

Welcome to O-leading

O-Leading strives to be your one stop solution partner in EMS supply chain, including PCB design , PCB fabrication and PCB assembly (PCBA).We provide some of the most advanced PCB technology, including HDI PCBs,multilayer PCBs, Rigid-Flexible PCBs.We can support from quick turn prototype to medium & mass Production.

In general, our global customers are very impressed with our services:Rapid response, competitive price and quality commitment.Providing more valuable technical service and overall solution is the way O-leading forward.

Looking to the future, O-leading will concentrate on the innovation and development of electronics manufacturing technology as always, and make persistent efforts on PCB & PCBA one-stop service to provide first-class services and create more value for our customers.

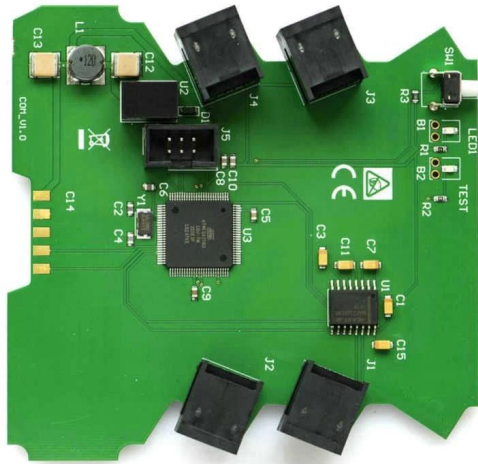
PLEASE CLICK THESE FOR MORE INFORMATION [PCB products are used in Industrial Electronic Products](#)

Product Description

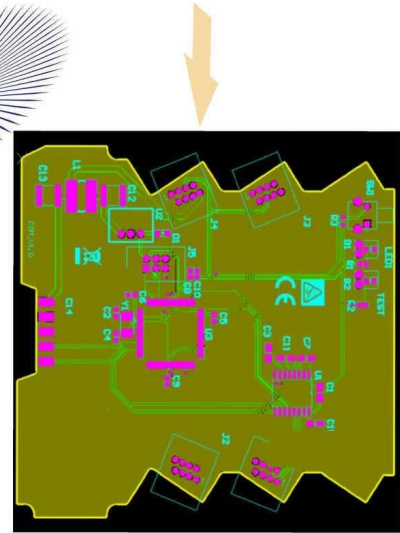
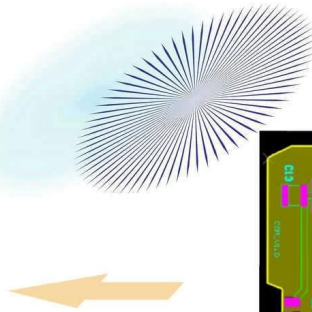
BOM

Manufacturer	Manufacturer Part Number	Designator (required)	Qty (required)	Description (required)	Case
Panasonic	ERJ-3GEYJ331V	R2	1	Thick Film Resistors 0603 330ohms 5% AEC-Q200	0603
Panasonic	ERJ-6GEYJ103V	R3	1	Thick Film Resistors 0805 10Kohms 5% AEC-Q200	0805
Vishay	CRCW06031K00FKEAC	R1	1	Thick Film Resistors - SMD 1/10Watt 1Kohms 1% Commercial Use	0603
ON Semiconductor	SZMMSZ4690T3G	D1	1	5.6 V Low Current Zener Diode Voltage Regulator	SOD-123-2
TDK	CGA9N3X7S2A106K230KB	C12,C13	2	10µF ±10% 100V Ceramic Capacitor X7S 2220 (5750 Metric)	2220
KEMET	T491A105K016AT7280	C1, C3, C7, C11, C15	5	1µF Molded Tantalum Capacitors 16V 1206 (3216 Metric) 100ohm	1206
KEMET	C0805J104K5RACAUTO	C5, C8, C9, C10	4	Multilayer Ceramic Capacitors MLCC - SMD/SMT 50volts 0.1uF 10% X7R AUTO	0805
KEMET	C0805C220J4GACTU	C2,C4,C6	3	Multilayer Ceramic Capacitors MLCC - SMD/SMT 16V 22pF COG 0805 0.05	0805

O-LEADING
FOR THE MANUFACTURE OF PCB



PCBA



PCB

O-LEADING
To Be Reliable. To Be Valuable.

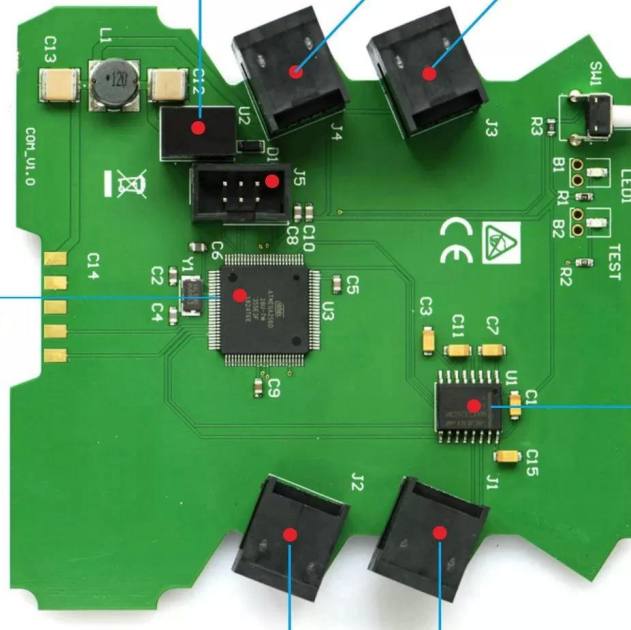
**Recom Switching
Regulator,
8 42V Input,
5V Output, 1A**

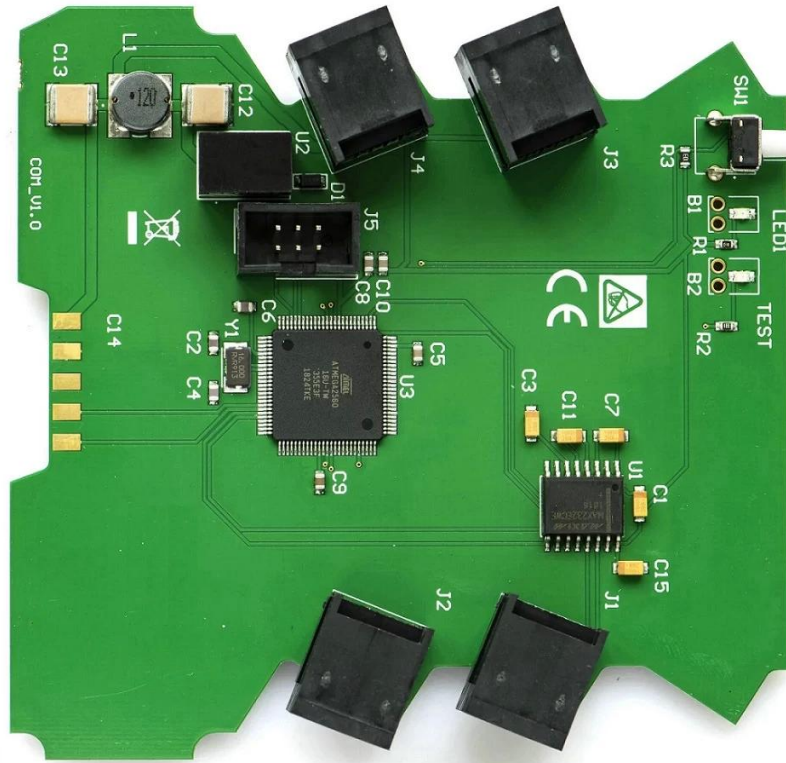
**Jack Modular Connector 8p8c
(RJ45, Ethernet) 90° Angle
(Right) Unshielded**

**Atmega
2560-16AU**

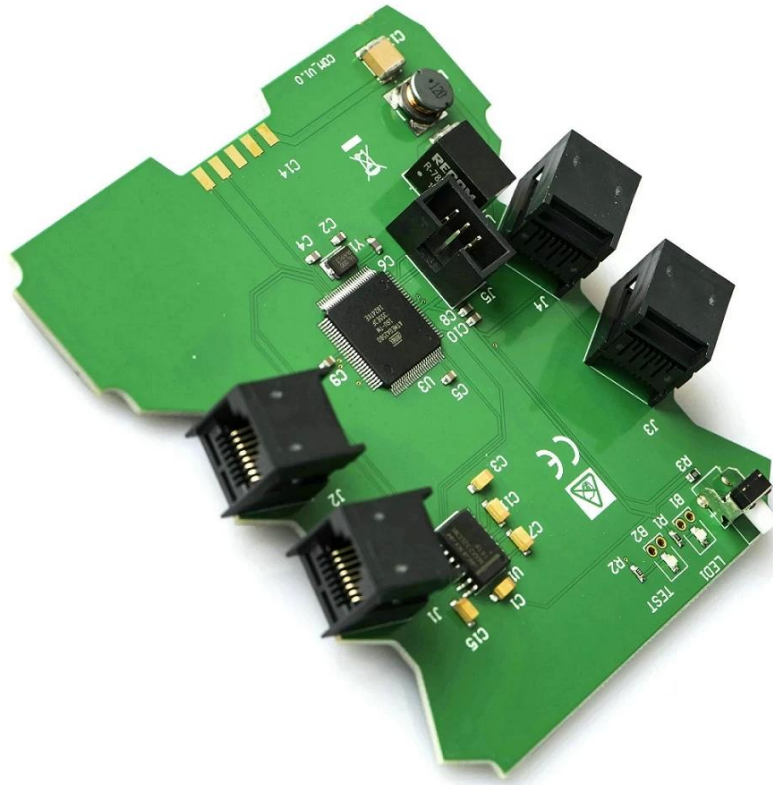
**IC TRANSCEIVER
FULL 2/2 16SOIC**

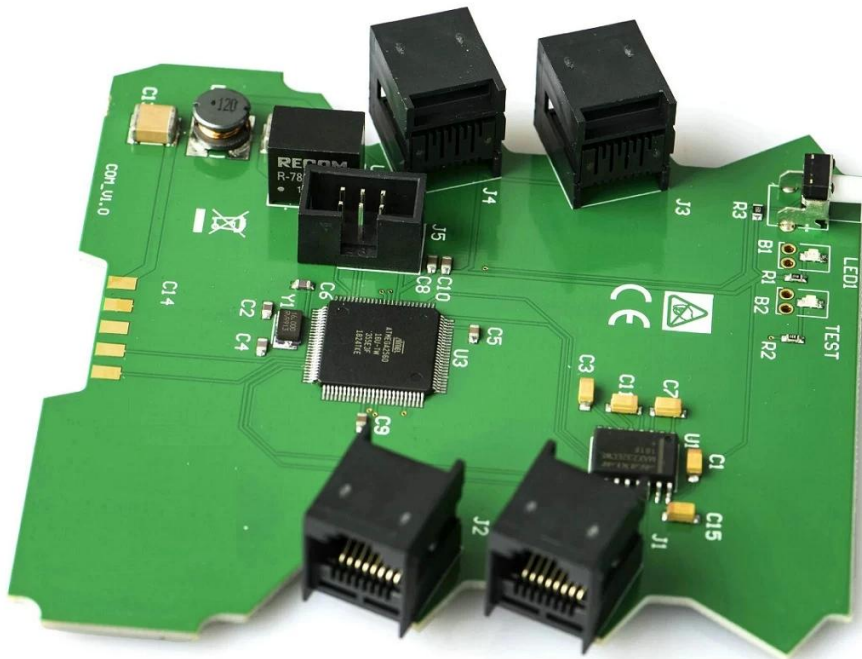
**Jack Modular Connector 8p8c
(RJ45, Ethernet) 90° Angle
(Right) Unshielded**











www.o-leading.com



Our Team



Golden Fingers PCB manufacturer china

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



Certifications

CICC INSPECTION CERTIFICATION



嘉泰认证

QUALITY MANAGEMENT SYSTEM CERTIFICATE

Certificate No: 18118Q10347R05

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 VODEUS ROAD CENTRAL HK

Business Add: 1213, Floor 13, Fortune Building, Danshui Town, Huiyang District, Huizhou, Guangdong, China

Has implemented and maintains a **Quality Management System** Which fulfills 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
-----------------------------	------------------------------	----------------

The certification registration number does not include those production stages which fail to be covered by the relevant effective administrative procedures and qualification procedures stipulated by the state. The effectiveness of this certificate shall be restricted to actual certification scope of CICC. The certificate shall be valid when used together with the qualified mark issued.

The initial issuance of this certification can be searched on the portal of CICC www.cicc.com.cn by the code of inquiry www.cicc.com.cn.






CICC INSPECTION CERTIFICATION



嘉泰认证

质量管理体系认证证书

证书号: 18118Q10347R05

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
在下列期限内, 未经CICC黏贴合格标贴, 本证书无效

第一次初审	第二次复审	黏贴处
-------	-------	-----

本证书认证范围不包括未取得有效的国家规定的行政许可、资质许可的产品/服务范围; 本证书通过CICC定期监督审核保持, 与年度《保持认证通知书》共同方为有效; 本证书信息可在国家认监委网站: www.cnca.gov.cn及CICC网站www.cicc.com.cn。








Test Report

No. SZXEC1900530401 Date: 30 Mar 2019 Page 1 of 6

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
Tina Fan
Approved Signatory



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms-and-conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/terms-and-conditions/ElectronicDocuments.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that unless he/she expressly agrees to the Company's liability at the time of its intended use, the limits of the Company's liability are restricted to the extent of the Company's liability under the applicable law. This document does not constitute an offer of any financial product or service and the Company is not responsible for any loss or damage arising from the use of this document. The appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this report refer only to the samples tested.

Member of the SGS Group (SGS SA)



Test Report

No. SZXEC1900530401 Date: 30 Mar 2019 Page 2 of 6

Test Results :

Test Part Description :

Specimen No. : SN1
SGS Sample ID : SZX19-005304.001
Description : 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, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

Table with 5 columns: Test Item(s), Limit, Unit, MDL, and 0/1. Lists various substances like Cadmium, Lead, Mercury, Hexavalent Chromium, and various brominated biphenyls with their respective limits and detection results.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms-and-conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/terms-and-conditions/ElectronicDocuments.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that unless he/she expressly agrees to the Company's liability at the time of its intended use, the limits of the Company's liability are restricted to the extent of the Company's liability under the applicable law. This document does not constitute an offer of any financial product or service and the Company is not responsible for any loss or damage arising from the use of this document. The appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this report refer only to the samples tested.

Member of the SGS Group (SGS SA)



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			SS/ DS/ DSO	Max	Max			Meets UL796	C T	
	Min	Min	Cond		Area	Solder	Oper	Flame			
	mm(in)	Edge mm(in)	Thk mic(mil)		Diam mm(in)	Limits C	Temp sec	Class C	DSR	I	
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.

并不是所有出现在本数据库中的公司名称和产品都满足了UL跟踪检验服务的要求。只有带有UL标志的产品，才应该被视为经过UL认证，并满足UL跟踪检验服务的要求。注意查看产品上的标志。

UL 允许在线认证目录中所含材料的复制遵循以下条件：1.指南信息、装配、构造、设计、系统和/或认证（文件）必须在不篡改任何数据（或图纸）的情况下完整且无误导性地呈现。2.经UL允许从在线认证目录转载“声明必须出现在所提取材料的邻近位置。此外，转载材料必须包含以下格式的版权声明：“© 2019 UL LLC”

Process Capability

PCB Production Capabilities		SMT Production Capabilities	
Layer Count	1Layer-32Layer	PCB Material	FR-4,CEM-1,CEM-3,Aluminum-based board
Finished copper thickness	1/3oz-12oz		
Min Line width/spacing internal	3.0mil/3.0mil	Max PCB size	510x460mm
Min Line width/spacing external	4.0mil/4.0mil	Min PCB size	50x50mm
Max Aspect Ratio	10:1	PCB Thickness	0.5mm-4.5mm
Board thickness	0.2mm-5.0mm	Board thickness	0.5-4mm
Max Panel size(inches)	635*1500mm	Min Components size	0201
Minimum Drilled Hole Size	4mil	Standard chip size component	0603 and larger
Plated Hole Tolerance	+/-3mil	Component max height	15mm
Blind/Buried Vias (All Types)	YES	Min lead pitch	0.3mm
Via Fill(Conductive,Non-Conductive)	YES	Min BGA ball pitch	0.4mm
Base Material	FR-4,FR-4high Tg.Halogen free material,Rogers,Aluminium base,Polyimide,Heavy Copper	Placement precision	+/-0.03mm
Surface finishes	HASL,OSP,ENIG,HAL-LF,Immersion silver,Immersion Tin,Gold fingers,Carbon ink		

Packaging & Delivery

Shipping service



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

FAQ

1. How do O-Leading ensure quality?

Our high quality standard is achieved with the following.

1.1 The process is strictly controlled under ISO 9001:2008 standards.

1.2 Extensive use of software in managing the production process

1.3 State-of-art testing equipments and tools. E.g. Flying Probe, X-ray Inspection, AOI (Automated Optical Inspector) and ICT (in-circuit testing).

1.4.Dedicated quality assurance team with failure case analysis process

1.5.Continuous staff training and education

2. How do O-Leading keep your price competitive?

Over the last decade, prices of many raw materials (e.g. copper, chemicals) had doubled, tripled or quadrupled; Chinese currency RMB had appreciated 31% over US dollar; And our labor cost also increased significantly.

However, O-Leading have kept our pricing steady. This owns entirely to our innovations in reducing cost, avoiding wastes and improving efficiency. Our prices are very competitive in the industry at the same quality level.

We believe in a win-win partnership with our customers. Our partnership will be mutually beneficial if we can provide you an edgeon cost and quality.

3. What kinds of boards can O-Leading process?

Common FR4, high-TG and halogen-free boards, Rogers, Arlon, Telfon, aluminum/copper-based boards, PI, etc.

4. What data are needed for PCB & PCBA production?

4.1 BOM (Bill of Materials) with reference designators: component description, manufacturer's name and part number.

4.2 PCB Gerber files.

4.3 PCB fabrication drawing and PCBA assembly drawing.

4.4 Test procedures.

4.5 Any mechanical restrictions such as assembly height requirements.

5. What's the typical process flow for multi-layer PCB?

Material cutting → Inner dry film → inner etching → Inner AOI → Multi-bond → Layer stack up Pressing → Drilling → PTH → Panel Plating → Outer Dry Film → Pattern Plating → Outer etching → Outer AOI → Solder Mask → Component Mark → Surface finish → Routing → E/T → Visual Inspection.

6. What's the key equipments for HDI manufacturing?

Key equipment list is as following: Laser drilling machine, Pressing machine, VCP line, Automatic Exposing machine, LDI and etc.

The equipments we have are the best in the industry, laser drilling machines are from Mitsubishi and Hitachi, LDI machines are from Screen(Japan), Automatic Exposing machines are also from Hitachi, all of them make we can meet customer's technical requirements.

7. How many types of surface finish O-lead can do?

O-the leader has the full series of surface finish, such as: ENIG, OSP, LF-HASL, gold plating (soft/hard), immersion silver, Tin, silver plating, immersion tin plating, carbon ink and etc. .. OSP, ENIG, OSP + ENIG commonly used on the HDI, we usually recommend that you use a client or OSP OSP + ENIG if BGA PAD size less than 0.3 mm.

8. What's your capability for FPC? Can O-Leading provide SMT service also?

O-Leading can fabricate FPC from single layer to 8layer, the working panel size can be as large as 2000mm*240mm, please find the details in the page "Flex Capability"

We also provide SMT one stop service to customer.

9. What are the main factors which will affect the price of PCB?

Material;

Surface finish;

Technology difficulty;

Different quality criteria;

PCB characteristics;

Payment terms;

Different manufacturing countries.

10. What's the definition of PCB, PWB and FPC and what's the difference?

PCB is short for Printed Circuit Board;

PWB is short for Printed Wire Board, same meaning as Printed Circuit Board;

FPC is short for Flexible Printed Board.

11. What factors should be considered when choosing the material for a PCB board?

Below factors should be considered when we choose the material for PCB:

The material's Tg value should be greater than the operation temperature;

Low CTE material has good performance of thermal stability;

Good thermal resistance performance: Normally PCBs are required to resist 250°C for at least 50s.
Good flatness; In consideration of the electrical properties, low loss/high permittivity material is used on high frequency PCB; Polyimide glass fiber substrate used for flexible PCB; Metal core is used when the product has strict requirement of heat dissipation.

12. What's the merits of O-leading's rigid-flex PCB?

O-leading's rigid-flex PCB has the characters of both FPC and PCB, so it can be used in some special products. Some part is flexible while the other part rigid, it can help save product's interior space, reduce product volume and improve performance.

13. How to you make the impedance calculation?

The impedance control system is done using some test coupons, the SI6000 soft and the CITS 500s equipment from POLAR INSTRUMENTS.

The equipment measures the impedance on a representative track configuration coupon of which the client has given us a determinate value and tolerance.