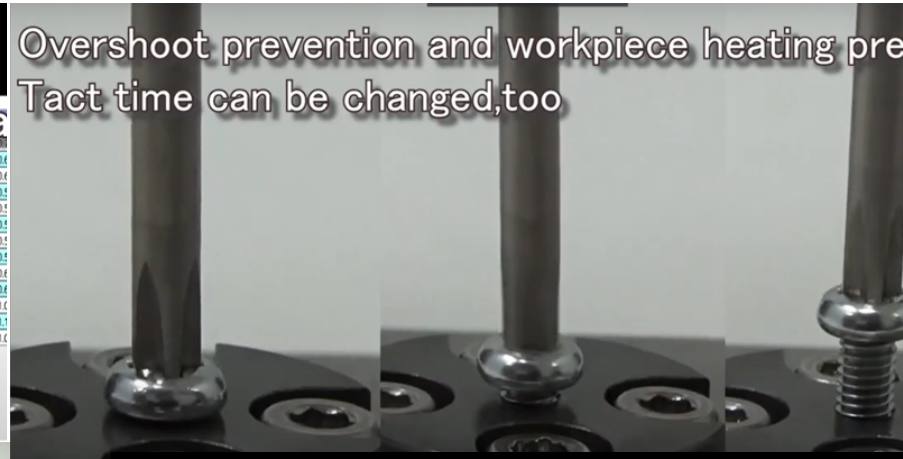
PRO-FUSE 接続ケーブル

接続先: COM11

接続: 接続 切断

情報選択:
・ネジ締結結果情報 収集 停止

日時	PRG	ターン数	最大トルク値	締付時間	結果
17/09/20 10:49:26	0	1.1	30.1	0.788	OK
17/09/20 10:49:30	0	1.1	29.9	0.811	OK
17/09/20 10:49:34	0	1.0	29.9	0.778	OK
17/09/20 10:49:39	0	1.0	29.9	0.794	OK
17/09/20 10:49:43	0	1.0	29.9	0.787	OK
17/09/20 10:49:47	0	1.0	29.9	0.783	OK



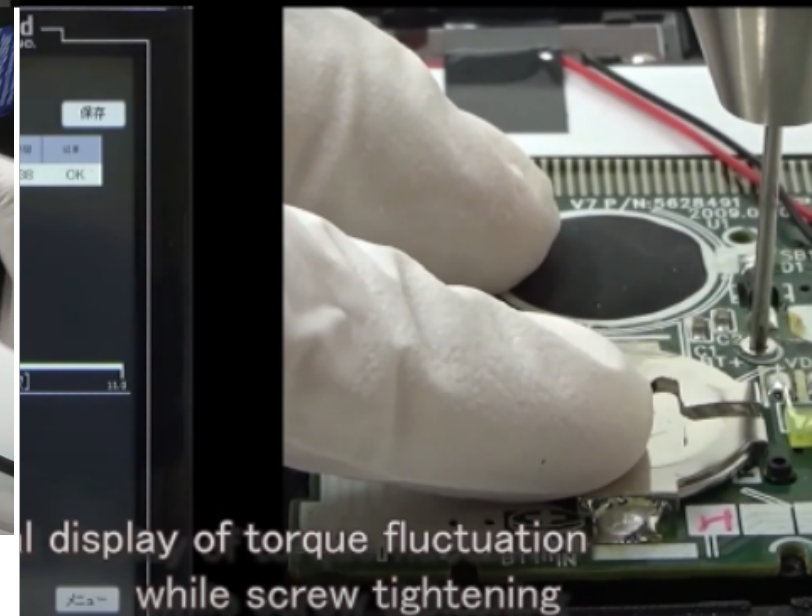
PRECISION BOARD

history of screw tightening results

保存 結果クリア

ターン数	最大トルク値	締付時間	結果
1.1	30.1	0.788	OK

MODEL:1PF-2-4-L (S/N) C20132





03

• **Consumable & Agents Experiences**

- Cables
- Flex
- Balde pins
- Foams
- Agents

FIRISH | SMT Standard Router Machine. Agent

Router Machines

S300 系列 在线自动分板机

特征 Feature

- ◇两个独立的左右工作台
- ◇切割速度高达100mm/s
- ◇自动检测和监控刀具寿命和状态
- ◇自动更换铣刀和铣刀分段切割
- ◇防静电高速主轴
- ◇视觉辅助编辑切割路径



S350 系列 在线自动分板机

特征 Feature

- ◇两个独立工作台
- ◇切割速度高达100mm/s
- ◇自动检测和监控刀具寿命和状态
- ◇自动更换铣刀和铣刀分段切割
- ◇防静电高速主轴
- ◇视觉辅助编辑切割路径
- ◇真空助力固定PCB板 (选配)
- ◇切割成品载具
- ◇分板定位精度高, 稳定性好
- ◇切割位置自动CCD检测 (选配)
- ◇自动扫描PCB二维码 (选配)
- ◇上、下吸尘, 上下同吸可以自由切换
- ◇通过MES系统自动打X板剔除 (选配)
- ◇多功能离线式编程系统
- ◇适应高频率机种换线, 解决了当今行业在线分板机换线时间长



S400 系列 在线自动分板检测摆盘堆垛一体机

特征 Feature

- ◇双工作台
- ◇真空助力固定PCB板 (选配)
- ◇铣刀寿命和断刀检测
- ◇自动换刀和分段切割
- ◇切割成品自动摆放, 可360°旋转。
- ◇高速取放系统, 吸取或夹取
- ◇Tray盘自动取/放
- ◇防静电高速主轴
- ◇分板定位精度高, 稳定性好
- ◇切割位置自动CCD检测 (选配)
- ◇自动扫描PCB二维码 (选配)
- ◇上、下吸尘或上下同吸可以自由切换
- ◇通过MES系统自动打X板剔除 (选配)
- ◇多功能离线式编程系统
- ◇适应高频率机种换线, 解决了当今行业在线分板机换线时间长



SWESION

Shenzhen Swesion Precision Equipment Co., Ltd

Certificate

— OF COMPLETION —

THIS CERTIFICATE IS PRESENTED TO

FIRISH SDN BHD

Is authorized to sell Swesion's Products for customers in area of Malaysia, Southeast Asia and other global regions, in your market to take charge business of marketing sales and services, etc.

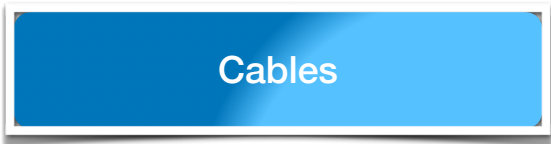
Valid to Sep.27th 2027

2024/09/28

DATE



FIRISH | Cables



Consumable USBC cable

1. FATP Consumable USBC cable provider.

Cables Test Process process.



Completed Products

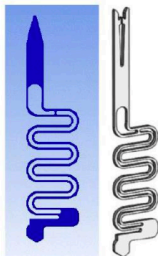
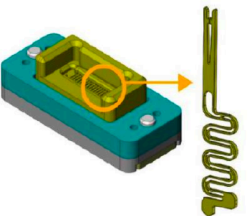


FIRISH | Blade Pins.

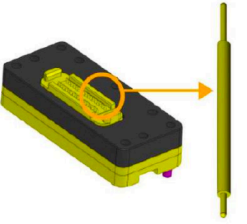
Blade Pins

Blade Pins Pogo Module Support.

1. ODM Blade Pins module. (Own Design).
2. CM factory blade pins module.
3. Share develop Blade Pins module design with Customer. Custom made.

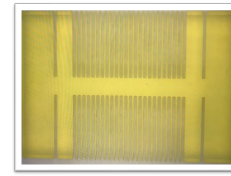
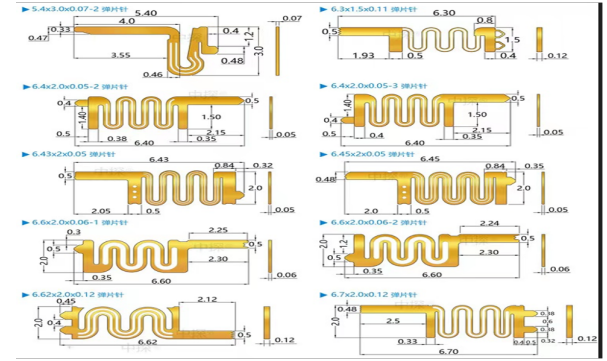



VS

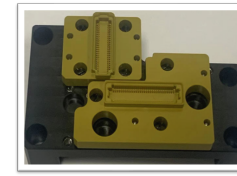


OVER 20000 TIMES	HIGHT DURABILITY	ONLY 5000 TIMES
>50m ohm High inspection accuracy even for devices under test that require low contact resistance	HIGH PRECISION MEASUREMENT	70mΩ Difficult to use for devices under test that require low contact resistance
99.99%	HIGH PASSING RATE	89%
0.175mm	NARROW PITCH	0.35mm or more

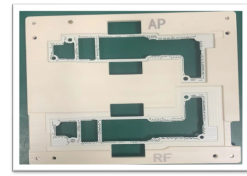
Single component structure
A single component plays the role of the pogo pin plunger, barrel, and spring.



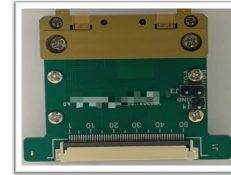
0.10mm 弹片针胶芯



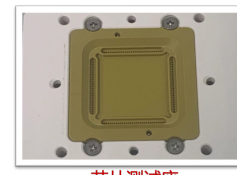
车载激光雷达测试座



800孔主板针板



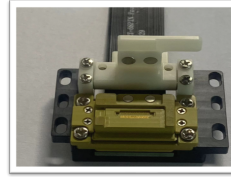
0.20 Pitch 屏幕测试模组



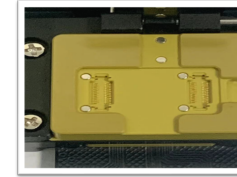
芯片测试座



4层精密转接排线



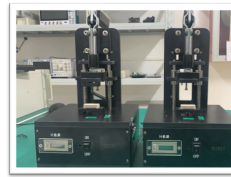
0.175pitch 弹片针模组



双0.175弹片针模组



4层精密转接排线



芯片测试专用治具



DJ无人机测试用

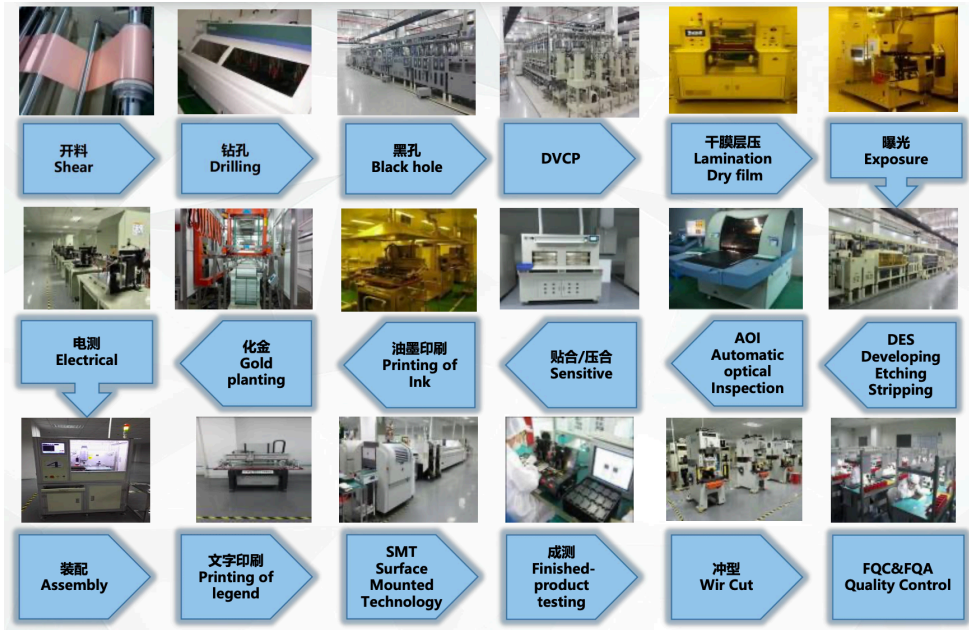


大电流测试微针模组

Completed Products



Manufacture Flex process.



Completed Products

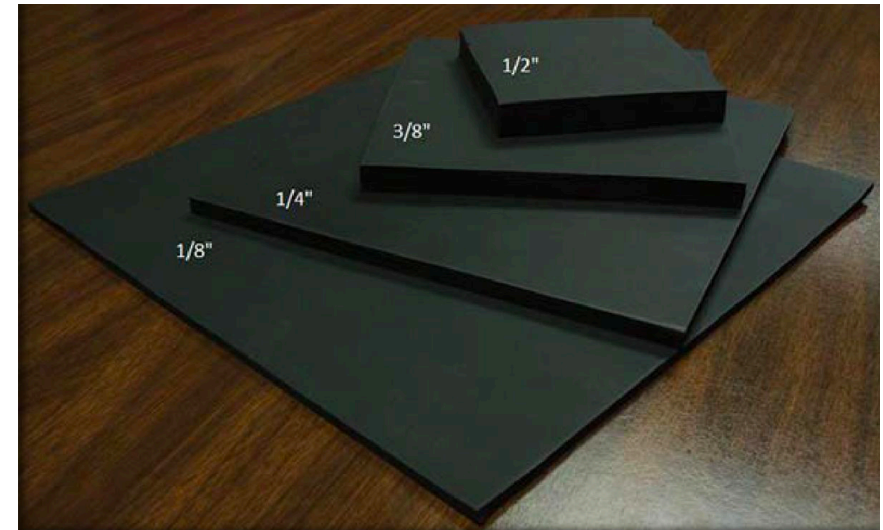
	<p>LCD module (Ultra small circuits line)</p> <ul style="list-style-type: none"> • 精细线路:0.04/0.035mm • Fine circuit: 0.04/0.035mm • 孔径:φ0.10mm • Aperture: φ0.10mm • 插拔手指公差:±0.05mm • Plug-in site tolerances:±0.05mm
	<p>Optical Communication</p> <ul style="list-style-type: none"> • 层数:2层 • Layer numbe: Two >精细线路:0.075mm • Fine circuit: 0.075mm • 孔径: φ0.2mm • Aperture: φ0.2mm >阻抗:50/100+/-10% • Impedance :50/100+/-10% • 材料:杜邦AP8525/AP8515/AP8535
	<p>Rigid-flex board</p> <ul style="list-style-type: none"> • 层数:5层 • Layer numbe: Five • 精细线路:0.075mm • Fine Circuit: 0.075mm • 孔径: φ0.2mm • Aperture: φ0.2mm
	<p>Intelligent wear</p> <ul style="list-style-type: none"> • 层数:4层 • Layer numbe: Four • 精细线路:0.075mm • Fine circuit: 0.075mm • 孔径: φ0.2mm • Aperture: φ0.2mm • 阻抗公差:±10% • Impedance tolerances:±10%
	<p>VR</p> <ul style="list-style-type: none"> • 层数:4层 • Layer number: Four • 精细线路:0.075mm • Fine circuit: 0.075mm • 孔径: φ0.2mm • Aperture: φ0.2mm
	<p>Industrial</p> <ul style="list-style-type: none"> • 层数:4层 • Layer numbe: Four • 精细线路:0.05mm • Fine circuit: 0.05mm • 孔径: φ0.15mm • Aperture: φ0.15mm
	<p>LCD module (Ultra small circuits line)</p> <ul style="list-style-type: none"> • 层数:2层 • Layer numbe: Double • 精细线路:0.05/0.05mm • Fine circuit: 0.05/0.05mm • 孔径: φ0.2mm • Aperture: φ0.2mm

FIRISH | Foam

Rubber Foam

Rubber foam is made by special rubber adding aerating powder vulcanize, close cell aerating at double sides, which has below advantages: excellent elasticity, excellent compression, excellent tear resistant, excellent sealing and excellent thermal insulation.

Thickness Tolerance	+0.5mm	- 0.5mm
Moisture Absorption	0.02% (Mass)	0.0% (Mass)
Compression deformation (22 hours at 24 degree centigrade)	25%	10%
TR10	-13°C	-13°C
Mass Density (Kg/M3)	260.03	259.97
Operating Temperature Range	50°C	-10°C



Production Size:

Thickness: 3.18mm <1/8 Inch>, 6.35mm <1/4 Inch>, 9.53mm <3/8 Inch>, 12.70mm <1/2 Inch>

Length: 420mm, developing 630mm

Width: 420mm, developing 630mm

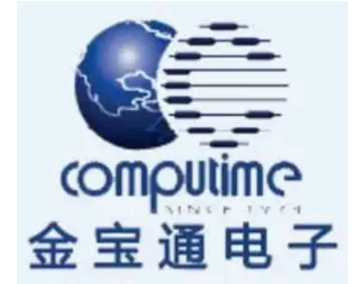
Can develop customer specify size as well.

FIRISH | MAIN CUSTOMER PRODUCT TESTING

KEY CUSTOMER



BOSCH



Electrolux



SONOS

英業達
Inventec





Thank You.

Talents come from diligence,
and knowledge is gained by accumulation.