# Bienvenido a O-Leaders

O-Leading se esfuerza por ser su socio de soluciones integrales en la cadena de suministro de EMS, incluido el diseño de PCB, la fabricación de PCB y el ensamblaje de PCB. Ofrecemos algunas de las tecnologías de PCB más avanzadas, incluidas PCB HDI, PCB multicapa, PCB rígido-flexible. Soporte desde el prototipo de giro rápido hasta la producción media y masiva. (Electrónica de PCB y ensamblaje de PCB Interfaz USB Fabricante de PCB)

En general, nuestros clientes globales están muy impresionados con nuestros servicios: respuesta rápida, precio competitivo y compromiso de calidad. Brindar un servicio técnico más valioso y una solución general es el camino a seguir para O-liderar.

Mirando hacia el futuro, O-Leaders se concentrará en la innovación y el desarrollo de la tecnología de fabricación de productos electrónicos como siempre, y hará esfuerzos persistentes en el servicio integral de PCB y PCBA para brindar servicios de primera clase y crear más valor para nuestros clientes.

**HAGA CLIC EN ESTOS PARA OBTENER MÁS INFORMACIÓN:Fabricante de módulos PCB de medio orificio**

# Descripción del producto

China Huizhou OEM Plazo de ejecución rápido Placa PCB electrónica Ensamblaje SMT Placa de circuito impreso PCBA Fabricante (Entrega rápida Fabricación de PCB Fabricación de OEM POE)

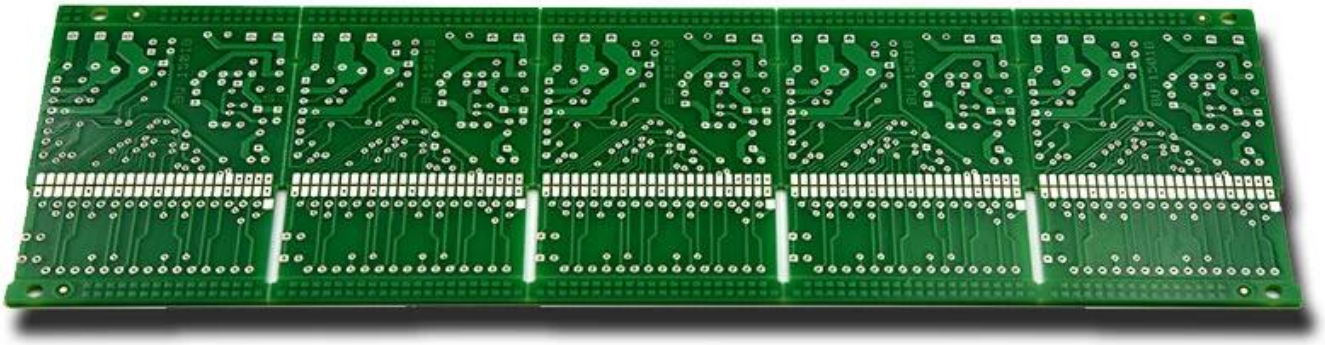
| | |
|---|---|
| nombre del producto | Placa de circuito impreso |
| Nombre de la marca | O-líder |
| Material de base | FR-4 / CEM-1 / CEM-3 / Polyimild / PTFE / Rogers |
| Espesor de cobre | 0.4-2mil (10-50um) |
| Espesor del tablero | 0,2-6 mm |
| Min. Tamaño del agujero | 0,1 mm (4 mil) para HDI / 0,15 mm (6 mil) |

| | |
|---|---|
| Min. Ancho de línea | 0,075 mm / 0,075 mm (3 mil / 3 mil) |
| Min. Espaciado entre líneas | 0,003 pulgadas |
| Acabado de superficies | HASL / OSP / Ag / ENIG / ENEPIG / Plata de inmersión, Estaño |

TOP QUALITY PCBA

O-LEADING

To Be Reliable, To Be Valuable



MAKE YOUR IDEA COME TRUE

TOP QUALITY PCBA

# O-LEADING

To Be Reliable, To Be Valuable

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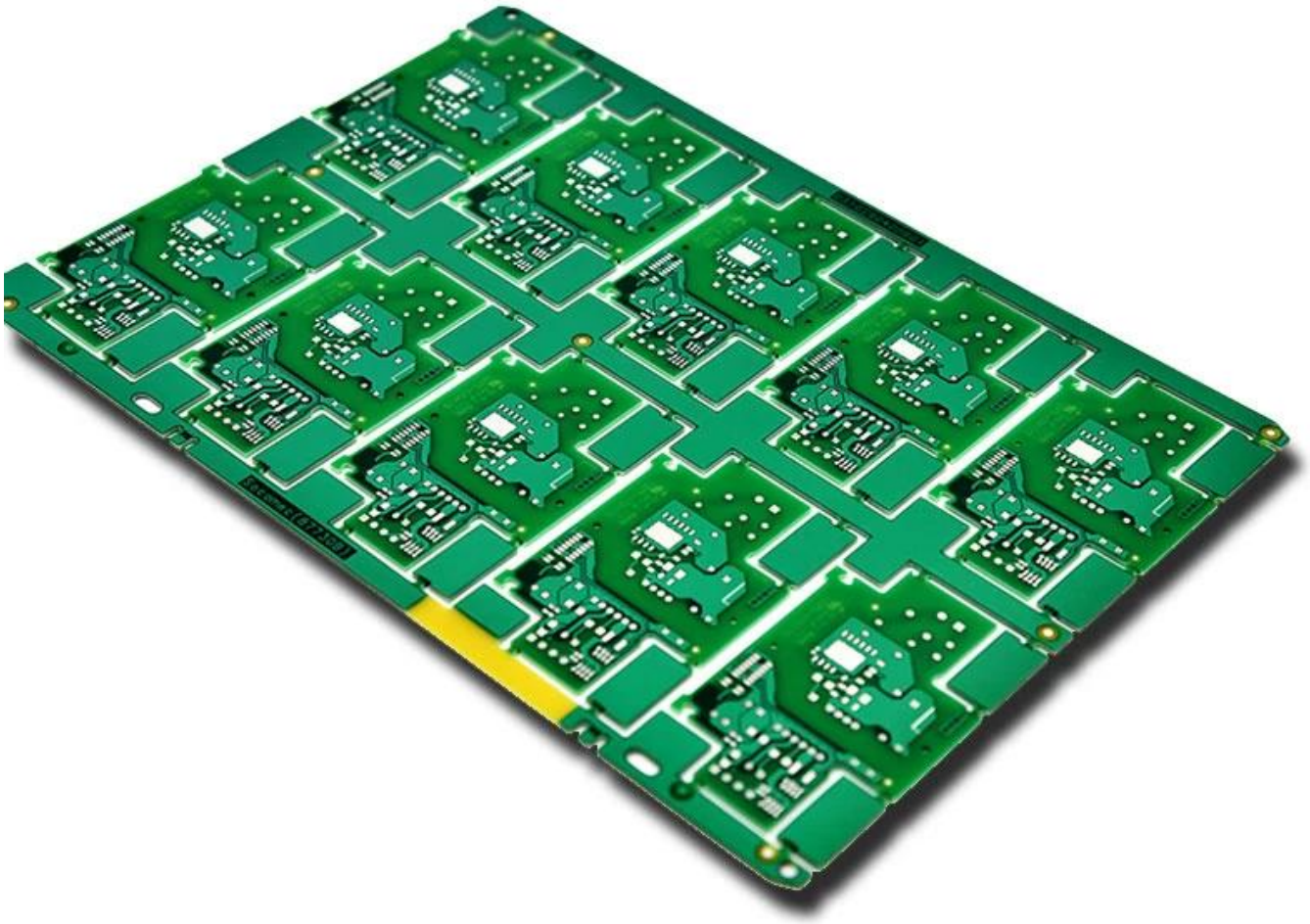
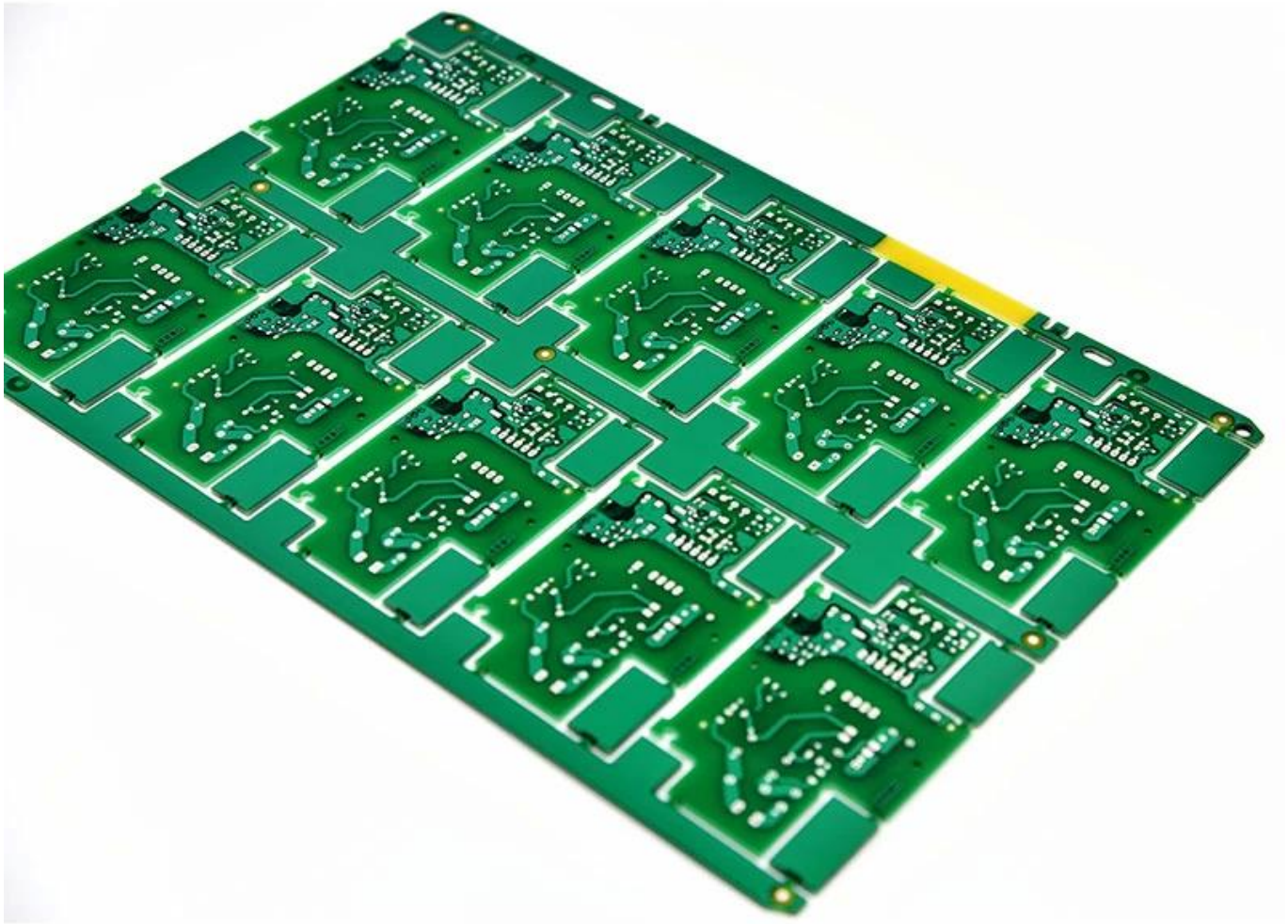
TOP QUALITY PCBA

# O-LEADING

To Be Reliable, To Be Valuable



MAKE YOUR IDEA COME TRUE



TOP QUALITY PCBA

# O-LEADING

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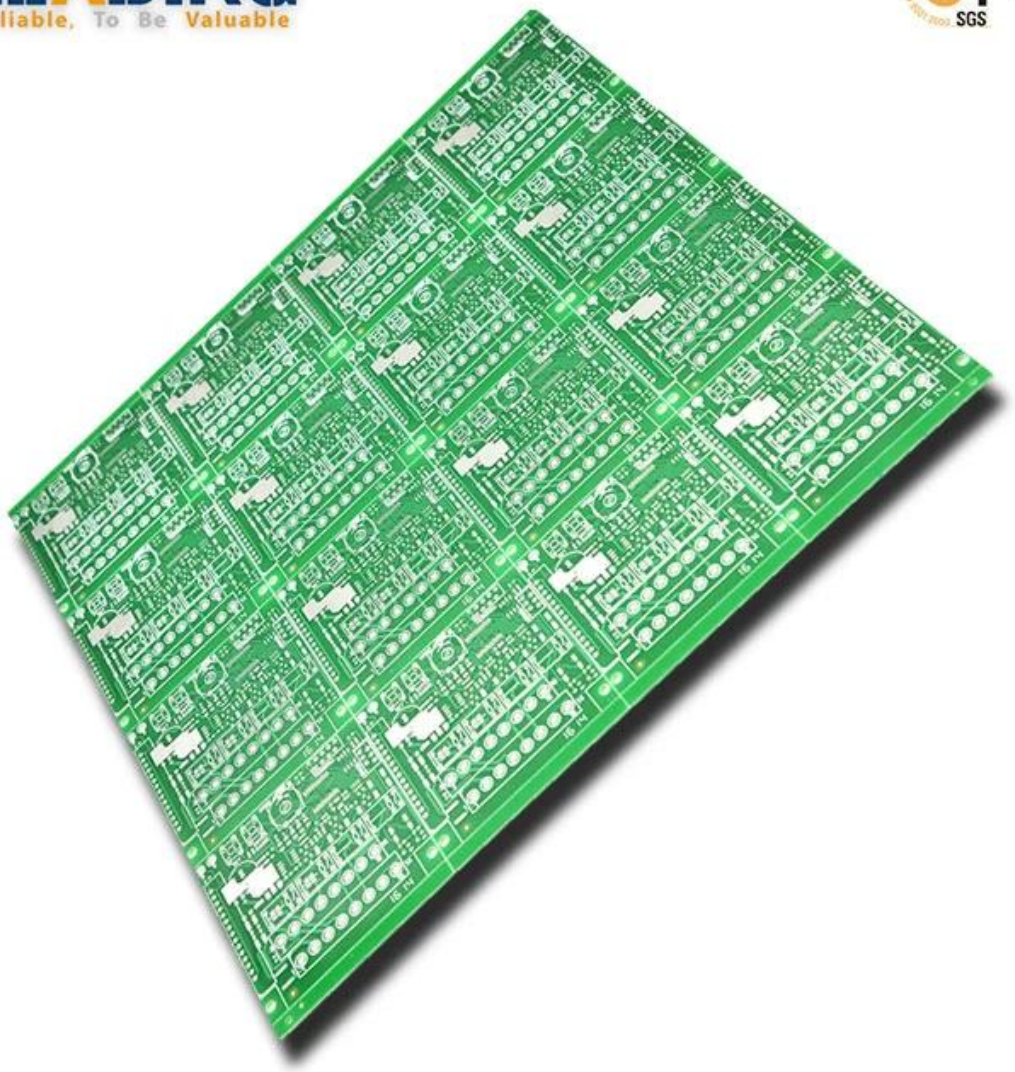
TOP QUALITY PCBA

# O-LEADING

To Be Reliable, To Be Valuable

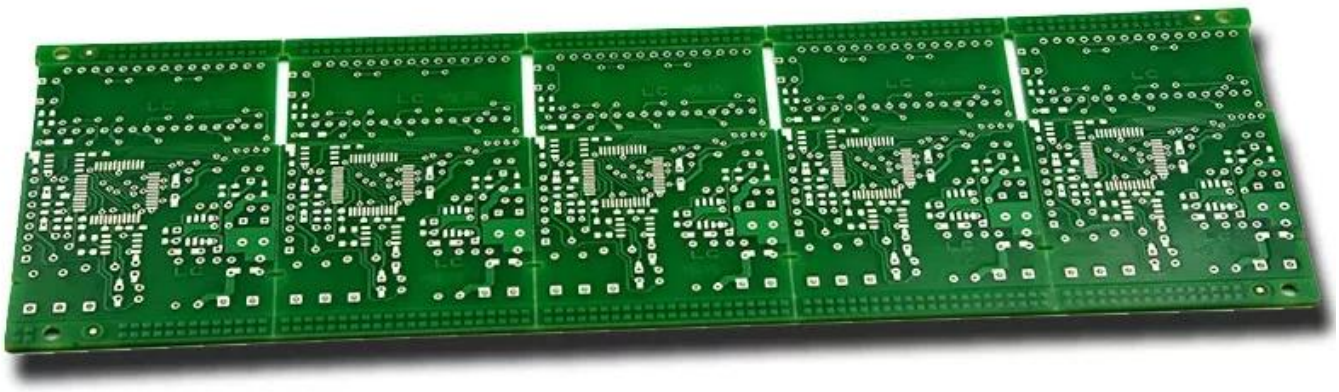


MAKE YOUR IDEA COME TRUE

TOP QUALITY PCBA

# O-LEADING

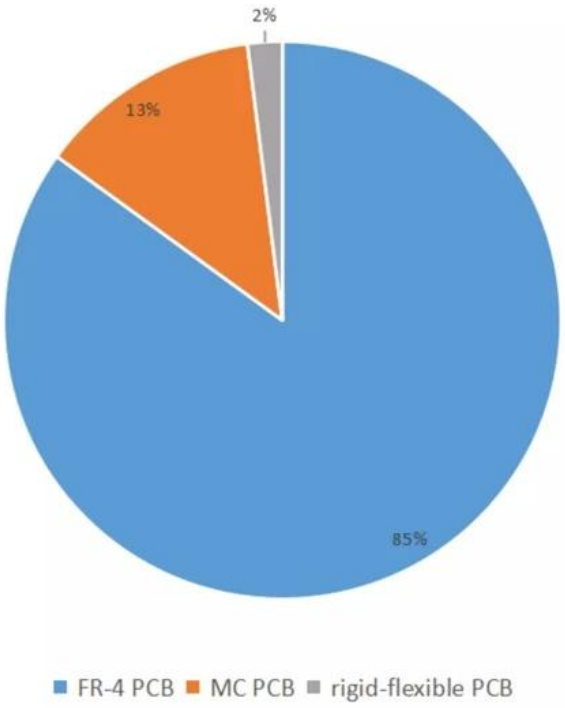
To Be Reliable, To Be Valuable



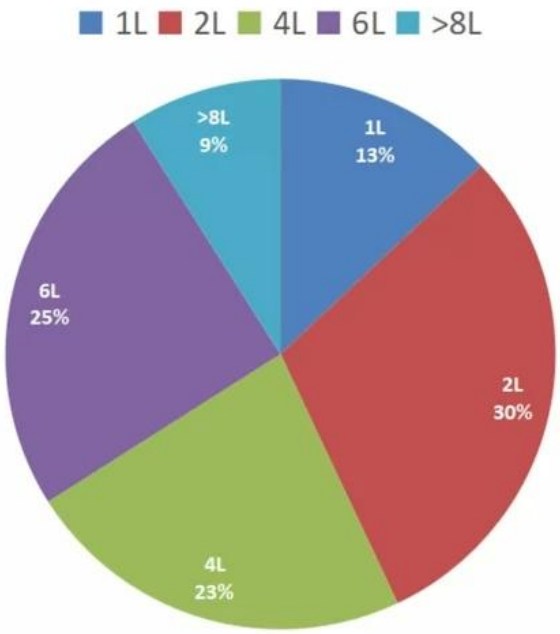
MAKE YOUR IDEA COME TRUE

# Market Share

## Product types




## Product layers



# Production Process

18 years experience in one-stop PCB and PCBA,we can make your idea come true,

## Nuestro equipo

O-LEADING

## Factory PCB

Automatic vacuum press machine

Drilling Machine

Pattern Plating Machine

Scrubbing Machine

Developing Machine

Routing Machine

High-speed flying probe machine

E-test Machine

## Factory SMT

# HOW O-LEADING MAKE A PROJECT FOR YOU

O-LEADING

rdware Dispenser Application Not

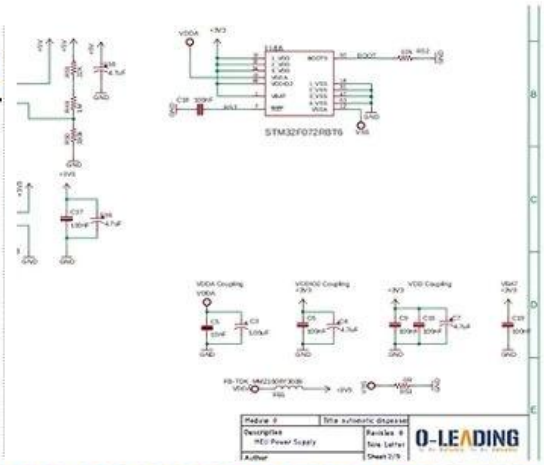
**Automatic Dispenser Application Not**

Voltage Table

| Volt Pin Number | Description |
|---|---|
| VDD | Battery Voltage |
| +3V3 | +3.3V |
| +5V | +5V |
| USB_+5V | USB 5V input |
| +5V/2 | Isolated +5V |
| +12V | 12V DC Drive |

STM32F072 PINOUT table

| Wire Name | Description | DIO | Mode | Note |
|---|---|---|---|---|
| SHTN_TOF | Shutdown Time of flight sensor | | Output | Logic '0' to shutdown |
| I2C_SCL_TOF | I2C communication with time of | | I2C1 SCL | |
| I2C_SDA_TOF | flight sensor | | I2C1 SDA | |
| I2C_SCL_IR | I2C communication with | | I2C2 SCL | |
| I2C_SDA_IR | thermopile sensor | | I2C2 SDA | |
| RATE_LC | Load cell control pins | | Output | |
| DOUT_LC | | | Output | |

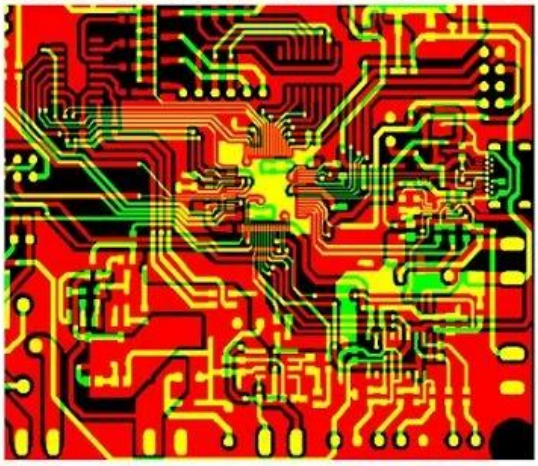


STM32F072RBT6

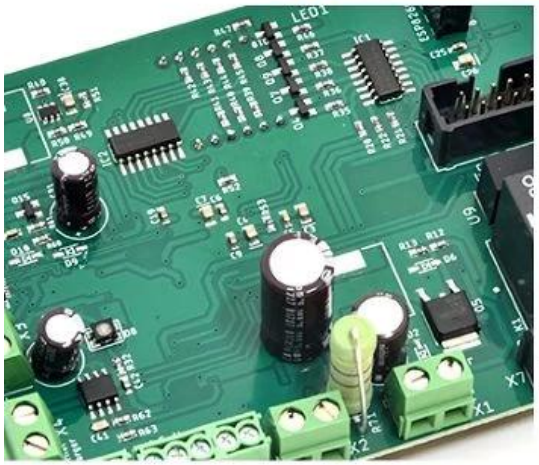
O-LEADING

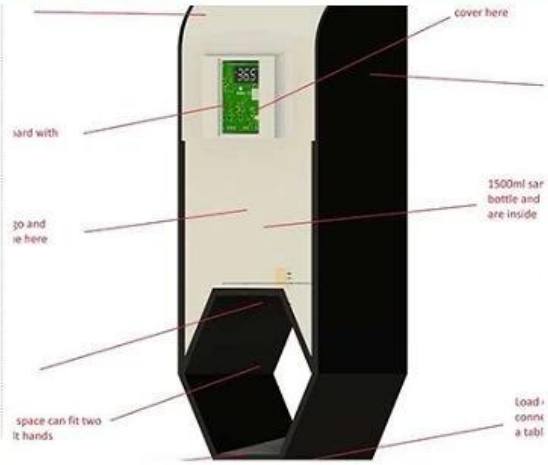
## HARDWARE schematics

## PCB PRODUCTION COMPONNETS SOURCING



| Qty | Value | Device | Parts | Description |
|---|---|---|---|---|
| 4 | AK500/2 | AK500/2 | X1, X2, | CONNECTOR |
| 1 | AK500/3 | AK500/3 | X7 | CONNECTOR |
| 1 | 1241148 | MA04-2 | SV2 | |
| 1 | PPPC04 | MA04-2 | SV1 | 8 POS , 4*2 FEMALE PIN HEADE |
| 1 | ML10 | ML10 | SV4 | HARTING |
| 1 | 8MHZ | XTALL CSTCE8M | X5 | CSTCE8M00G52-R0 RESONATOR |
| 1 | 0R | R-0603 | R53 | Thick Film Resistors - SMD 0603 |
| 2 | 10R | R-0603 | R12, R5 | Thick Film Resistors - SMD 0603 |
| 8 | 100R | R-0603 | R1, R2, | Thick Film Resistors - SMD 0603 |
| 1 | 270R | R-0805 | R15 | Thick Film Resistors - SMD 0605 |
| 1 | 330R | R-0603 | R11 | Thick Film Resistors - SMD 0603 |
| 9 | 680R | R-0603 | R20, R3 | Thick Film Resistors - SMD 0603 |
| 17 | 1k | R-0603 | R9, R10 | Thick Film Resistors - SMD 0603 |
| 2 | 4.7k | R-0603 | R17, R6 | Thick Film Resistors - SMD 0603 |
| 2 | 5.1k | R-0603 | R18, R1 | Thick Film Resistors - SMD 0603 |
| 9 | 10k | R-0603 | R16, R3 | Thick Film Resistors - SMD 0603 |






## PCB Assembly MECHANICAL DESIGN

## O-LEADING CUSTOMER

### To be RELIABLE

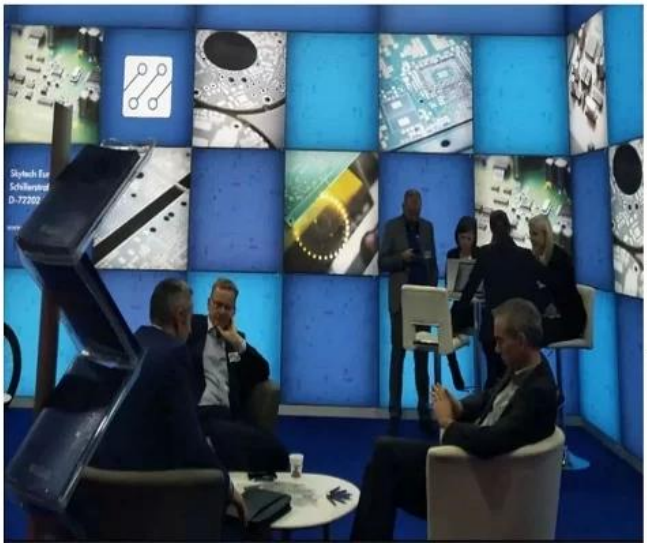
Quality first ,

Customer supreme ,

Scientifically management ,

Striving for famous brand

# THE CUSTOMER IS KING



### To be VALUABLE

Science and technology keeps head ,

Put people first,

Be precise and practical,

contribute sincerely

Skyworth 创维

HOT 和而泰
H&T INTELLIGENT CONTROL

dongweikeji
东威科技

美的 Midea

STAR-NET
星网锐捷

FORYOU
ADAYO
华阳集团

EDIFIER®

Cultraview 金锐显

3nod三诺

T&W

TCL

AcBel
康舒科技
ACBEL POLYTECH INC.

Honeywell

Schneider
Electric

ZTE中兴

EMERSON.

BYD

PHILIPS

TE
connectivity

VIDEOTON

# O-LEADING CUSTOMER REVIEW

## CUSTOMER VOICE IS EXTREMELY IMPORTANT TO US

订单编号: 49335463501024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

**High quality usb power pcb , pcba manufacturer**

Fancy has done an exllent job, whenever we write, she answered us within 1 second, O-leading is very perfe ct with fast delivery, fast logistics, the most important thing is good quality, good packaging, thank you!

回复该评论

**oem customized rohs pcb drawing schematic s...**

We received the boards, the quality is very good,the price is very reasonable, Fancy is very nice & smart & e xperienced, the logistics is super fast, I will come to see more in the future.

回复该评论

订单编号: 49298271001024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

**High TG180 FR-4 Circuit HDI PCB 94V0 Board ...**

perfect product,perfect PCB supplier!

回复该评论

**oem customized rohs pcb drawing schematic s...**

Very good and professional PCB product as usual!

回复该评论

**Strip LED Aluminum FR-4 lighting PCB board 9...**

High quality, fast delivery, good service, competitve price, lucky and happy to purchase from O-leading!

回复该评论

订单编号: 49322411001024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

**High TG180 FR-4 Circuit HDI PCB 94V0 Board ...**

This is a very difficult PCB design, but we are lucky to find O-leading to support the PCB for us,very good to p PCB supplier!

**universal FR4 Multilayer PCB washing machine...**

Fancy gives us very excellent service, very professional and experienced, O-leading is the best one of our su ppliers, very happy to work with them

订单编号: 49024962001024670

United States

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

**High quality Keyboard pcb & pcba Factory SMT...**

Top quality,it's the right choice to choose O-leading to make the PCB & PCBA

回复该评论

订单编号: 40938622501024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

**Professional Printed Circuit Board Manufactur...**

Very high quality PCB products, O-leading is the best PCB supplier that we have ever worked with,

订单编号: 44068794501024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

**High TG180 FR-4 Circuit HDI PCB 94V0 Board ...**

We bought two batches, one by DHL the other one by air, good quality and fast delivery!

## LISTEN TO CUSTOMER VOICE

订单编号: 40903347501024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

**Strip LED Aluminum FR-4 lighting PCB board 9...**

Very fast delivery! Fantastic, good job!!!

**Professional Printed Circuit Board Manufactur...**

Very happy to great support from O-leading,they are not only professional on the PCB, but also provide goo d PCBA products, very good supplier!!!

**hot sale rigid-flexible PCB with 0.2mm BGA an...**

very professional supplier

**High Quality custom FPCB/Flex PCB/FPC/Flexi...**

Good product

**OEM ODM PCBA Bluetooth Wireless Marking G...**

high soldering quality

**Electronic parts haptic pcba Circuit Board asse...**

Very Good product

订单编号: 36919647001024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

**AML-S802 Quad-core Android embedded boar...**

Good products

**Fast delivery low cost pcb fabrication O-leadin...**

Good supplier

**Lidar IR Sensor board pcba(H08R6x)**

perfect product

**Customized PCBA design PCB design**

perfect

**Audio Speaker and Headphone Jack (H07R3x)**

High quality, good

订单编号: 37378603001024670

供应商服务: 非常满意 (5 stars) 按时发货: 非常满意 (5 stars)

**Raspberry pi 0 Zero Raspberry Pi Zero Pi W ver...**

Fantastic products!!

**double layer pcb with red S/M and LF-HASL su...**

Good!

**half hole pcb, half hole pcb module, half hole m...**

Top half hole pcb supplier, very perfect goods

**High Quality custom FPCB/Flex PCB/FPC/Flexi...**

this rigid-flexible pcb quality is perfect!

**Electronic parts haptic pcba Circuit Board asse...**

Very satisfied with O-leading products and quality,especially their on-time delivery, fantastic!

**Be kind to your client, because he has many choices, but he chooses you instead.**

# Certificaciones

CICC INSPECTION CERTIFICATION

CICC CERTIFICATION
嘉泰认证

QUALITY MANAGEMENT SYSTEM CERTIFICATE

Certificate No: 18118Q10347R0S

We hereby certify that

O-LEADING SUPPLY CHAIN(HK) CO.,LIMITED

Credit No: 61691591-000-07-18-7

Registration Add: FLAT/RM 1205 12/F TAI SANG BANK BUILDING 130-132 DES VOEUS ROAD CENTRAL HK

Business Add: 1313, Floor 13, Fortune Building, Danshui Town, Huiyang District, Huizhou, Guangdong, China

Has implemented and maintains a **Quality Management System**

Which fulfils the requirements of the following standards

GB/T19001-2016 idt ISO9001:2015

**Scope of certification**

Sales of printed circuit boards

Initial Issuance period: February 27, 2018

Renewal date: April 22, 2019

This certificate is valid during: April 22, 2019 ~ February 26, 2021

This certificate is invalid without CICC qualified label in the following period

| First supervision and audit | | Second supervision and audit | Qualified mark |
|---|---|---|---|

CICC IAF CNAS

CICC INSPECTION CERTIFICATION

CICC CERTIFICATION
嘉泰认证

质量管理体系认证证书

证书号：18118Q10347R0S

兹证明

诚领供应链（香港）有限公司

统一社会信用代码：61691591-000-07-18-7

注册地址：香港中環德輔道中 130-132 號大生銀行大廈 1205 室

经营地址：广东惠州惠阳淡水南亨西路财富大厦 13 楼 1313

建立的质量管理体系符合

GB/T19001-2016 idt ISO9001:2015 质量标准适用条款的要求

认证范围

印刷线路板的销售

初次获证日期：2018 年 02 月 27 日

换 证 日 期 ：2019 年 04 月 22 日

证 书 有 效 期：自 2019 年 04 月 22 日至 2021 年 02 月 26 日

在下列期间内，未经 CICC 贴防伪标贴，本证书无效

| 第一次监审 | | 第二次监审 | 贴标处 |
|---|---|---|---|

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本证书信息可在国家认监委网站：www.cnca.gov.cn及CICC网站www.cicc-cqc.com查询。

CICC IAF CNAS

O-LEADING SUPPLY CHAIN (HK) CO.,LIMITED

1313,FLOOR 13, FORTUNE BUILDING, DANSHUI TOWN, HUIYANG DISTRICT, HUIZHOU, GUANGDONG, CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : OSP

| | |
|---|---|
| SGS Job No. : | RP19-005089 - SZ |
| Date of Sample Received : | 22 Mar 2019 |
| Testing Period : | 22 Mar 2019 - 30 Mar 2019 |
| Test Requested : | Selected test(s) as requested by client. |
| Test Method : | Please refer to next page(s). |
| Test Results : | Please refer to next page(s). |
| Conclusion : | Based on the performed tests on submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU. |

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Tina Fan
Approved Signatory

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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
SGS-CSTC Standards Technical Services Co., Ltd.
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SGS Bldg, No.2, Jingshan Industrial Park, No.498, Jihua Road, Bantian, Longgang District, Shenzhen, China 518129 t (86-755) 25328888 f (86-755) 83106190 www.sgsgroup.com.cn
中国·深圳·龙岗区坂田吉华路430号江灏工业园4栋SGS大楼 邮编: 518129 t (86-755) 25328888 f (86-755) 83106190 e sgs.china@sgs.com
Member of the SGS Group (SGS SA)



Test Results :

Test Part Description :

| Specimen No. | SGS Sample ID | Description |
|---|---|---|
| SN1 | SZX19-005304.001 | Green"PCB" |

Remarks :

(1) 1 mg/kg = 1 ppm = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected ( < MDL )
(4) "-" = Not Regulated

**RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU**

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC62321-5:2013, IEC62321-7-2:2017, IEC 62321-6:2015 and IEC62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

| Test Item(s) | Limit | Unit | MDL | 001 |
|---|---|---|---|---|
| Cadmium (Cd) | 100 | mg/kg | 2 | ND |
| Lead (Pb) | 1,000 | mg/kg | 2 | 8 |
| Mercury (Hg) | 1,000 | mg/kg | 2 | ND |
| Hexavalent Chromium (Cr(VI)) | 1,000 | mg/kg | 8 | ND |
| Sum of PBBs | 1,000 | mg/kg | - | ND |
| Monobromobiphenyl | - | mg/kg | 5 | ND |
| Dibromobiphenyl | - | mg/kg | 5 | ND |
| Tribromobiphenyl | - | mg/kg | 5 | ND |
| Tetrabromobiphenyl | - | mg/kg | 5 | ND |
| Pentabromobiphenyl | - | mg/kg | 5 | ND |
| Hexabromobiphenyl | - | mg/kg | 5 | ND |
| Heptabromobiphenyl | - | mg/kg | 5 | ND |
| Octabromobiphenyl | - | mg/kg | 5 | ND |
| Nonabromobiphenyl | - | mg/kg | 5 | ND |
| Decabromobiphenyl | - | mg/kg | 5 | ND |
| Sum of PBDEs | 1,000 | mg/kg | - | ND |
| Monobromodiphenyl ether | - | mg/kg | 5 | ND |
| Dibromodiphenyl ether | - | mg/kg | 5 | ND |
| Tribromodiphenyl ether | - | mg/kg | 5 | ND |
| Tetrabromodiphenyl ether | - | mg/kg | 5 | ND |
| Pentabromodiphenyl ether | - | mg/kg | 5 | ND |

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UL Product iQ™

# ZPMV2.E490354 - WIRING, PRINTED - COMPONENT

## Wiring, Printed - Component

See General Information for Wiring, Printed - Component

**O-LEADING SUPPLY CHAIN (HK) CO LTD**
ROOM 1205, 12/F
TAI SANG BANK BLDG
130-132 DES VOEUS ROAD
CENTRAL, HONG KONG

E490354

| Type | Cond Width Min mm(in) | Min Edge mm(in) | Cond Thk mic(mil) | SS/ DS/ DSO | Max Area Diam mm(in) | Solder Limits C | sec | Max Oper Temp C | Flame Class | Meets UL796 DSR | CTI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Multilayer (mass laminate) printed wiring boards.** | | | | | | | | | | | |
| **O-LEADING-401** | 0.1 (0.004) | 0.3 (0.012) | 34 (1.34) | DS | 12.7 (0.5) | 260 | 10 | 130 | V-0 | - | - |
| **O-LEADING-407** | 0.08 (0.003) | 0.2 (0.008) | 17 (0.67) | DS | 9.7 (0.4) | 260 | 10 | 130 | V-0 | All | - |
| **Multilayer printed wiring boards.** | | | | | | | | | | | |
| **O-LEADING-408** | 0.125 (0.005) | 0.125 (0.005) | 12 (0.47) Int:136 | DS | 50.8 (2.0) | 280 | 20 | 130 | V-0 | All | * |
| **Single layer printed wiring boards.** | | | | | | | | | | | |
| **O-LEADING-002** | 0.38 (0.015) | 1.14 (0.045) | 34 (1.34) | SS | 19.1 (0.8) | 260 | 10 | 105 | V-0 | All | - |
| **O-LEADING-003** | 0.38 (0.015) | 1.14 (0.045) | 34 (1.34) | SS | 19.1 (0.8) | 260 | 10 | 130 | V-0 | ▲ | - |
| **O-LEADING-033** | 0.15 (0.006) | 0.3 (0.012) | 34 (1.34) | SS | 25.4 (1.0) | 260 | 10 | 120 | V-0 | All | - |
| **O-LEADING-205** | 0.1 (0.004) | 0.3 (0.012) | 34 (1.34) | DS | 69.6 (2.7) | 260 | 10 | 130 | V-0 | All | - |
| **O-LEADING-206** | 0.15 (0.006) | 0.33 (0.013) | 17 (0.67) | DS | 69.6 (2.7) | 260 | 10 | 130 | V-0 | All | - |
| **O-LEADING-D01** | 0.14 (0.006) | 0.15 (0.006) | 33 (1.30) | DS | 25.4 (1.0) | 260 | 10 | 130 | V-0 | All | * |
| **O-LEADING-S01** | 0.25 (0.010) | 0.25 (0.010) | 17 (0.67) | SS | 25.4 (1.0) | 260 | 4 | 130 | V-0 | All | * |

WIRING, PRINTED - COMPONENT | UL Product iQ

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **O-LEADING-S02** | 0.2 (0.008) | 0.2 (0.008) | 17 (0.67) | SS | 25.4 (1.0) | 260 | 4 | 130 | HB | ▲ | * |
| **O-LEADING-S03** | 0.25 (0.010) | 0.25 (0.010) | 34 (1.34) | SS | 25.4 (1.0) | 260 | 4 | 130 | V-0 | All | * |

* - CTI marking is optional and may be marked on the printed wiring board.

Marking: Company name or file number and type designation. May be followed by a suffix to denote factory identification or burning test classification.

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# Capacidad de procesamiento

| Capacidades de producción de PCB | |
|---|---|
| Recuento de capas | 1Layer-32Layer |
| Espesor de cobre terminado | 1 / 3oz-12oz |
| Mínimo ancho de línea / espaciado interno | 3,0 mil / 3,0 mil |
| Ancho de línea mínimo / espaciado externo | 4.0 mil / 4.0 mil |
| Relación de aspecto máxima | 10: 1 |
| Espesor del tablero | 0,2 mm a 5,0 mm |
| Tamaño máximo del panel (pulgadas) | 635 * 1500 mm |
| Tamaño mínimo del orificio perforado | 4 mil |
| Tolerancia de orificio revestido | +/- 3 mil |
| Vias Blind / Enterradas (Tipos AII) | SI |
| Vía relleno (conductivo, no conductivo) | SI |
| Material de base | FR-4, FR-4 de alta Tg. Material libre de halógenos, Rogers, Base de aluminio,Poliamida, cobre pesado |
| Acabados superficiales | HASL, OSP, ENIG, HAL-LF, plata de inmersión,Estaño de inmersión, dedos de oro, tinta de carbón |

| Capacidades de producción SMT | |
|---|---|
| Material de PCB | FR-4, CEM-1, CEM-3, tablero a base de aluminio, FPC |
| Tamaño máximo de PCB | 510x1500mm |
| Tamaño mínimo de PCB | 50x50mm |
| Espesor de PCB | 0,5 mm a 4,5 mm |
| Espesor del tablero | 0,5-4 mm |
| Tamaño mínimo de los componentes | 0201 |
| Componente de tamaño de chip estándar | 0603 y mayor |
| Altura máxima del componente | 15 mm |
| Paso mínimo de plomo | 0,3 mm |
| Paso mínimo de bola BGA | 0,4 mm |
| Precisión de colocación | +/- 0,03 mm |

# Empaquetado y entrega

# Shipping service

DHL WORLDWIDE EXPRESS TNT FedEx Express UPS

| Quick Turn Lead Time | | |
|---|---|---|
| Layer Count: | Lead Tim | Special Requirement |
| 1L/2L | 2-3days | 24 Hours,48 Hours |
| 4L | 3-4days | 48 Hours |
| 6L | 4-5days | 72 Hours |
| 8L | 5-6days | NA |
| 10L | 6-7days | NA |
| 12L | 7-8days | NA |
| 14L | 8-9days | NA |

| Standard Lead Time | | |
|---|---|---|
| Layer Count: | Sample Lead Time | Volume order lead time |
| 2L | 4 days | 10 days |
| 4L | 5 days | 11 days |
| 6L | 6 days | 12 days |
| 8L | 8 days | 14 days |
| 10L | 10 days | 16 days |
| 12L | 12 days | 18 days |
| 14L | 14 days | 20 days |
| 16-32L | 18 days | 24 days |

# Preguntas más frecuentes

**1. ¿Cómo asegura O-Leading la calidad? Nuestro alto estándar de calidad se logra con lo siguiente.**

1.1 El proceso está estrictamente controlado bajo las normas ISO 9001: 2008.
1.2 Uso extensivo de software en la gestión del proceso de producción
1.3 Equipos y herramientas de prueba de última generación. P.ej. Flying Probe, inspección de rayos X, AOI (inspector óptico automatizado) e ICT (pruebas en circuito).
1.4 Equipo de aseguramiento de la calidad dedicado con proceso de análisis de casos de falla
1.5 Formación y educación continua del personal

**2. ¿Cómo mantiene O-Leading su precio competitivo?**
Durante la última década, los precios de muchas materias primas (por ejemplo, cobre, productos químicos) se duplicaron, triplicaron o cuadruplicaron; La moneda china RMB se había apreciado un 31% con respecto al dólar estadounidense; Y nuestro costo laboral también aumentó significativamente.
Sin embargo, O-Leading ha mantenido nuestros precios estables. Esto se debe enteramente a nuestras innovaciones para reducir costos, evitar desperdicios y mejorar la eficiencia. Nuestros precios son muy competitivos en la industria al mismo nivel de calidad.
Creemos en una asociación de beneficio mutuo con nuestros clientes. Nuestra asociación será de beneficio

mutuo si podemos ofrecerle un coste y una calidad superiores.

**3. ¿Qué tipo de tableros puede procesar O-Leading?**
Placas comunes FR4, High-TG y libres de halógenos, Rogers, Arlon, Telfon, placas a base de aluminio / cobre, PI, etc.

**4. ¿Qué datos se necesitan para la producción de PCB y PCBA?**
4.1 Lista de materiales (BOM) con designadores de referencia: descripción del componente, nombre del fabricante y número de pieza.
4.2 Archivos Gerber de PCB.
4.3 Plano de fabricación de PCB y plano de montaje de PCBA.
4.4 Procedimientos de prueba.
4.5 Cualquier restricción mecánica, como los requisitos de altura de montaje.

**5. ¿Cuál es el flujo de proceso típico para PCB multicapa?**
Corte de material → Película seca interna → Grabado interno → AOI interno → Multi-bond → Apilado de capas Presionando → Perforación → PTH → Revestimiento de panel → Película seca externa → Revestimiento de patrón → Grabado externo → AOI externo → Máscara de soldadura → Marca de componente → Acabado de superficie → Enrutamiento → E / T → Inspección visual.

**6. ¿Cuáles son los equipos clave para la fabricación de HDI?**
La lista de equipos clave es la siguiente: perforadora láser, máquina de prensado, línea VCP, máquina de exposición automática, LDI, etc. Los equipos que tenemos son los mejores de la industria, las perforadoras láser son de Mitsubishi e Hitachi, las máquinas LDI son de Screen (Japón), las máquinas de exposición automática también son de Hitachi, todas ellas hacen que podamos cumplir con los requisitos técnicos del cliente.

**7. ¿Cuántos tipos de acabado superficial O-lead puede hacer?**
O-the leader tiene la serie completa de acabados superficiales, tales como: ENIG, OSP, LF-HASL, chapado en oro (suave / duro), plata de inmersión, estaño, chapado en plata, estañado por inmersión, tinta de carbón y etc. OSP, ENIG, OSP + ENIG de uso común en el HDI, generalmente recomendamos que utilice un cliente o OSP OSP + ENIG si el tamaño de BGA PAD es inferior a 0,3 mm.

**8. ¿Cuál es su capacidad para FPC? ¿O-Leading también puede proporcionar servicio SMT?**
O-Leading puede fabricar FPC de una sola capa a 8 capas, el tamaño del panel de trabajo puede ser tan grande como 2000 mm * 240 mm, encuentre los detalles en la página "Capacidad de Flexión". También proporcionamos un servicio integral de SMT al cliente.

**9. ¿Cuáles son los principales factores que afectarán el precio de los PCB?**
Material;
Acabado de superficie;
Dificultad tecnológica;
Diferentes criterios de calidad;
Características de PCB;
Términos de pago;
Diferentes países de fabricación.

**10. ¿Cuál es la definición de PCB, PWB y FPC y cuál es la diferencia?**
PCB es la abreviatura de placa de circuito impreso;
PWB es la abreviatura de Printed Wire Board, con el mismo significado que Printed Circuit Board;
FPC es la abreviatura de Tablero impreso flexible.

**11. ¿Qué factores deben tenerse en cuenta al elegir el material para una placa PCB?**

Los siguientes factores deben considerarse cuando elegimos el material para PCB:
El valor de Tg del material debe ser mayor que la temperatura de operación;
El material de bajo CTE tiene un buen rendimiento de estabilidad térmica;
Buen rendimiento de resistencia térmica: normalmente se requiere que los PCB resistan 250 ℃ durante al menos 50 segundos.
Buena planitud; Teniendo en cuenta las propiedades eléctricas, se utiliza material de baja pérdida / alta permitividad en PCB de alta frecuencia;
Sustrato de fibra de vidrio de poliimida utilizado para PCB flexible; El núcleo de metal se utiliza cuando el producto tiene un requisito estricto de calor.
disipación.

**12. ¿Cuáles son las ventajas de la placa de circuito impreso rígido-flexible de O-leading?**
El PCB rígido-flexible de O-Leader tiene los caracteres de FPC y PCB, por lo que puede usarse en algunos productos especiales. Una parte es flexible mientras que la otra parte rígida, puede ayudar a ahorrar espacio interior del producto, reducir el volumen del producto y mejorar el rendimiento.

**13. ¿Cómo se hace el cálculo de la impedancia?**
El sistema de control de impedancia se realiza utilizando algunos cupones de prueba, el equipo SI6000 soft y el CITS 500s de POLAR INSTRUMENTS. El equipo mide la impedancia en un cupón de configuración de pista representativa del cual el cliente nos ha dado un valor y tolerancia determinados.