



台灣光電暨化合物半導體產業協會  
Taiwan Optoelectronic Semiconductor Industry Association

會員手冊

**Member Handbook**

**2022**

台灣光電暨化合物半導體產業協會

Taiwan Optoelectronic Semiconductor Industry Association (TOSIA)

地址 : 新竹縣竹東鎮中興路4段195號78館205-9室  
Address : Rm. 205-9, Bldg 78., No.195, Sec. 4, Chung Hsing Rd., Chutung, Hsinchu, 310, Taiwan R.O.C.  
電話(TEL) : 03-5918301  
傳真(FAX) : 03-5833986  
信箱(E-mail) : [tosia@itri.org.tw](mailto:tosia@itri.org.tw)  
網址(Website) : <http://www.tosia.org.tw/>

# 目錄 | Contents

台灣光電暨化合物半導體產業協會	TAIWAN OPTOELECTRONIC SEMICONDUCTOR INDUSTRY ASSOCIATION	02
一詮精密工業股份有限公司	I-CHIUN PRECISION INDUSTRY CO., LTD.	04
三得電子股份有限公司	SANDER ELECTRONICS INDUSTRY CO., LTD.	06
千才科技股份有限公司	LIVERAGE TECHNOLOGY INC.	08
工業技術研究院 量測技術發展中心	INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE CALIBRATION AND MEASUREMENT CAPABILITIES	10
工業技術研究院 電子與光電系統研究所	INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE ELECTRONIC AND OPTOELECTRONIC SYSTEM RESEARCH LABORATORIES	12
今台電子股份有限公司	KINGBRIGHT ELECTRONIC CO., LTD.	14
台達電子工業股份有限公司	DELTA ELECTRONICS, INC.	16
台灣凱瑞光學有限公司	TRIOPTICS TAIWAN	18
立碁電子工業股份有限公司	LEGITEK ELECTRONICS CO., LTD.	20
光鼎電子股份有限公司	PARA LIGHT ELECTRONICS CO., LTD.	22
光鎰科技股份有限公司	EPILEDS CO., LTD.	24
光寶科技股份有限公司	LITE-ON TECHNOLOGY CORPORATION	26
宏齊科技股份有限公司	HARVATEK CORPORATION	28
佰鴻工業股份有限公司	BRIGHT LED ELECTRONICS CORP.	30
和欣光通股份有限公司	LRU TECHNOLOGY INC.	32
欣偉科技股份有限公司	SINGWAY TECHNOLOGY	34
長洛國際股份有限公司	CHAIN-LOGIC INTERNATIONAL CORP.	36
香港商先進太平洋科技股份有限 公司台灣分公司	ASM PACIFIC TECHNOLOGY	38
高平磊晶科技股份有限公司	IQE TAIWAN CORPORAAATION	40
惠特科技股份有限公司	FIT TECH, CO., LTD.	42
晶元光電股份有限公司	EPISTAR CORPORATION	44
華興電子工業股份有限公司	LEDTECK ELECTRONICS CORP.	46
閱康科技股份有限公司	MATERIALS ANALYSIS TECHNOLOGY INC.	48
鼎元光電科技股份有限公司	TYNTEK CORPORATION	50
億光電子工業股份有限公司	EVERLIGHT ELECTRONICS CO., LTD.	52
銻創科技股份有限公司	PLAYNITRIDE DISPLAY CO., LTD.	54
德國感測器及量測協會	AMA ASSOCIATION FOR SENSORS AND MEASUREMENT	56



# 台灣光電暨化合物半導體產業協會

## Taiwan Optoelectronic Semiconductor Industry Association



# Taiwan Optoelectronic Semiconductor Industry Association

## 台灣光電暨化合物半導體產業協會

### 公司簡介

台灣光電暨化合物半導體產業協會 (簡稱 TOSIA) 成立於民國九十六年，以匯聚國內光電半導體產業發展共識，促成會員間之策略合作，促進產業繁榮進步為宗旨。這十幾年間台灣已在 LED 產業奠定全球前三大供應鏈的國際地位，近幾年產業逐漸轉型擴展到高頻高壓應用領域。為帶動產業接軌化合物半導體全球市場趨勢，TOSIA 於 2021 年 2 月由「台灣光電半導體產業協會」更名為「台灣光電暨化合物半導體產業協會」，藉以宣示將凝聚產業共識提昇我國光電及化合物半導體技術水準，接軌化合物半導體全球市場的願景。

TOSIA 組織架構如下：



### 會員

TOSIA 會員包含國內光電、半導體、照明、感測領域，以及德國感測器協會，共計 26 家團體會員。在化合物半導體、人工智慧物聯網、智慧城市等議題驅動 LED 產業再度升級轉型，TOSIA 將持續結合國內產官學研力量，共同帶領會員為台灣光電及化合物半導體產業發展而努力。



### 連絡資訊

- ◆ Email : [tosia@itri.org.tw](mailto:tosia@itri.org.tw)
- ◆ 電話 : +886-3-5918301; +886-3-5917466
- ◆ 傳真 : +886-3-5833986

### Company Profile

Taiwan Optoelectronic Semiconductor Industry Association (TOSIA) was founded in March 2007 aims to agglomerate domestic consensus on the development of the optoelectronic and compound semiconductor industry, to promote strategic collaboration among its members, and to advance and bring prosperity to the industry. Meanwhile, it joins efforts with various major associations and industrial organizations, and the Industrial Technology Research Institute to develop an industrial development platform in order to provide effective technical and professional services, and to boost the overall competitive advantages of the optoelectronic and compound semiconductor industry in Taiwan.

Association Organization :



### Member

TOSIA has 26 members, including Optoelectronics、Lighting and Sensor filed in Taiwan. Regarding to issues such as the compound semiconductor、AIoT and Smart City have driven the LED industry to upgrade and transform again, TOSIA will continue combining the efforts of the industry, government, academia and research institutes to help Taiwan optoelectronics and compound semiconductor industry move toward further diversified and limelight new milestone with smart innovation.



### Contact Information

- ◆ Email : [tosia@itri.org.tw](mailto:tosia@itri.org.tw)
- ◆ TEL : +886-3-5918301; +886-3-5917466
- ◆ FAX : +886-3-5833986



# 一詮精密工業股份有限公司

I-CHIUN PRECISION INDUSTRY CO., LTD



# I-CHIUN PRECISION INDUSTRY CO., LTD

一詮精密工業股份有限公司

## 公司簡介

一詮創立於 1977 年，主要產品有光電導線架、微電機、各式小型馬達及 3C 產業的主要部品。近年來，一詮為配合全球產業生產重心轉移到大陸的趨勢，以及就近服務客戶的需求，積極展開在大陸投資設廠的工作，目前已於深圳、昆山、江門設廠，建立了更迅速完善的服務網。

全球員工已達 3000 餘名，以世界性 3C 製造業，全球化前瞻性公司自許。目前一詮光電產業 LED 可見光及不可見光導線架的全球市佔率已經排名世界第一。為了挑戰精度與產能極限，不斷的投入研發，

培植技術能力，開創新產品。更為了開拓國際市場，積極培養人才，禮聘專業經理人建立具有國際觀的經營團隊，奠定永續經營的基礎。

一詮創立至今已經擁有核心智財權超過 50 項以上，分布於手機震動馬達、3C 關鍵部品以及 LED 光電產業導線架等。在無線通訊與電子產業日新月異的今天，企業經營不容絲毫懈怠，一詮集團秉持四十年來創業與立業的精神，繼續朝高科技的領域發展，引進最新技術挑戰未來，以期為客戶與公司創造雙贏的契機。

## Company Profile

I-Chiun was established in 1977 as a manufacturer of optoelectronic lead frames, miniature electrical products, small motors and 3C products. In recent years, I-Chiun shifted its manufacturing base to China and invested in production plants in China to serve customers in the area. I-Chiun successively built plants in Shenzhen, Kunshan, Jiangmen and established a responsive and complete service network.

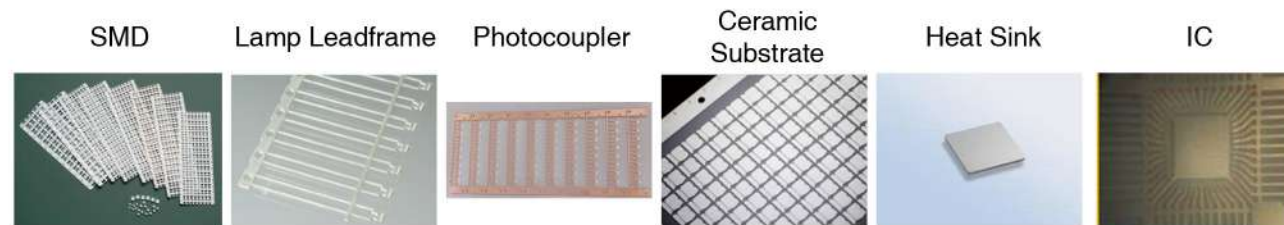
I-Chiun is a global company with over 3,000 employees worldwide that aims to become an advanced world-class 3C manufacturer. Currently, I-Chiun's optoelectronic LED and visible/invisible light lead frames have been ranked number one in terms of global market share. To improve precision and production capacity, I-Chiun has continuously invested in research and development, enhanced its technology and developed new products. As we enter

international markets, we work to cultivate top-quality human resources and recruit professional managers to form a team with an international point of view to build a foundation for sustainable development.

Since its establishment, I-Chiun has become the proud owner of over 50 items of intellectual property in the areas of mobile phone vibration motors, 3C key components, and LED optoelectronic lead frames. In this era when technology for wireless communication and electronics is advancing daily, the operation of our business does not allow us to rest on our laurels. I-Chiun upholds the spirit of sustainable development. In the 40 years since our establishment, I-Chiun has continued to advance in the field of high-technology. I-Chiun aims to assimilate the newest technology and challenge the future to create win-win opportunities for our clients and the company.

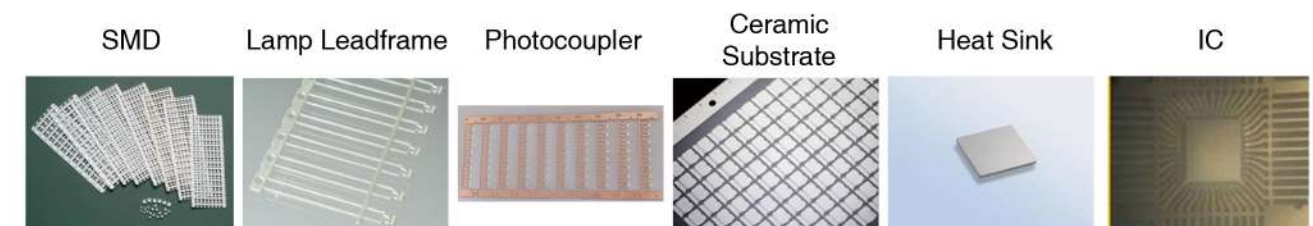
## 主要產品

主要產品



## Products

Main Products



## 連絡資訊

- ◆ 台北營業處：陳志勇 協理
- ◆ 產品企劃：李廷璽 經理
- ◆ 總公司地址：24890 新北市新莊區五工五路 17 號
- ◆ 公司電話：+886-2-22990001
- ◆ 公司傳真：+886-2-22990089
- ◆ 聯絡信箱：webmaster@i-chiun.com.tw

## Contact Information

- ◆ sales representative:Chih Yung Chen
- ◆ Product Supervisor:Ted Lee
- ◆ CompanyAddress:No.17, Wugong 5th Rd, Xinzhuang Dist., New Taipei City 24890, Taiwan R.O.C
- ◆ Company TEL:+886-2-22990001
- ◆ Company FAX:+886-2-22990089
- ◆ Contact Us:mail: webmaster@i-chiun.com.tw



# 三得電子股份有限公司

Sander Electronics Co. Ltd



# Sander Electronics Co. Ltd

三得電子股份有限公司

## 公司簡介

三得電子股份有限公司創立於西元 1989 年，是創辦人黃茂雄先生累積三十餘年 LED 之專業製造經驗的成果。

三得電子本著「永續經營、基業長青」的理念，不斷地培育人才並引進自動化與最新科技的生產設備，在全體員工全心投入的研究、開發與創造之下，以服務導向的理念，與顧客秉持「共存」、「共榮」的夥伴相關，成就了目前的三得電子的經營成績；現今 LED 產品廣泛應用於科技與生活，三得電子以穩定現有市場與顧客為基礎，放眼全球市場，展現對技術實力的信心與擴大經營版圖的企圖心。

三得電子將持續提升 LED 的附加價值與實用性，不斷為客戶創造商機，是穩定中求成長的重要元素。我們將從 LED 原料之配方、各項工序，產品開發到成品一貫作業方式，秉持著「品質創造信譽；信譽創造品質」的信念，提供市場更多元化商品的需求，這不但是三得電子經營的理念與願景，亦是全體員工追求的願景與目標。

目前公司營運據點：

台灣 (台北、台南、宜蘭)、馬來西亞、日本辦公室、美國辦公室，公司的業務版圖將不斷的擴增當中。

## 主要商品 / 服務項目

1. 各式發光二極體 (LED) 包含交通用紅外線產品
2. 室內、戶外看板專用 LED 模組，看板
3. 特殊光源模組開發
4. 車用之 LED 設計
5. LED 照明產品開發設計
6. OEM、ODM 產品服務

## 連絡資訊

- ◆ 電話：02-28951361
- ◆ 傳真：02-28960980
- ◆ Email：jerry@sander.com
- ◆ 地址：112 台北市北投區立功街 153 號 3 樓

## Company Profile

Through the tireless efforts of the founder, Mr. Huang Maoxiong, since 1989, Sander Electronics Co Ltd has now more than 30 years of professional experience in LED manufacturing.

Based on the concept of "sustainable management and long-lasting business", Sander continues to cultivate talents and introduces automation and the latest technology production equipment.

Sander Electronics' business performance today is achieved under the dedicated research, development, and creation of all employees with a service-oriented concept, and also customers who adhere to the principles of "coexistence" and "common prosperity".

Nowadays, LED products are widely used in technology and life. Sander Electronics not only maintains stable relationships, with customers as foundation, but Sander Electronics is also

demonstrating confidence in its technological strength and ambition to expand its business scope in the global market.

Sander Electronics will continue to enhance the added value and practicality of LEDs in its operation and manufacturing methods: from LED raw materials, various processes, product development to finished products, upholding the belief of "quality creates credibility; credibility creates quality", to provide the market with more diversified product needs.

This is not only the business philosophy and vision of Sander Electronics, but also the vision and goal pursued by all its employees.

### Locations:

Taiwan (Taipei, Tainan, Yilan), Malaysia, Japanese office, American office, the company's business map will continue to expand.

## Main Products

LED module, VMS, Message boards, Price boards, LED components, LED solutions, LED lighting, LED bus sign LED signs, LED diodes, LED lights, LED display, LED headlight LED DRL, LED automotive lighting, Power supply, cluster.

## Contact Information

- ◆ TEL: 02-28951361
- ◆ Fax: 02-28960980
- ◆ Email: jerry@sander.com
- ◆ Address: 3rd Floor, No. 153, Ligong Street, Beitou District, Taipei City 112



# 千才科技股份有限公司

LIVERAGE TECHNOLOGY INC.



# LIVERAGE TECHNOLOGY INC.

千才科技股份有限公司

## 公司簡介

千才科技股份有限公司 (Liverage Technology Inc.) 配合國家策略性工業的發展，從事高科技光纖通訊主動元件及光電模組之專業設計以及製程及技術服務。Liverage 之研發策略為保持與世界潮流趨勢同步之最新產品技術的速度，並與被動元件 - 平面光路波導技術、光學微機電技術、新型半導體雷射及積體電路封裝製程技術等重要核心技術相互結合，延伸至產品全自動化量產技術，並導入全面品質保障流程，於短時間內提供國內光通訊廠商光電元件之專門設計服務，並及時開發完成原型機進入市場，供給國內相關廠商垂直整合及品質保障之專門設計以及專業技術服務之全面解決方案。

## 主要產品 / 服務

千才科技股份有限公司提供之生產光電模組系列產品及技術服務，主要商品或服務項目諸如：1. 半導體雷射光器件 155 Mbps ~ 2.5 Gbps TOSA 2. 光耦合器件 155 Mbps ~ 2.5 Gbps ROSA 3. 單纖三向光器件 Triplexer OSA 4. 1X9 SC 雙纖雙向光收發模組 1X9 SC 155 Mbps Optical Transceiver 5. 1X9 SC/FC 單纖雙向光收發模組 1X9 155 Mbps Bi-directional Transceiver Module 6. 小型化熱插拔雙纖雙向光收發模組 1.25 ~ 2.5 Gbps SFP LC Transceiver Module 7. 小型化雙纖雙向光收發模組 1.25 ~ 2.5 Gbps (2X10) SFF LC Transceiver Module 8. 乙太網路轉換器 1.25 Gbps /Gigabit Ethernet GBIC 9. CWDM 小型化熱插拔雙纖雙向光收發模組 1.25 ~ 2.5 Gbps CWDM SFP 10. CWDM 乙太網路轉換器 CWDM GBIC Transceiver Module 11. 被動式網路單纖雙向光收發模組 GEAPON - 1.25 Gbps ONU 12. 光電媒體轉換器 155 Mbps / 1.25 Gbps Media Converter (With Network Management)

## 亮點介紹

千才科技股份有限公司提供各種高質量的測量設備。包括 BER 測試儀、MPO 測試儀、光纖安裝工具、高速光收發功率計和光測試工具。並提供各種高質量的測量設備。包括 BER 測試儀、MPO 測試儀、光纖安裝工具、高速光收發功率計和光測試工具。

## 連絡資訊

- ◆ 聯絡人姓名 / 職稱：孫英正 / 協理
- ◆ 地址：新竹縣竹北市台元街 30 號 3 樓之 5
- ◆ Email：bruce@liverage.com.tw
- ◆ 電話：03-5525268
- ◆ 傳真：03-5525388

## Company Profile

Founded in 2003, Liverage Technology Inc. is a professional manufacturer of high-quality fiber optical components, transceivers and measurement equipment in the fiber optic communications industry. Liverage Technology Inc. is located in the Tai Yuen Hi-Tech Industrial Park in Zhubei, Hsinchu. It is very close to the Hsinchu Science Park and the Industrial Technology Research Institute. Our mission - Enjoy your life, is to bring the optical broad bandwidth with reasonable price into your life. With more than 30 years of experience, our team members pride ourselves on our innovation and dedication to the highest quality in the fiber optical industry.

## Main Product / Service

The core technologies of Liverage include optical packaging, customized manufacturing technologies and testing equipment manufacturing. Our advanced quality control methods utilize state-of-the-art processing techniques, laser welding, epoxy packaging, module design and testing system integration. Additionally, our trend-setting R&D group develops high-end products for several applications such as defense, aerospace, custom security, oil exploration, etc. The following introduces the benefits of cooperating with us. First, excellent manufacturing and quality control, passed the audit and approval of well-known companies in Japan, and secondly, the price of our products is competitive, with excellent manufacturing capabilities and logistical support. In addition, we have our own R&D team, and our products can time to market efficiently. Finally, our products have been approved by top tier companies.

## Featured Product

Liverage Technology Inc. provides various high-quality measurement equipment. Including BER Tester, MPO Tester, Optical Fiber Installation Tool, High-Speed Optical Transceiver Power Meter and optical testing tool. Liverage Technology Inc. provides various high-quality measurement equipment. Including BER Tester, MPO Tester, Optical Fiber Installation Tool, High-Speed Optical Transceiver Power Meter and optical testing tool.

## Contact Information

- ◆ Name：Bruce Sun
- ◆ Address：3F-5, No. 30, Taiyuan Street, Chupei City, Hsinchu County 302, Taiwan
- ◆ Email：bruce@liverage.com.tw
- ◆ TEL：03-5525268
- ◆ FAX：03-5525388



# 工業技術研究院 量測中心

Industrial Technology Research Institute Calibration And Measurement Capabilities



# Industrial Technology Research Institute Calibration And Measurement Capabilities

工業技術研究院 量測中心

## 公司簡介

### 關於工研院量測中心

「精準好服務，標準好生活」是量測技術發展中心現階段的重點方向。經由經驗的累積，我們已建立與世界同步的標準技術能力，現階段更積極以此根基落實於產業，如最近投入的國際產業標準、影像顯示產業標準、平面顯示器檢測技術等，讓國內半導體業者在國際間更具領導優勢；在儀器產業發展上，目前則聚焦在自動化製造智慧檢測技術上，提供共通性技術互動平台，協助創造自有品牌與市場。

科技改進生活是我們更具意義的使命。量測中心的研發成果讓人民的生活、政府公權力、甚至環保醫療都得到準確的保障。「精」「準」是我們一路追求的目標，經過多年的深耕，量測中心在國際計量舞台上已有一席之地。展望未來，量測中心將結合產業，積極運用國際組織平台，推動國際產業標準以及兩岸標準合作，為產業提供專業即時的好服務，為人民提供品質保障的好生活。

## 主要產品 / 服務

1. 國家度量衡標準實驗室 (<https://www.nml.org.tw/>) 提供溯至國際單位 (SI unit) 之校正服務
2. THz 兆赫波材料分析量測技術
3. 光學，電性，可靠度檢測服務
4. 半導體設備合作開發
5. 無塵室汙染監控應用 /particle counter



**工研院量測中心 光電測試實驗室**  
Recognized Testing Lab.

- LED modules / traffic signals / lighting testing and verification services
- Establishment of LED testing systems and quality consultant
- LED Traffic signals
- LED screen
- LED Lighting
- Traffic Controller

ISO/IEC 17025 accreditation testing Lab. by TAF can provide the national mutual recognition arrangement for ILAC-MRA label

QR code for scopes of the testing...

## 連絡資訊

- ◆ 聯絡人姓名 / 職稱：梁璋耘 / 經理
- ◆ 地址：新竹市光復路二段 321 號 7 館 310 室
- ◆ Email：monicaliang@itri.org.tw
- ◆ 電話：03-5732072
- ◆ 傳真：03-5733540

## Company Profile

### About CMS/ITRI

Precision for better service, Harmonization for quality life” is the goal we embrace now. Based on the capability of establishing national measurement standards, CMS is devoted to create timely international/industrial standards to shorten the traceability chain and enhance the competitiveness. In the research of precision inspection developing, we are focusing on the development of intelligent optical inspection technology for automatic fabrication. It is a platform to expedite the development of in-house brands and technology.

Measurement for improving life is an innovation-oriented mission. Recently, a series of measures have been introduced to ensure Government’ s credibility, to safeguard living condition, and to promote health care in general publics. “Precision” and “Harmonization” are what we have been pursuing for years and the professional capability has been recognized worldwide. Through the global organization platform, we will continuously work with the industry, to promote the international industrial standards and facilitate the cross-strait collaboration of metrology activities. It is hoped, with the accumulated capability, to create value-added achievement to upgrade the quality of industry and our daily life.

## Main Product / Service

1. The National Measurement Laboratory (<https://www.nml.org.tw/en/>) provides calibration services traceable to SI units
2. THz material analysis and measurement technology
3. Optical characteristics, electrical, reliability testing services
4. Development of semiconductor equipment
5. Particle counter for clean room

## Contact Information

- ◆ Name：Wei-Yun Liang
- ◆ Address：Rm. 310, Bldg. 7, No. 321, Sec. 2, Guangfu Rd., East Dist., Hsinchu City 30011, Taiwan (R.O.C.)
- ◆ Email：monicaliang@itri.org.tw
- ◆ TEL：886-3-5732072
- ◆ FAX：886-3-5733540



# 工業技術研究院 電子與光電系統研究所

INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE ELECTRONIC AND OPTOELECTRONIC SYSTEM RESEARCH LABORATORIES



# Industrial Technology Research Institute ELECTRONIC AND OPTOELECTRONIC SYSTEM RESEARCH LABORATORIES

工業技術研究院 電子與光電系統研究所

## 公司簡介

電子與光電系統研究所半世紀以來透過技術研發、服務、移轉與成立衍生公司來推動台灣半導體、顯示及光電技術整體產業興起及蓬勃發展；因應市場快速變動環境，我們持續研發強化國家發展競爭力技術：AI 晶片、化合物半導體、數位／類比及混合訊號晶片設計、異質整合、量子電腦與智慧顯示互動系統等前瞻科技，成為全球智慧化整合方案提供者，引領台灣電子與光電產業再躍升！

## 主要產品 / 服務

我們開發系統整合及應用導向的前瞻技術，深耕產業自主能力，並帶動產業創新、推動新創育成，強化國際與學術合作，推升整體產業價值，創造我國產業在全球核心競爭優勢！

## 連絡資訊

- ◆ 電話：03-5917050
- ◆ E-mail：eosl\_cs@itri.org.tw
- ◆ 地址：31040 新竹縣竹東鎮中興路四段 195 號

## Company Profile

In the past 40 years, the Electronic and Optoelectronic System Research Laboratories undertakes the missions for the researches and developments of AI Chips, Compound Semiconductors, Digital/Analog and Mixed-Signal IC Design, Heterogeneous Integration, Quantum Computers and Transparent Display Interactive System technologies.

## Main Product / Service

We fully cultivate the capability of independent innovation through participating in international cooperation and academic programs. These collaborative activities are pursued so as to aid in the success of technological incubation and entrepreneur start-ups. We strive to strengthen the technological innovation and value creation ability for Taiwan's industry in order to remain the competitiveness globally.

## Contact Information

- ◆ TEL：03-5917050
- ◆ E-mail：eosl\_cs@itri.org.tw
- ◆ Address：195, Sec.4, Chung Hsing Rd., Chutung, Hsinchu, Taiwan 31040, R.O.C.



Kingbright

# 今台電子股份有限公司

Kingbright Electronic Co., Ltd.

Kingbright

# Kingbright Company, LLC

今台電子股份有限公司

## 公司簡介

Kingbright

QS 9000  
ISO 9002

今台電子 (Kingbright) 是一家專業的 LED(發光二極體) 製造廠, 自 1980 成立於台灣後, Kingbright 持續不斷的在 LED 電子零件的專業領域內成長茁壯和擴大影響力。擁有超過 40 年的專業製造經驗, 今台開發的各項 LED 產品和技術的創新, 對我們全球各地的客戶助益良多。

今台電子位於台灣新北市, 為了近距離提供給世界各地的客戶最快速的服務品質, 在全球各地皆有行銷系統。

過去 40 多年來, 今台電子成功地在銷售額成長茁壯和全球業務的穩健擴張, 是由於 Kingbright 一流的產品和對客戶的體貼服務, 持續不斷的吸收在世界各地的客戶。今台電子將會秉持同一水準, 並再接再勵在 LED 之領域上做更進一步的創新與服務。



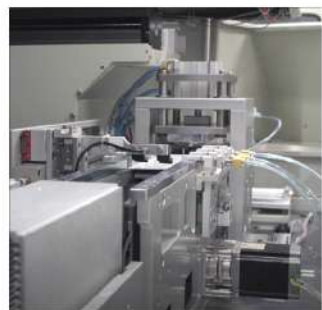
## 主要產品

今台電子工廠有通過各項重要品質管理認證包括 ISO 9002 與 TS 16949, 實行 6 SIGMA 品質系統和導入 ERP 系統管理。

自動化產線產能 SMD LED 每月三億顆, Through-hole Lamp 每月二億顆, LED Display 每月七百萬個。



Kingbright



## 連絡資訊

- ◆ 台灣新北市中和區中山路二段 317-1 號 3 樓
- ◆ TEL: +886-2-2249-9224
- ◆ FAX: +886-2-2240-3981
- ◆ EMAIL: [sales@kingbright.com](mailto:sales@kingbright.com)

## About Kingbright LED MANUFACTURER

Kingbright Company has manufactured innovative Light Emitting Diodes for 40 years. Kingbright offers the most comprehensive LED product portfolio in the industry, including: SMD LEDs, Through-Hole LEDs, SMD/ Through-Hole Displays, Circuit Board Indicators and High Brightness LEDs. Kingbright also offers fully customized LED solutions to enhance customer designs with many options in LED packaging and colors.

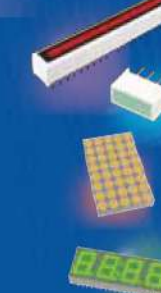
Kingbright's core mission is to achieve innovation through investment in research and development that creates the highest efficiency LEDs in compliance with ROHS and REACH directives. Kingbright is TS16949, ISO9001, and ISO14001 certified.

### SMD LED



- Top-Emitting PLCC SMD LED
- Top-Emitting Chip SMD LED
- Right Angle SMD LED
- Multi-Color SMD LED
- Subminiature SMD LED
- Reverse Mount SMD LED
- SOT-23 SMD LED

### THROUGH-HOLE DISPLAY



- Single Digit 7-Segment Through-Hole Display
- Dual Digit 7-Segment Through-Hole Display
- Three Digit 7-Segment Through-Hole Display
- Four Digit 7-Segment Through-Hole Display
- Alphanumeric Through-Hole Display
- Dot Matrix
- Bar Graph Array
- Light Bar

### THROUGH-HOLE LED



- Round LED
- Oval LED
- Rectangular LED
- Cylindrical LED
- Multi-Color LED
- Resistor LED
- Blinking LED
- Low Current LED

### CIRCUIT BOARD INDICATOR (CBI)



- Single-Level CBI
- Bi-Level CBI
- Tri-Level CBI
- Quad-Level CBI
- SMD CBI
- Panel Mount CBI

### SMD DISPLAY



- 7-Segment SMD Display
- Alphanumeric SMD Display

### INFRARED & PHOTOTRANSISTOR



- Infrared Emitting Diode
- Phototransistor



SALES@KINGBRIGHTUSA.COM WWW.KINGBRIGHTUSA.COM  
 TEL: (909)468-0500 FAX: (909)468-0505  
 225 BREA CANYON ROAD, CITY OF INDUSTRY, CA 91789





# 台達電子工業股份有限公司

DELTA ELECTRONICS INC.



# DELTA ELECTRONICS INC.

台達電子工業股份有限公司

## 公司簡介

台達由鄭崇華先生創立於 1971 年，為全球提供電源管理與散熱解決方案。面對日益嚴重的氣候變遷，台達長期關注環境議題，秉持「環保 節能 愛地球」的經營使命，持續開發創新節能產品及解決方案、不斷戮力提升產品的能源轉換效率，以減輕全球暖化對人類生存的衝擊。近年來，台達已逐步從關鍵零組件製造商邁入整體節能解決方案提供者，深耕「電源及零組件」、「自動化」與「基礎設施」三大業務範疇。



## 照明解決方案

台達提供全方位的 LED 照明產品及系統整合服務，滿足客戶照明需求。

LED 產品包括：

工業照明：天井燈、天車燈、停車場燈

道路照明：路燈

商用照明：嵌燈、軌道燈、吸頂燈、平板燈

戶外照明：投光燈、矮柱燈、壁燈

漁業照明：集魚燈

服務內容包括：

照明設計解決方案

智慧路燈解決方案

物聯網照明解決方案

## 連絡資訊

◆ [LS.Sales@deltaww.com](mailto:LS.Sales@deltaww.com)

## About the Company

Delta, founded in 1971, is a global provider of power and thermal management solutions. Its mission statement, "To provide innovative, clean and energy-efficient solutions for a better tomorrow," focuses on addressing key environmental issues such as global climate change. As an energy-saving solutions provider with core competencies in power electronics and automation, Delta's business categories include Power Electronics, Automation, and Infrastructure.



## Business Categories

Delta offers a full range of LED lighting products and system integration services to meet customers' lighting needs.

LED products include :

Industrial Lighting: High bay, Overhead crane, Linear

Street Lighting: Street light

Commercial lighting: Downlight, Track, Ceiling, Panel

Outdoor lighting: Flood, Bollard, Wall light

Fishing light: Saury light, Squid light

Services include:

Lighting design solutions

Smart street light solutions

BIC (Bluetooth Intelligent Control) solutions

## Contact Information

◆ [LS.Sales@deltaww.com](mailto:LS.Sales@deltaww.com)



# 台灣凱瑞光學有限公司

TRIOPTICS TAIWAN



# TRIOPTICS TAIWAN

台灣凱瑞光學有限公司

## 公司簡介

台灣凱瑞光學有限公司於 2013 年 7 月由德商 TRIOPTICS 公司與台灣宏惠光電股份有限公司 UNICE E O Service Inc. 共同合資成立公司。另在 2020 年 9 月 TRIOPTICS GmbH 與 JENOPTIK AG( 德國及美國股票上市公司) 成功完成合併交易：

TRIOPTICS 成為 JENOPTIK AG 集團的成員之一，並於 2021 年 12 月 100% 融入集團的 Light & Optics 事業部。

JENOPTIK 是一家全球運營的光學、光電子、光安全應用的高精密光學科技應用的技術集團。

台灣凱瑞光學多年在地深耕推展後，已成為台灣光學鏡頭測試領域最具專業性的光學檢測研發暨設備供應商。服務客戶業務範圍自研發設計、試產、量產等階段有效縮短產品製造時程，生產良率提昇，增加市場競爭優勢。於國防、太空衛星、科學研究單位相繼導入台灣凱瑞光學的最新製程監控與量測設備後，光學產品的質量已達國際競爭力。

台灣凱瑞光學有限公司同時努力擴展至半導體高精密光學應用領域，合作開發超精密的光學核心技術曝光機之光學顯影鏡頭的生產，並切入元宇宙 AR/VR 晶圓級 Waveguide 量產自動化檢測設備，達到國內自有半導體設備的供應鏈，與最先進製程的晶圓代工國的目標。

## 主要產品 / 服務

ImageMaster® VR/AR



VR 鏡頭和 AR 模組 MTF 量測系統 高精度光學傳遞函數 MTF 量測系統

ImageMaster®HR



Wafer-level & Semiconductor



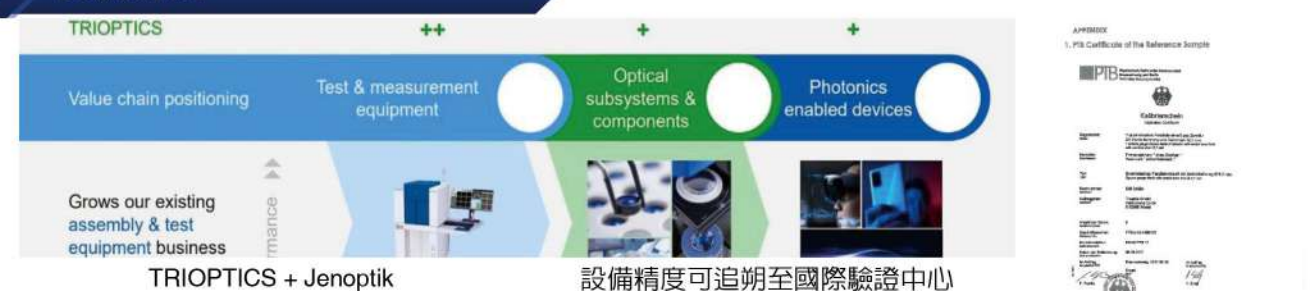
晶圓級及半導體量測系統

FLEX-3A



3D 光學量測儀

## 亮點介紹



## 連絡資訊

- ◆ 姓名 / 職稱：姚志奎 / 業務經理
- ◆ 地址：桃園市中壢區中壢工業區安東路 5 號 4 樓之 2
- ◆ Email：ttservice@trioptics.tw
- ◆ 電話：(03)462-0405
- ◆ 傳真：(03)462-3909

## Company Profile

Trioptics Taiwan was established on July 2013 by joint venture of Trioptics German and Taiwan Unice EO Services. In addition, during September 2020, TRIOPTICS GmbH and JENOPTIK AG (listed companies in Germany and the United States) successfully completed the merger transaction: TRIOPTICS became a member of the JENOPTIK AG group and was 100% integrated into the group's Light & Optics division in December 2021. JENOPTIK is a globally operating technology group for high-precision optical technology applications in optics, optoelectronics, and optical safety applications. Our optical measurement and manufacturing systems speed up and improve the development, production and quality control of lenses, optical lens systems and camera modules around the world. With our broad knowledge base in optical metrology systems, comprehensive product range and international focus, we create lasting customer value and benefits.

## Main Product / Service

ImageMaster® VR/AR



VR / AR MTF Measurement System

ImageMaster®HR



VR / AR MTF Measurement System

Wafer-level & Semiconductor



Wafer-level & Semiconductor

FLEX-3A



Automated 3D Measurement System Inspection

## Featured Product



Alignment and testing of VR/AR lens and module

Instrument can be traceable to PTB

## Contact Information

- ◆ Name：Victor Yao/Sales Manager
- ◆ Address：4F-2, No.5, Andong Rd., Chungli Dist., Taoyuan City, Taiwan
- ◆ Email：ttservice@trioptics.tw
- ◆ TEL：(03)462-0405
- ◆ FAX：(03)462-3909



# 立碁電子工業股份有限公司

Ligitek Electronics Co., Ltd.



# Ligitek Electronics Co., Ltd.

立碁電子工業股份有限公司

## 公司簡介

立碁電子集團是發源於以 LED 光電半導體專業生產製造為主體的營運企業，自 1989 年起正式成立，長期以來以穩健的作風，雄厚的研發實力發展綠能相關科技，為國際客戶帶來最優質、最全面的光電節能整合服務。



## 主要產品

### LED 與 LASER 封裝事業

◆ 產品與應用：電腦設備及其他資訊與網通廠商相關 LED 元件及模組需求、安控產業使用紅外線 LED 元件與模組、固化設備業使用紫外線 LED 元件與模組、VCSEL LASER 元件與模組設計、電視背光模組、車用儀表、LED 車燈、手機背光板、全彩 LED 資訊看板、月台警示燈、交通號誌及指示燈，領域包含航空、通訊、交通運輸、汽車電子、LED 顯示屏幕、商業及民用照明、城市建築亮化工程（廣告裝飾與各種燈飾應用）。



### LED 照明事業

◆ 產品與應用：LED MR16、LED AR111、LED T8 及 T9 燈管、LED 嵌燈、T-Bar、LED 路燈、LED 天井燈、LED 投射燈、光引擎及光源智慧型控制模組。



### 大眾交通及捷運系統應用

◆ 產品與應用：LED 月台警示燈、捷運、鐵路、車廂、隧道、公路等交通相關應用燈具。



### 汽車、機車 LED 模組應用

◆ 產品與應用：機車儀錶板 LED 模組應用設計客製化生產、汽車相關 LED 照明產品開發、腳踏車前、後 LED 燈具模組合作開發。



### 影像照明紅外線模組產品與代工

◆ 產品與應用：監視器用紅外線照明模組、影像辨識 LED 或 LASER 照明模組、訊號偵測用紅外線模組。



### 紫外線模組產品

◆ 產品與應用：膠材固化設備、曝光顯影設備、殺菌設備業。



### 太陽能事業

◆ 產品與應用：高功率 Solar Module 太陽能電池組件與太陽能電池板。

◆ 在台灣安裝工程實績：台灣電力公司、台灣中油公司、中華郵政公司、氣象局、消防局、國家風景區、農委會茶業改良場台東分場、嘉義大學、台北科技大學...等太陽能系統。



## 連絡資訊

- ◆ 電話 :886-2-77036000
- ◆ 傳真 :886-2-77036286
- ◆ E-mail:ligitek@mail.ligitek.com

## Company Profile

Ligitek Electronics Group is the operating company with the mainstay originated in the LED optoelectronic semiconductor professional manufacturing. Established since 1989, for a long time with a prudent style, strong research and development capabilities, Ligitek Electronics

Group develops green energy-related technology to bring the highest-quality, most comprehensive photovoltaic energy saving integration services to international customers.



## Main Products

### LED and LASER packaging business

Product and application: LED components and modules needs related to computer equipment and other information and net connection vendors, infrared LED components and modules used by security control industry, curing equipment industry used UV LED components and modules design, TV backlight module, automotive instrumentation, LED vehicle lights, mobile phone backlight plate, full-color LED billboard, the platform warning lights, traffic signals and indication lights. The field contains the aviation, telecommunications, transportation, automotive electronics, LED display screen, commercial and civil lighting, urban construction illumination works (advertising decoration and various lighting applications).

### LED lighting business

Products and applications: LED MR16, LED AR111, LED T8 and T9 lamp, LED embedded light, T-Bar, LED street light, LED patio light, LED spot light, light engine and light source intelligent control module.

### Mass transit and MRT system applications

Products and applications: Traffic application related lighting like LED platform warning light, mass rapid transit, railway, cars, tunnels, highways and others.

### Automobile, motorcycle LED module applications

Products and Applications: Motorcycle dashboard LED module application design customized production, automotive LED lighting product development, bike front, rear LED lamps module development cooperation.

### Imaging lighting infrared module and OEM

Products and Applications: Monitor infrared lighting module, image recognition LED or LASER lighting module, infrared signal detection module.

### UV module

Products and applications: plastic curing equipment industry, exposure and development equipment, sterilization equipment industry.

### Photovoltaic Solar energy business

Obtained the United States California Energy Bureau certified as qualified solar module suppliers.

Product and application: High power solar module, solar cell components and solar panels. Installation works performance in Taiwan: Taiwan Power Company, CPC Corporation, Taiwan, Chunghwa Post Co., Ltd., Weather Bureau, Fire Department, National Scenic Area, the Council of Agriculture Tea Research and Extension Station, Taitung Station, Chiayi University, Taipei University of Technology ... and other solar systems.

## Contact Information

- ◆ TEL:886-2-77036000
- ◆ FAX:886-2-77036286
- ◆ E-mail:ligitek@mail.ligitek.com



# 光鼎電子股份有限公司

PARA LIGHT ELECTRONICS CO., LTD.



# PARA LIGHT ELECTRONICS CO., LTD.

光鼎電子股份有限公司

## 公司簡介

光鼎電子股份有限公司成立於 1987 年，以生產 LED 發光二極體與提供照明節能方案為主，近年來亦積極與國際 PC 大廠合作，參與電競電腦的 LED 炫光系統之設計。

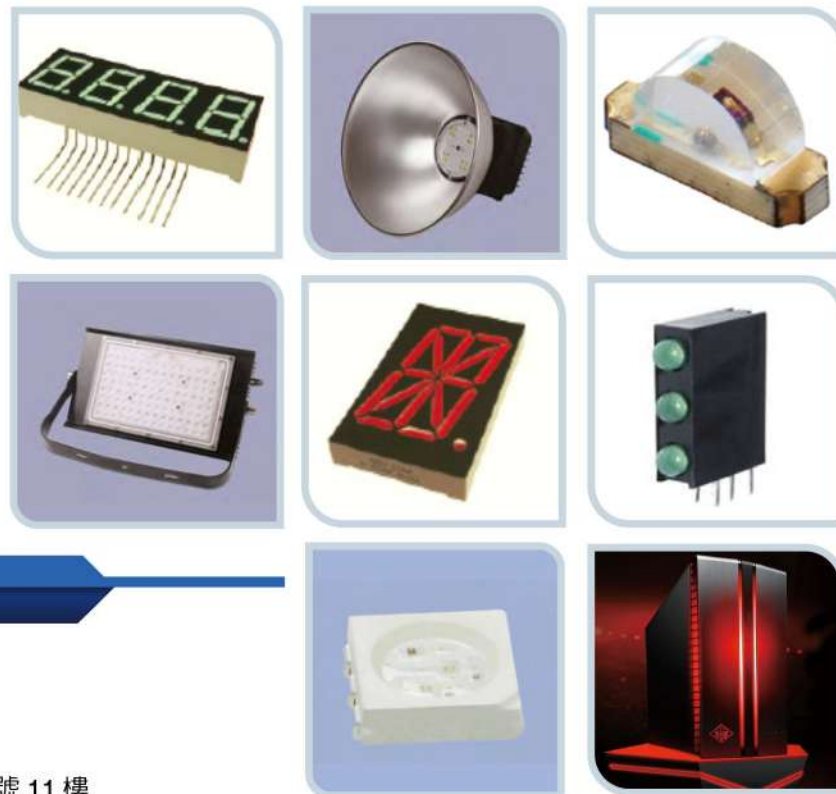
多年來光鼎致力於自動化設備更新、市場的國際化及完整的售後服務，本公司已成為國內外 LED 發光二極體的重要供應商之一，並通過 ISO 14001、ISO 9001 及 TS16949 認證，提供值得信賴的品質。挾帶著在 LED 封裝的充沛創新及研發能力，近幾年，光鼎亦成功跨入 LED 照明領域，產品也陸續通過 UL、CNS 及 PSE 等國際標準。自 2015 年開始，電競產業市場持續創新高，在 LED 照明模組耕耘多年

的光鼎也開始積極布局電競電腦市場，與世界級大廠合作，參與多項電競電腦的 LED 炫光系統設計專案，並得到肯定。

目前光鼎在中國大陸及與緬甸仰光均設有工廠，擁有 2,000 名員工，現正積極尋找合作廠商以完整銷售通路，亦不斷投資設立海外分公司，如：美國、墨西哥、香港、韓國、緬甸及中國大陸各地區以擴展業務版圖。為因應客戶需求並提高生產效率，光鼎持續研發新產品、改善製程、增添自動化生產設備及測試儀器，增加產品與品質競爭力。

光鼎電子將本著〔品質・專業・服務〕的精神，以滿足客戶需求為優先考量，供應高品質的產品。

- ◆ LED 元件：SMD、PLCC、高功率 LED、Lamps、七段顯示器
- ◆ LED 替代性光源及照明燈具：天井燈、投光燈、路燈
- ◆ 光模組：電競電腦 LED 炫光系統



## 連絡資訊

- ◆ 網站：www.para.com.tw
- ◆ 電話：+886-2-2225-3733
- ◆ 傳真：+886-2-2225-4800
- ◆ 地址：台灣新北市中和區建康路 8 號 11 樓
- ◆ E-mail：para@para.com.tw

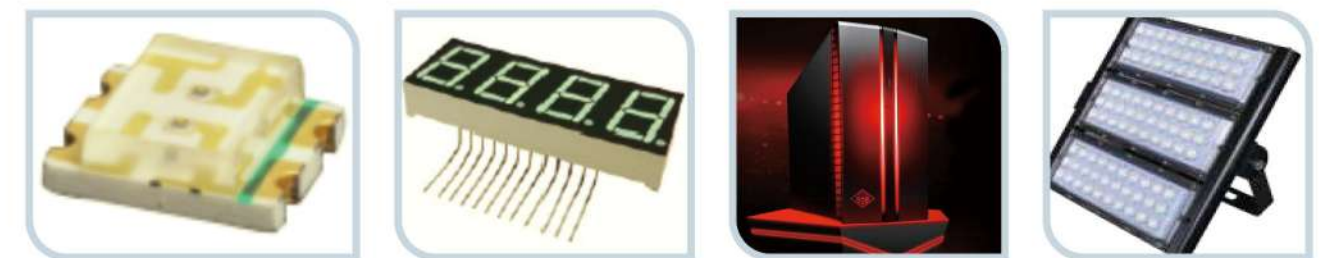
## Company Profile

Founded in 1987, PARA LIGHT (TWSE code: 6226) is a world-leading expert of LED components, LED lighting modules and LED lighting solutions.

In the past 30 years, PARA LIGHT has been devoted to new product development, automation equipment upgrade, and enhancing the efficiency of manufacturing processing to establish our competitiveness in the global market.

### LED Components, Lighting Solutions and Gaming PC Lighting System

PARA LIGHT was founded in LED package industry providing a diverse product portfolio consisting of High Power LEDs, SMD LEDs, Digital Displays, PLCC and Lamps. With 30 years superior technology in LED package, PARA LIGHT is now also



PARALight has 2 manufacturing plants in China and Myanmar, certified with ISO 14001, ISO 9001 and TS16969, with approximately 2,000 employees, including 100 quality control staffs aiming to maintain high product quality and 150 R&D staffs dedicated to serve customer's needs. Today, PARA LIGHT is a global company with sales offices and warehouses in US, Mexico, China, Hong Kong and across Asia that allows us to provide immediate services.

successfully attached into LED lighting market and gets reputation in the past few years.

In recent years, PARA LIGHT expands its market reach in Gaming PC Lighting System area, and achieves success by providing immediate ODM/OEM customized professional services to satisfy customer demand.

## Contact Information

- ◆ Website：www.para.com.tw
- ◆ Delegate：Josephine Ma
- ◆ TEL：+886-2-2225-3733
- ◆ FAX：+886-2-2225-4800
- ◆ E-mail：para@para.com.tw
- ◆ Add：11F., No. 8, Jiankang Rd., Zhonghe Dist., New Taipei City 235, Taiwan



# 光鋇科技股份有限公司

EPILEDs Co., Ltd.



# EPILEDs Co., Ltd.

光鋇科技股份有限公司

## 公司簡介

光鋇科技成立於 2006 年 6 月，並獲南科管理局核准進駐台南科學工業園區並於 2017 年正式搬遷至樹谷園區，致力於藍、綠、紅、黃、不可見光、紫、深紫外光 LED 磊晶片及晶粒之研發、設計、製造與銷售。

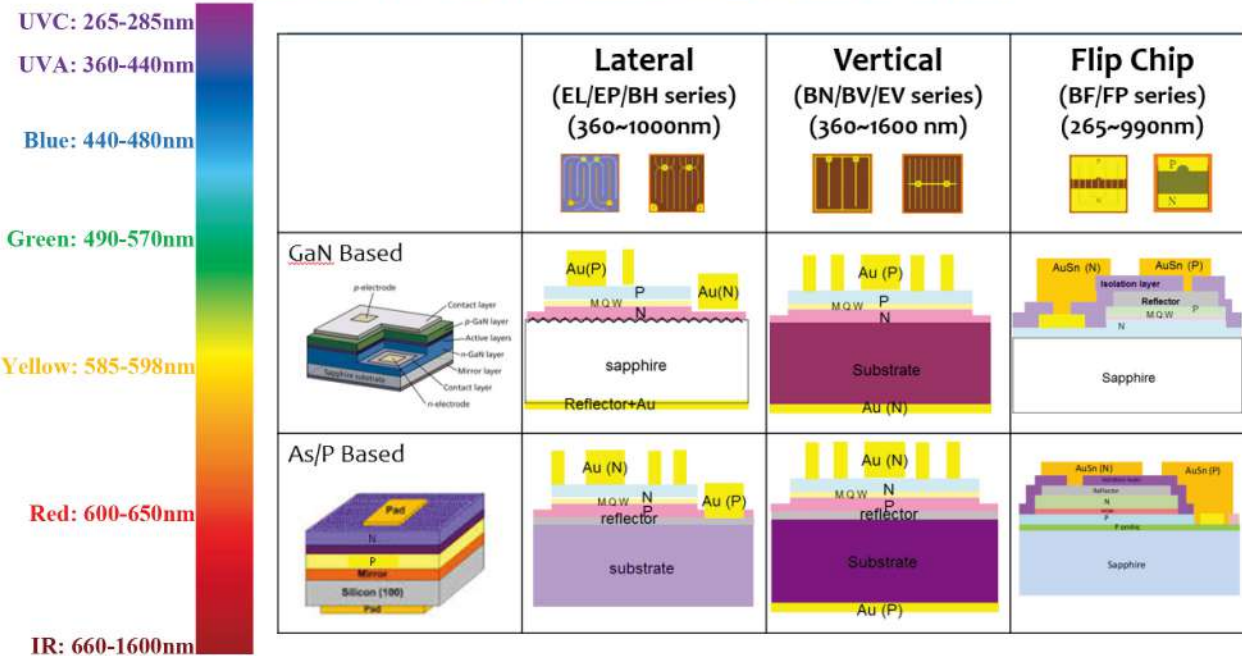
光鋇不僅僅是全台唯一擁有全光譜製程能力的 LED 製造商 (波段 :265-1600nm)，且自磊晶片至晶片生產皆於台灣當地生產製造。因應全球市場的多變

性，光鋇針對客戶需求除了擁有客製晶片大小的能力之外，在 UVA/B、UVC(封裝)、IR dual junction 也是 LED 首屈一指的先驅，近年更致力於 VCSEL、MINI&MICRO LED 晶片等特殊應用市場。

公司自成立以來，堅持『突破、創新、專業、負責』之經營理念，創造客戶、合作夥伴、社會大眾、投資者與光鋇之互利互惠的雙贏局面，以維持企業之永續發展。

## 產品介紹

片包含垂直 / 水平 / 覆晶等結構並涵蓋全光譜的選擇 (265nm-1600nm)



## 連絡資訊

- ◆ <http://www.epileds.com.tw>
- ◆ [sales@epileds.com.tw](mailto:sales@epileds.com.tw)
- ◆ No.7, Kanxi Rd., Tree Vally Park, Xinshi Dist, Tainan City, Taiwan
- ◆ 06 - 5050101

## Company Profile

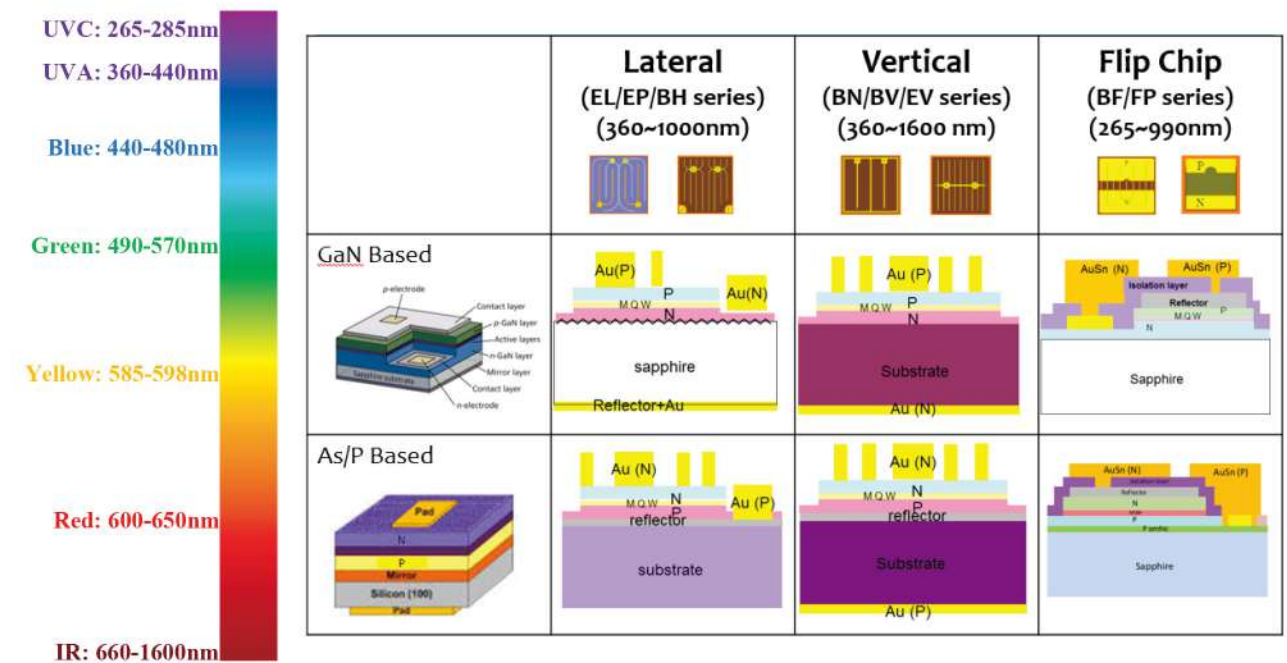
EPI LEDs Co., Ltd. was established on June 12th, 2006, approved by National Science Council and relocated at Tainan Tree Valley Park with new production line in 2017.

EPILEDs is an exclusively LED manufacturer with full range of wave length (from265-1600nm), and from

Epi wafer to chip is made by ourselves in Taiwan. With a capability of customizing size and supporting UVA/B, UVC(package), and IR dual junction chips, EPILEDs also dedicates developing VCSEL, MINI&MICRO LED to support potential market demand.

## Products

Feature in Vertical/Lateral/Flip chips with full spectrum from 265nm-1600nm



## Contact Information

- ◆ <http://www.epileds.com.tw>
- ◆ [sales@epileds.com.tw](mailto:sales@epileds.com.tw)
- ◆ No.7, Kanxi Rd., Tree Vally Park, Xinshi Dist, Tainan City, Taiwan
- ◆ 06 - 5050101

# LITEON® 光寶科技股份有限公司

LITE-ON TECHNOLOGY CORPORATION

# LITEON® LITE-ON TECHNOLOGY CORPORATION

光寶科技股份有限公司

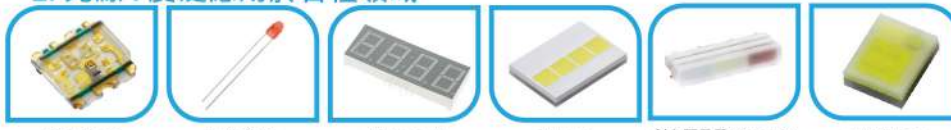
## 公司簡介

成立於 1975 年的光寶科技光電事業部 (OPS) 是全球領先的光電半導體供應商。在光電技術領域，光寶科技光電事業部擁有領先業界的專業知識和廣泛且多元的產品組合，包括從光源到感測，從低功率到高功率，從 LED 到雷射，從標準品到客製化產品，從可見光到紅外線和紫外線。

身為經驗豐富的專業光電半導體封裝設計製造供應商，光寶科技光電事業部除提供客戶高品質的光電產品解決方案外，長久以來致力於開發高性能，低污染的光源。期望能為人類創造並提供永續發展的解決方案，積極實現「智慧•節能」的永續發展願景

## 主要產品

### 1. 光源：廣泛應用於各種領域



滾滾長江東逝水

### 2. 感測：智慧新應用



### 3. 光耦：具備安全性和可靠，完美適合各項應用



## 連絡資訊

- ◆ 姓名：賴怡鈴 / 鄧麗菲
- ◆ 地址：新北市 242034 新莊區思源路 555 號 21 樓
- ◆ 電話：+886-2222-6181
- ◆ 傳真：+886-2221-1948
- ◆ 郵件：OPS-opswebmaster@liteon.com
- ◆ 網址：<https://www.liteon.com/opto>



## Company Profile

### Our Profession Your Brilliant

Founded in 1975, LITEON Optoelectronics Product Solution SBU (LITEON OPS) is a worldwide leading provider of optoelectronic semiconductors. Our leading role is backed by the broadest and most widely varying product offering in Optical technologies, ranging from illumination to sensing, from low power to high power, from commodity to custom-made, from LED to Laser, from visible lights to infrared & UV.

As an experienced supplier in professional packaging designing and manufacturing, LITEON OPS not only has been able to provide customers with high-quality optoelectronic component solutions, but also has been constantly pursuing high-performance and low-pollutant light sources that make lives Smarter, Safer and Greener.

## Main Products

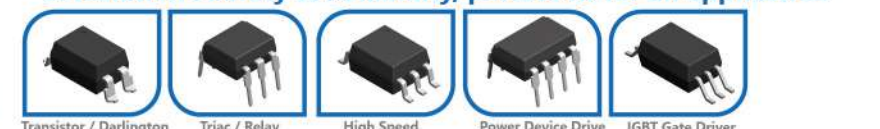
### 1. Illumination : Supporting a broad range use cases



### 2. Sensing : Making applications smarter



### 3. Isolation : Safety & Reliability, perfect fit for all application



## Contact Information

- ◆ Name : Vanessa Lai / Kay Teng
- ◆ ADD : 21F, No.555, Siyuan Rd. Xinzhuang Dist., New Taipei City 242034, Taiwan (R.O.C.)
- ◆ TEL : +886-2222-6181
- ◆ FAX : +886-2221-1948
- ◆ E-mail : OPS-opswebmaster@liteon.com
- ◆ <https://www.liteon.com/opto>



# HARVATEK 宏齊科技股份有限公司

HARVATEK CORPORATION



## 公司簡介

本公司創立於 1995 年，主要研究開發二極體封裝設計、製造、測試及產品進出口貿易業務，屬於 LED 下游封裝產業，在產業供應鏈中是關鍵性的策略夥伴，因應市場環境需求，追求企業永續經營。未來本公司計劃開發之新商品及服務仍以 SMD LED 之封裝技術為主軸，以現有產品之衍生品、改良品，甚或整合型產品為主。並以「成為全球 SMD LED 之技術領導廠商」及「成為“光”概念公司」自我期許。



## 產品介紹

以通訊工業、汽車工業、彩色顯示工業為研發主軸，並以自有技術為基礎，發展超高亮度、高功率之 LED 產品。



- 1. 家電 (掃地機器人 / 烘手機)** 紅外線發射 / 接收器應用在多種智能家電的感應上，透過紅外線感應，能讓家電更具智慧、更人性化。
- 2. 電競週邊 (電競鍵盤)** 電競鍵盤全面使用 IR/PT 感應的光軸鍵盤，按鍵行程短，壽命長。
- 3. 行動裝置 (手機 / 平板)** 紅外線距離感應、相機鏡頭的紅外線 / 雷射對焦等，為行動裝置帶來更精確、更高效的能力。
- 4. 穿戴式 (智慧手錶 / 手環)** 穿戴式的健康管控裝置，利用不同波段的光源搭配生物感測晶片，能每日監控健康狀況，提醒自己該注意或改善哪方面的健康。
- 5. 安防監控** 監控系統常用紅外光當作輔助照明，搭配光感 IC 來控制調整紅外光的啓用，達到省電節能的功效。
- 6. 光感應觸控螢幕** 利用成對 IR/PT 感應定位而達到觸控。光感應觸控螢幕可掛於對應尺寸的螢幕上，達到螢幕觸控效果。
- 7. 顯屏應用** LED 以微小、陣列化及高亮等特性，應用於各種不同場所之顯示面板 (戶外、商務表演、廣告等)，為生活帶來全新的感官體驗。
- 8. 照明** 現今的照明形式已有很多種，以不同需求客製化色溫、亮度等規格，並以低耗電高效能應用於各類室內及戶外照明，除明亮之外，還讓生活中多了各種不同種視覺感受。

## 連絡資訊

◆ 台灣總部  
30094 新竹市中華路五段 522 巷 18 號  
TEL : +886-3-5399889  
FAX : +886-3-5399227  
e-Mail : sales@harvatek.com



◆ 其他服務據點  
美洲 e-Mail : americas@haratek.com  
中國 e-Mail : ryan@harvatek.com  
歐洲 e-Mail : ryan@harvatek.com  
東南亞 e-Mail : sonia@harvatek.com

# HARVATEK HARVATEK CORPORATION

宏齊科技股份有限公司



## Company profile

Harvatek Corporation was founded in 1995 in Hsinchu, Taiwan. It became a publicly traded company on the Taiwanese Stock Exchange in 2003. Today, it is a leading manufacturer of semiconductor chips and LEDs with a wide spectrum of applications. The company designs, manufactures, tests, and exports these products to domestic and international OEM manufacturers, trade retailers, and design houses. With the highest quality products, unparalleled customer service, and perpetual emphasis on innovation, Harvatek has become one of the world's most preferred LED suppliers



## Main Products



- 1. Household Appliances (cleaning robots / hand-dryers)**  
Infrared emitters and receivers have multiple applications for smart home appliances. Through infrared sensing, household appliances can become smarter and make our lives simpler.
- 2. Gaming Accessories (Gaming Keyboards)**  
To enable gamers to press keys faster, gaming keyboards uses IR/PT optical switches. Optical switch keyboards have short actuation time and long lives, a recent trend for keyboards.
- 3. Mobile Devices (Mobile phones / tablets)**  
The functions and performance of mobile devices continue to improve. Infrared sensing products are widely used in applications such as proximity sensing and infrared/laser focusing of camera lenses to bring precision and efficient capabilities to mobile devices.
- 4. Wearable (smart watches / wristbands)**  
Busy working, people often neglect their health. Wearable health-control devices use light sources of different wavelengths with bio-sensing IC to monitor daily health status and alert people to pay attention or boost certain aspects of health.
- 5. Security Measures**  
The security systems often save energy through using infrared light as additional lighting. Light-sensing IC are used to control the usage of infrared light.
- 6. Optical Touchscreen**  
Touchscreen can be achieved through utilizing pairs of IR/PT positioning sensors. Optical touchscreens can be hung on top of screens that have corresponding sizes to generate the effect of touchscreens.
- 7. Display Application**  
LED is applied in display panel on different occasions (outdoors, business show, advertisement) due to its small, arrayed and high brightness and brings a brand new sense experience for life.
- 8. Illumination**  
There are many varieties of the nowadays lighting with different customized color temperature and brightness. Also, many lighting products of low power consumption and high efficiency are applied in indoors and outdoors lighting; besides brightness, they create different visual experience in life.

## Contact Information

◆ Taiwan HQ  
30094 No.18, Lane 522, Sec.5, Chung Hwa Road, Hsinchu City 30094, Taiwan  
TEL : +886-3-5399889  
FAX : +886-3-5399227  
e-Mail : sales@harvatek.com



◆ Global Sales Contact Window  
Harvatek Americas e-Mail : americas@haratek.com  
Harvatek China e-Mail : ryan@harvatek.com  
Harvatek Europe e-Mail : ryan@harvatek.com  
Harvatek Malaysia e-Mail : sonia@harvatek.com





# 佰鴻工業股份有限公司

BRIGHT LED ELECTRONICS CORP



# BRIGHT LED ELECTRONICS CORP

佰鴻工業股份有限公司

## 公司簡介

佰鴻工業股份有限公司由董事長廖宗仁先生創立於 1981 年 7 月。在董事長前瞻性的決策及全體同仁的辛勤耕耘下，公司的營運規模逐年成長擴大，客戶群遍及全球各地，在台灣、中國大陸、韓國、東南亞及美洲、歐洲等地都擁有眾多的長期合作客戶，產品被廣泛應用於 3C 產業、工業運用，照明市場、車用市場，航太、醫療、通訊等多個領域。佰鴻生產

基地最早建於台灣新北市工業區，有鑑於大陸廣大市場需求，1990 年在香港成立萬輝企業，作為統籌兩岸三地的轉運基地。同年轉投資中國大陸興建東莞高步廠，並自於 2011 年轉型升級為東莞佰鴻電子有限公司。該廠現有土地面積 45,000 坪、廠房面積 54,000 坪，員工數千餘人。

## 主要產品

元件類：發光二極管 LED、Lamp, SMD, Chip, Infrared 紅外線模組, PLCC, Multi-digit display, PCBA: Motor assembly, sensor assembly, LED light bar assembly, UV LED, ALS sensor、馬達、光感測器、LED 支架、PCB、藍寶石

照明類：LED 冷凍/冷藏櫃燈條, LED 燈管、LED 路燈、LED 景觀燈、LED 天井燈、LED 投光燈、LED 隧道燈、LED 燈泡、LED 筒燈、COB LED 模組、LED 植物燈、LED 車燈……

## 產品特色

佰鴻運用集團內公司做上下游材料整合，量產最具經濟規模的 LED 產品，並取得相關 UL、CE、CNS、TS16949 及 AS9100 等認證，期望提供被消費者接受之高品質中低價位產品。

## 連絡資訊

- ◆ 電話：02-29591090
- ◆ 傳真：02-29547006
- ◆ Email：services@brtled.com
- ◆ 地址：22061 新北市板橋區和平路 19 號 3 樓

## Diversified Products 多元化產品



### Diversified Products



## Company Profile

BRIGHT LED ELECTRONICS CORP., aka BRTLED, was established by Mr. Sandy Liaw in July, 1981. Under Mr. Liaw's prescient leadership and by all employees' effort, the company has grown steadily and continuously over the past few decades. Nowadays, we have built up long-term relationships with customers all over the world including Taiwan, China, Korea, Southeast Asia, America and Europe. We collaborate and maintain these long-term partnerships, in the meanwhile, continue to seek out more possibilities and opportunities for improvement and perfection. Our products are popularly adapted in various fields including 3C, industry-wide, communication, lighting market, automotive market, aerospace, medical industry

and so on.

BRTLED's first production base was in the industry park of New Taipei City, Taiwan. By taking China's market demands and incentives into account, BRTLED established Mainbright in Hong Kong in 1990 as the transfer point between China and Taiwan. In the same year, Mainbright also reinvested and set up a factory in Dongguan, China. In 2011, the Dongguan factory transformed to Dongguan Bright LED Electronics Corp. under BRTLED group. Dongguan site's area of land is around 150,000 square meters and its area of facilities is around 180,000 square meters. Current total number of employees including direct and indirect is over 1500.

## Main Product

**LED components:** LAMP, SMD, CHIP, PLCC, INFRARED, PHOTO COUPLER, MUTI-DIGIT, UV LED, LED DISPLAY, PCBA: MOTOR ASSEMBLY, SENSOR-ASSEMBLY, LED LIGHT-BAR ASSEMBLY, LED LIGHT-BAR FOR FREEZER, ALS SENSOR, LED lead frame, PCB, Sapphire……

**LED lighting:** LED indoor lighting、LED outdoor lighting、LED street Lamp, LED landscape light、LED high bay、LED food light、LED tunnel light、LED ground light、LED bulb、LED tube、LED down light、COB LED module、LED Plant grow light……

## Featured Product

Bright LED group utilizes its internal resources among all subsidiaries to form our own upper, middle and lower stream of supply chains and so produces various types of LED products competitively with

relevant international certifications such as UL, CE, CNS, TS16949, AS9100 and etc. We expect to provide reliable LED products with high quality but at competitive prices to customers.

## Contact Information

- ◆ Tel：02-29591090
- ◆ Fax：02-29547006
- ◆ Email：services@brtled.com
- ◆ Address：3F., No.19, Heping Rd., Banqiao Dist., New Taipei City, Taiwan, R.O.C. 22061

Lites R us

和欣光通科技股份有限公司

LRU Technology Inc.

Lites R us

LRU Technology Inc.

和欣光通科技股份有限公司

## 公司簡介

和欣光通科技股份有限公司於 2017 年成立，母公司為 1995 年設立之中山和欣智能照明科技有限公司，為台商獨資企業。主要產品種類為戶外燈具、LED 燈具、物聯網照明、照明管理系統及健康照明服務等。公司具有 30 多年的燈飾設計、生產和銷售經驗，並與世界諸多知名設計師和品牌合作。

公司以低壓直流技術為核心願景，繼而發展智能控制系統，導入健康光技術以及可見光定位技術，希望創造安全、健康以及舒適的環境，成為智慧健康光照護市場的領頭羊。

## 主要產品 / 服務

### 1. 低壓直流 LED 照明系統：

效用：

- (1) 節能效果，相對傳統燈具耗能減少 85%、
- (2) 降低電線短路及火災機率、
- (3) 工作溫度低、
- (4) 高流明輸出，持久耐用、
- (5) 降低維護成本。

### 2. 生理光燈具：

透過「同色異譜人因照明」專利調光技術有效影響人體晝夜節律因子 (CAF, Circadian Action Factor)，在照明色溫不變的情況下，於不同時段調控燈光波長，影響生理褪黑激素的分泌，使生活作息更符合自然節奏，讓工作更有效率，使睡眠更加安穩。

較市售燈具有更大的 CAF 值調整範圍，並獲得臺灣、美國、歐洲、日本、中國專利，專利取得時間領先國際知名照明大廠。

### 3. 智能控制系統：

- (1) ZigBee, Wi-Fi & Bluetooth 無線調控亮度與色溫
- (2) 參考日照變化設定節律照明
- (3) 依據不同環境設定情境照明

晝夜節律作用因子 (CAF)：光源影響人體生物時鐘能力的指標



高 CAF 值  
抑制褪黑激素  
使人保持覺醒，  
適合需集中精神  
的工作環境



低 CAF 值  
增加褪黑激素  
使人情緒舒緩，  
適合需要放鬆休  
憩的環境

## 亮點介紹

因應節能減碳，和欣光通為 LED 低壓智慧照明設備製造商，鎖定健康智慧照明之應用領域發展，在透過整合節能低壓系統、LED 燈具、物聯網、智慧照明管理系統以及健康照明等，創造新的照明產品價值。

本公司期望以節能低壓健康智慧照明系統之整合開發，成為帶動低碳直流健康智慧控制系統市場發展的領頭羊角色，提供大眾節能、安全、智能控制與健康的生活。

## 連絡資訊

- ◆ 聯絡人姓名 / 職稱：馮仲平 / 市場擴展經理
- ◆ 地址：310 新竹縣竹東鎮中興路四段 195 號 52 館 402 室
- ◆ Email：ryanfeng@lrutechnology.com
- ◆ 電話：(03) 591 0355 / 0975 591 194

## Company Profile

LRU Technology Inc. was founded in 2017, a Taiwanese-owned subsidiary of Lites R Us Co., Ltd., which was established in 1995. The main products include outdoor lighting, LED lamps, IoT lighting, lighting management system, health lighting service, etc. The company has more than 30 years of design, manufacture, and sales experience in the lighting industry. It also corporates with well-known designers and famous brands in the world.

Low voltage LED lighting system is the essential technology and core vision of LRU Technology Inc. The company then develops smart control systems, introduces advanced technologies such as Human Centric Lighting and Visual Light Communication. LRU hopes to create a safe, healthy, and comfortable environment as it becomes a leader in the smart health-lighting market.

## Main Product/ Service

### 1. Low voltage LED lighting system:

Benefits:

- (1) Low energy consumption, close to 85% energy savings compared to incandescent lighting.
- (2) Lower rate of electrical short circuit and fire incidents.
- (3) Low operating temperature.
- (4) High lumen output with better durability.
- (5) Reduce maintenance costs.

### 2. Human Centric Lighting:

The circadian light with patented metamerism technology is proved to be effective to the circadian action factor (CAF) of human. By adjusting the wavelength at the same light temperature, the circadian light affects the secretion of melatonin. The technology can be applied throughout the day and makes our life in line more with the human biological rhythm, increasing work efficiency and reinforcing sleep stability.

Comparing with existing lamps in the market, LRU products make adjustable CAF values with a broader range. LRU also obtained patents in Taiwan, the US, China, Europe, and Japan, leading other distinguished international manufacturers.

### 3. Smart control systems:

- (1) ZigBee, Wi-Fi & Bluetooth wireless technology with dimmer and color temperature control.
- (2) Circadian lighting design according to the changes in sunlight.
- (3) Ambient lighting design based on different environments.

The Circadian Action Factor(CAF) : an indicator of the ability of a light source to influence the biological clock in the human beings.



High CAF  
Suppress melatonin.  
Keep people  
awake as it is  
suitable for working  
environments  
that require  
concentration.



Low CAF  
Increase melatonin.  
Soothing  
emotions as  
it is suitable  
for relaxing  
environments.

## Featured Product

In response to energy saving and carbon reduction, LRU Technology Inc. is a manufacturer of LED low-voltage smart lighting equipment, which is committed to developing the application field of healthy smart lighting and creating additional lighting product value.

LRU hopes to become a leader and provides the public with energy-saving, safe, intelligent control, and healthy life through the integrated development of energy-saving, low-voltage, and healthy intelligent lighting systems.

## Contact Information

- ◆ Name : Ryan Feng
- ◆ Address : R402, Buld.52, No.195, Sec.4, Zhongxing Rd, Zhudong Township, Hsinchu County, 310 Taiwan (R.O.C.)
- ◆ Email : ryanfeng@lrutechnology.com
- ◆ TEL : +886 3 591 0355 / +8869 75 591 194

### 公司簡介

欣偉科技創立於 2000 年，致力於電子事業廢棄物清除處理與光電半導體 PVD/CVD Parts.clean 的貴金屬（金、銀、鈀、鉑）回收、精煉、加工技術及將所回收的稀有貴金屬開發成工業用的原料；橫跨 PCB、光電、半導體三大產業，目前為台灣前三大貴金屬精煉廠。

欣偉積極創造廢棄物新生命，同時也為客戶的產品創造出新的價值與利潤，期許成為綠色科技產業未來發展的新指標！

### 主要產品 / 服務

- 事業廢棄物清除處理
- 貴金屬回收精練
- 事業廢水處理
- PVD/CVD 半導體零件清洗
- 無氰環保金屬剝除劑
- 貴金屬吸附設備回收
- 蒸鍍鍍金屬材料
- 特用化學品



### 亮點介紹

- 有害事業廢棄物甲級清理許可證
- Alpe 材料供應鏈
- UL2809 再生料含量的環境聲明驗證
- BS8001 循環經濟供應鏈認證

### 連絡資訊

- ◆ 聯絡人姓名 / 職稱：李庭芳
- ◆ 地址：337 桃園市大園區工一路 13 號
- ◆ Email：alan@sing-way.com
- ◆ 電話：03-386-9300
- ◆ 傳真：03-386-9301

### Company Profile

SingWay Technology was founded in 2000, a company focus on the treatment of electronic industry waste and the recovery, refining, processing technology of precious metals (gold, silver, palladium, platinum) of optoelectronic semiconductor PVD/CVD Parts clean and the development of recovered rare precious metals It is a raw material for industrial use; It is related to PCB, optoelectronics and semiconductor, and is currently the top three precious metal refineries in Taiwan.

SingWay Technology creates new life for waste, and also new value and profit for customers' products, and becoming a market leader for the future development of green technology industry!

### Main Product/ Service

- Industrial waste Treatment
- Precious metal recovery and refining
- Industrial Wastewater Treatment
- PVD /CVD semiconductor parts cleaning
- Cyanide-free environmentally friendly metal stripper
- Recycling of precious metal equipment
- Vapor deposition materials
- Specialty Chemicals



### Identity Introduction

- Class A Permit for Hazardous Industrial Waste Treatment
- Apple qualified supplier
- UL2809 Environmental Claim Validation Procedure (ECVP) certification
- BS8001 Circular Economy Supply Chain Certification

### Contact Information

- ◆ Name：Mr. Alan Lee
- ◆ Address：33759 No.13, Gong 1st Rd., Dayuan Dist., Taoyuan City 337, Taiwan (R.O.C.)
- ◆ Email：alan@sing-way.com
- ◆ TEL：03-386-9300
- ◆ FAX：03-386-9301



# 長洛國際股份有限公司

CHAIN-LOGIC INTERNATIONAL CORP



# CHAIN-LOGIC INTERNATIONAL CORP

長洛國際股份有限公司

## 公司簡介

長洛國際成立於 1994 年，為專業設備代理服務商。長洛國際總公司設立於新竹縣新埔鎮，服務據點分佈於新竹、台中、高雄，以提供客戶即時的業務和技術諮詢服務。

母公司 旺矽科技 (MPI Corporation) 產品跨越多領域產業，其中，探針卡居於業界領先地位。另外，三大類主力產品：化合物半導體及光電測試解決方案、高低溫測試系統、先進半導體測試解決方案由長洛國際專業代理。此外，長洛國際也同步代理歐、美、日、韓等製程及測試等相關設備及耗材。

長洛國際致力於協助客戶提升競爭力，在持續的挑戰中與客戶共同成長，代理的產品跨足半導體、液晶面板、LED、光通訊，光感測等高科技產業。

## 主要產品 / 服務

- 先進半導體測試解決方案
- 半導體測試用關鍵零組件製造及銷售
- 化合物半導體及光電元件測試解決方案、零配件銷售
- 高低溫測試系統
- 3D 量測方案
- 光學顯微鏡系列產品
- 其他客製平台等

## 亮點介紹

- 旺矽化合物半導體及光電元件測試方案
- 旺矽先進半導體測試工程探針台 ( 手動 / 半自動 / 全自動 )
- 旺矽高低溫測試方案：可移動式氣流溫度控制系統 (Thermal Air 產品系列)

## 連絡資訊

- ◆ 聯絡人姓名 / 職稱：Ammy Chan/ 業務經理
- ◆ 地址：新竹縣新埔鎮文山路犁頭山段 988 號 2F
- ◆ Email：sales@cli.com.tw
- ◆ 電話：03-552-7788
- ◆ 傳真：03-551-9899

## Company Profile

Chain Logic International Corp. (CLIC) was established in 1994 and is located in Hsinchu, Taiwan. CLIC is a subsidiary of MPI Corporation that has been publicly listed on TPEX since 2003. For more than 25 years, CLIC has been representing well-known equipment and consumable manufacturers from Europe, USA, Japan, and Korea and strives to offer excellent products and professional services for high-tech manufacturing industries such as Semiconductors, Display, LED, Optical Communications, and Optical Sensing. Our mission is to provide value as well as competitiveness to customers.

CLIC provides services that include but are not limited to Photonic device tests, IC package material, Advanced Semiconductor Test solutions, Thermal Tests, and Laser solutions. CLIC has built its maintenance and service centers in Taichung and Kaohsiung to provide fast response and localized service support. CLIC dedicates to technical innovations and commits to delivering solutions to our customers in the best possible way. With years of experience, we aim to provide tailor-made and precise turn-key test solutions to further increase the efficiency and quality of measuring tasks.

## Main Product/ Service

- Advanced Semiconductor Test:
- Engineering Probe System / RF and mmW Probes from 26 to 220 GHz / Micro Positioner
- Laser System
- LED /Mini LED/ Micro LED Assembly Process:  
Capillary/ CSP P-S-T Solution/ COB Solution/ Dispensing Product/ Molding Equipment
- III-V Compound Semiconductors:  
Wafer / Chip Prober / Die Sorter/ AOI System/ Photonics Tester
- Optical Test:  
Optical Product/ Thermal Air TA5000
- Thermal Test Applications:  
Temperature Forcing Air Stream Systems / Thermal Wafer Chucks
- Other Service: customized stage

## Featured Products

- Wafer probers for III-V Compound Semiconductors test
- Engineering manual, automated, and fully-automated probe systems
- Temperature forcing air stream systems

## Contact Information

- ◆ Name : Ammy Chan/ Sales Manager
- ◆ Address : No.988 Litoushan Sec., Wunshan Rd., Hsinpu, Hsinchu, Taiwan, R.O.C.
- ◆ Email : sales@cli.com.tw
- ◆ TEL : +886-3-552-7788
- ◆ FAX : +886-3-551-9899



# 香港商先進太平洋科技 股份有限公司台灣分公司

ASM PACIFIC TECHNOLOGY



# ASM PACIFIC TECHNOLOGY

香港商先進太平洋科技股份有限公司台灣分公司

## 集團簡介

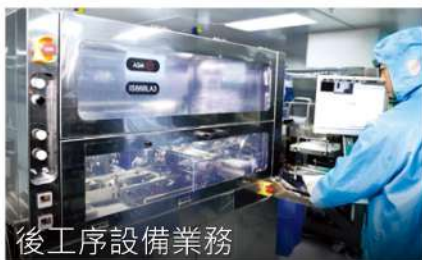
ASMPT 足跡遍布全球 30 多個國家，集團持續發揮自身在國際業務網絡與資源方面的優勢，推動其主要業務的增長 - 後工序設備、物料和 SMT 解決方案業務份部。

於 1975 年在香港成立，集團是全球首個為半導體封裝及電子產品生產的所有工藝步驟提供技術和解決方案的設備製造商，包括從半導體封裝材料到後段(芯片集成、焊接、封裝)到 SMT 工藝。全球並無其他設備供應商擁有類似的全面產品組合及對裝嵌及 SMT 程序的廣泛知識及經驗。

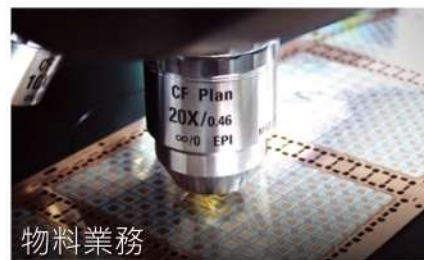
後工序設備業務生產及提供半導體裝嵌及封裝設備，應用於微電子、半導體、光電子及光電市場。其提供多元化產品如固晶系統、焊線系統、滴膠系統、切筋及成型系統及全方位生產線設備。物料業務生產及提供半導體封裝材料，由引線框架部和模塑互連基板部構成。SMT 解決方案業務負責為 SMT、半導體和太陽能市場開發和分銷一流的 DEK 印刷機，以及一流的 SIPLACE SMT 貼裝解決方案。

ASMPT 總部位於新加坡，自 1989 年起在香港聯交所上市。

## Business



後工序設備業務



物料業務



SMT 解決方案業務

## 連絡資訊

- 桃園 桃園市 333 龜山區科技一路 69 號 4 樓  
電話: +886 3 397 2020 | 傳真: +886 3 3973030
- 新竹 新竹市東區東美路91巷5號2樓  
電話: +886 3 573 3750 | 傳真: +886 3 573 3551
- 高雄 高雄市南梓加工出口區東三街 4-2 號  
電話: +886 7 367 6300 | 傳真: +886 7 367 6399
- 台中 台中市潭子區中山路 2 段 135 號 8F 之 1  
電話: +886 4 2535 6390 | 傳真: +886 4 2535 6820



## Company Profile

With a global presence in over 30 countries, ASMPT leverages its strong network and infrastructure, resources and talents to grow its key businesses in Back-end Equipment, Materials and SMT Solutions.

ASMPT, founded in 1975, is the only company in the world that offers high-quality equipment for all major steps in the electronics manufacturing process - from carrier for chip interconnection to chip assembly and packaging to SMT. No other supplier offers a comparable range and depth of process expertise.

Our Back-End Equipment Business offers a diverse product range from bonding to molding and trim & form to the integration of these activities into complete in-line systems for the microelectronics, semiconductor, photonics, and optoelectronics industries. Our Materials Business provides customers with a variety of leadframes such as etched and stamping as well as advanced packaging materials. Our SMT Solutions develops and sells best-in-class DEK printers for the SMT, semiconductor and solar markets as well as best-in-class SIPLACE SMT placement solutions.

ASMPT is headquartered in Singapore and is listed in Hong Kong Stock Exchange since 1989.

## Business



Back-end Equipment Business



Material Business



SMT Solutions Business

## Contact Information

- Taoyuan 4F, No.69, Keji 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan R.O.C.  
TEL: +886 3 397 2020 | FAX: +886 3 3973030
- Hsinchu 2 Floor, No.5, Lane 91, Dongmei Road, Hsinchu City, Taiwan R.O.C.  
TEL: +886 3 573 3750 | FAX: +886 3 573 3551
- Kaohsiung No. 4-2, East 3 Road Street, N.E.P.Z., Kaohsiung, Taiwan R.O.C.  
TEL: +886 7 367 6300 | FAX: +886 7 367 6399
- Taichung 8F-1, No. 135, Sec 2 Chung-Shan Road, Tantz District, Taichung City, Taiwan R.O.C.  
TEL: +886 4 2535 6390 | FAX: +886 4 2535 6820





# 高平磊晶科技股份有限公司

IQE TAIWAN CORPORAATION



# IQE TAIWAN CORPORAATION

高平磊晶科技股份有限公司

## 公司簡介

高平磊晶科技股份有限公司（以下簡稱高平磊晶）成立於民國九十年二月七日，位於新竹科學園區，實收資本額為新台幣三億九千五百萬元。主要法人投資者 90% 為英國半導體高科技公司 IQE plc、其他來自國內外、通訊及光電等產業，包括美國 Skyworks Solutions, Conexant Systems，日本 Sumitomo Electric Device Innovations，及國內的宏捷科技及聯測科技等。

高平磊晶的主要產品是以砷化鎵 (GaAs) 微波通訊半導體及光電半導體磊晶片為主，包含 HBT, pHEMT, BiFET, BiHEMT。已安裝完成十台有機化學氣相沉積 (MOCVD) 機台、砷化鎵材料分析、HBT 元件測試儀器與無塵室等生產設施，生產六吋磷化鎵 (InGaP) 及砷化鋁鎵 (AlGaAs)HBT 磊晶片。

高平磊晶產品的主要應用是行動電話手機的功率放大器 (Power Amplifier, PA)，無線區域網路 (WiFi) 所用的功率放大器及高速光纖網路的通訊元件，是無線通訊行動裝置的關鍵零組件，IQE 集團的市場佔有率超過 50%，為世界第一大供應商，產品研發技術及量產供貨能力都位居市場領導地位。

## 主要產品

砷化鎵 HBT, pHEMT, BiHEMT 半導體磊晶片

## 連絡資訊

- ◆ 張詔智 Jeffrey Chang
- ◆ 電話 :03-5798181 分機 :126
- ◆ 傳真 :03-5788865
- ◆ Email:jechang@iqep.com

## Company Introduction

IQE Taiwan Co., Ltd. was established on February 7, 1990 in the Hsinchu Science Park. The current paid-in capital is NT\$395 million and 90% of shares are owned by IQE plc, a global leading British compound semiconductor high-tech company. The other shareholders are from the industries of the communication and optoelectronics sectors, including Skyworks Solutions, Conexant Systems, Sumitomo Electric Device Innovations, Advanced Wireless Semiconductor Co. and UTAC Taiwan.

The company products are mainly Gallium Arsenide (GaAs) epitaxy wafers for the applications of microwave communication and optoelectronic semiconductors, including HBT, pHEMT, BiFET, BiHEMT. IQE Taiwan currently have the wafer capacity of more than ten organic chemical vapor deposition (MOCVD) systems with III-V material analysis tools, HBT device test equipment and high level clean room facilities. The production activities focus on six-inch Indium Gallium Phosphide (InGaP) and Aluminum Gallium Arsenide ( AlGaAs) HBT epitaxial wafer.

The main applications of company produced wafers are Power Amplifier (PA) for mobile phone handsets, power amplifiers for wireless local area networks (WiFi) and communication components for high-speed fiber-optic networks. Those are key components of wireless communication mobile devices. IQE Group is the largest supplier with a worldwide market share of more than 50%, and is in the leading position of new technology development.

## Main Product

GaAs HBT, pHEMT, BiHEMT epitaxy wafers

## Contact Information

- ◆ Jeffrey Chang
- ◆ TEL: 03-5798181 EXT 126
- ◆ FAX: 03-5788865
- ◆ Email:jechang@iqep.com



# 惠特科技股份有限公司

FITTECH CO., LTD.



# FITTECH CO., LTD.

惠特科技股份有限公司

## 公司簡介

惠特科技成立於 2004 年，為專業光電 / 半導體 / 雷射自動化設備研發與系統整合設備商。以 FitTech 自有品牌行銷全球，為目前全球 LED 測試與分選設備的最大供應商暨領導品牌，更以光電專業投入雷射二極體 (LD) 及其他化合物半導體測試設備、雷射微細加工設備及自動化等設備整合研發。惠特科技擁有完整的研發團隊，具備領先業界的研發能力，可高度滿足客戶需求。惠特堅持持續的創新，以優秀的整合能力與核心技術，提供客戶具競爭力的解決方案。

## 主要產品 / 服務



**LED / MiniLED / MicroLED 測試及分選解決方案**  
提供完整LED後段測試製程相關設備，包含全自動 LED/Flip chip 晶圓、晶粒測試及分選機、計數機、上下模機等設備。



**Laser Diode及其他化合物半導體測試解決方案**  
提供VCSEL/PD/DFB/EML等相關雷射二極體晶粒測試設備。可提供近遠場測試、高低溫測試、人眼安全測試、發散角測試等項目測試。



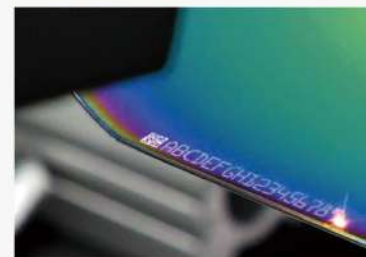
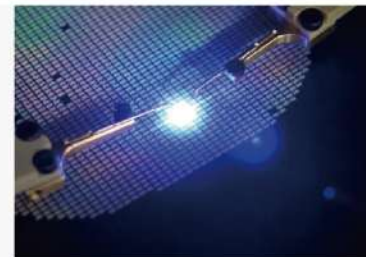
**雷射微細加工解決方案**  
惠特成立雷射技術研發中心，致力發展應用於半導體、PCB等產業的雷射精密加工設備，提供如切割、鑽孔、劃線、刻印、清潔等應用。



**LED / Laser Diode 測試及分選代工服務**  
惠特以自有研發生產之設備，建立代工廠，提供客戶LED/LD 測試及分選之代工服務。



**自動化/智慧化解決方案**  
因應工業4.0趨勢，惠特投入智慧製造，開發自動化點測及分選系統、整合MES系統，提供業界唯一LED後段點測與分選製程整合解決方案。



## 連絡資訊

- ◆ 地址：台中市西屯區工業區 35 路 3 號
- ◆ Email：marketing@fittech.com.tw
- ◆ 電話：04-23502319
- ◆ 傳真：04-23504502

## Company Profile

Established in 2004, FitTech Co., Ltd. is a professional corporation of developing automatic equipment and system integration for the optoelectronic, semiconductor industry and laser processing field. FitTech marketed globally with our own brand "FitTech". We expand steadily in the optoelectronic field, and become the biggest supplier and leading brand of LED testing and sorting system. FitTech also committed to develop testing and sorting systems of laser diode, other compound semiconductor, and laser micromachining system. To fit customers' requirements, we have a superior R&D team with high integration capabilities, and with our after-sales team, we provide all-round solutions for customers.

## Main Product/ Service



**LED / MiniLED / MicroLED Test & Sort solutions**  
FitTech provides total testing solutions for LED/ Flip chip LED wafer or chip. Including auto probing and testing systems, sorting system, chip counter, detaching tape system, etc..



**Laser Diode & Other Compound Semiconductor Test solutions**  
FitTech provides testing solutions for VCSEL/PD/DFB/FP/EML. Including near/far field pattern test, high/low temp. test, eye safety measurement, divergence angle measurement, etc. test items.



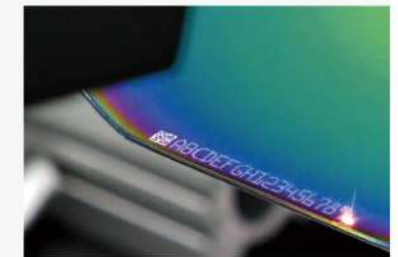
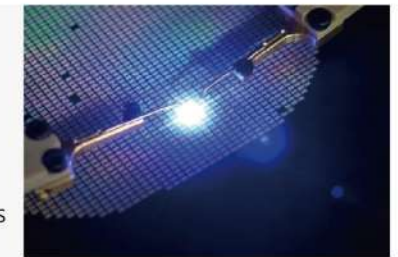
**Laser Micromachining Solutions**  
FitTech ventured into the research and development of laser micromachining systems for semiconductor and PCB industry, such as drilling, cutting, marking, scribing, cleaning machine, etc.



**LED / Laser Diode Test & Sort Service**  
FitTech builds OEM foundries, and provides customers LED/LD testing and sorting service by our own developed machines.



**Automation/Intelligence Solutions**  
FitTech invests in intelligent manufacturing, develops MES system, automation and smart factory solutions of LED testing and sorting.



## Contact Information

- ◆ Address：No.3, Gongyequ 35th Rd., Xitun Dist., Taichung City 407, Taiwan
- ◆ Email：marketing@fittech.com.tw
- ◆ TEL：+886 4 2350 2319
- ◆ FAX：+886 4 2350 4502

# EPISTAR 晶元光電股份有限公司

EPISTAR CORPORATION

# EPISTAR

# EPISTAR CORPORATION

晶元光電股份有限公司

## 公司簡介

EPISTAR自1996年創立至今，持續專注於發光二極體LED磊晶與晶粒的製造，以累積的豐富專業智識、研發與製造能力及全波段產品線優勢，滿足客戶全方位需求，成為世界LED供應商的領導品牌。

重視市場趨勢的EPISTAR，不斷突破現有框架，努力創新來符合客戶與終端市場的需要；除了照明應用外，也透過與客戶的合作，持續在顯示屏、車用、感測等應用上展現傑出的技術與產品。EPISTAR也正以前所未有的方式茁壯成長，準備好迎接各項挑戰，努力實現LED應用無限可能，創造更美好的未來生活方式。

晶元光電與隆達電子透過換股所共同成立之富采投資控股股份有限公司（以下簡稱「富采控股」），於2021年1月6日正式成立，並以股票代號3714於臺灣證券交易所上市，致力成為跨國性的最佳化合物半導體產業投資平台。

晶元光電已在2021年1月份正式成為富采控股百分之百持有之子公司，已於台灣股票市場上市，更多訊息請參閱富采控股 [www.ennostar.com](http://www.ennostar.com)

## 主要產品

- 四元（紅黃光）LED 磊晶片及晶粒
- 紫外線 / 遠紅外線 LED 晶粒
- 氮化物（藍綠光）LED 磊晶片及晶粒
- HCPV 太陽能晶片

## 產品特色

- ITO 應用全球第一：首創 ITO 應用在 LED 晶粒製程（四元、氮化物、三五族太陽能電池）
- Bonding 技術全球第一：全球最完整的 Bonding 相關專利
- 四元產品產能全球領先：全球主要四元晶粒製造廠中，擁有最完整且齊全的產品線
- 高電壓 LED、倒裝晶片...等先進產品製造技術完整，具有全球領先地位

## 連絡資訊

- ◆ 公司名稱：晶元光電股份有限公司
- ◆ 電話：03-5678-000
- ◆ 傳真：03-5783-080
- ◆ Email：Sales@EPISTAR.com
- ◆ 地址：300 新竹市力行路 21 號

## We Actualize LED Potential

In 1996, a handful of visionaries founded EPISTAR to usher in the LED era. With accumulated expertise and expansive capacity, today EPISTAR sits firmly as the premier global supplier. EPISTAR has already worked with some of the most well-known brands around the world, popularizing LED applications on smart phones, laptops, television, and much more. Thus EPISTAR is able to inject the benefits of solid state lighting into everyday life.

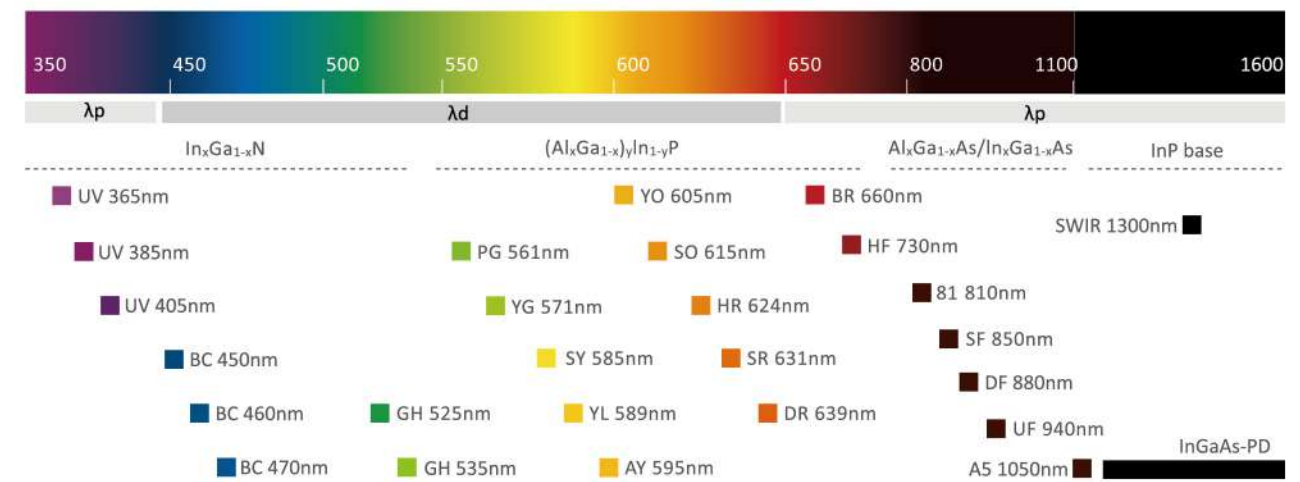
The singular vision that has powered EPISTAR from the beginning also contains insights into client-supplier relationship. EPISTAR has always believed that working closely with clients is critical to producing the highest quality end-products. That is why EPISTAR has developed a unique "Co-activation Service Model", working alongside clients as their partner, co-designing chips and production processes, while perfecting quality control.

EPISTAR's pivotal role in LED's full commercialization has guided the world into the solid state lighting era. Today that era is fast approaching full-bloom, and EPISTAR is more equipped than ever to take on increasingly challenging feats, to help illuminate the world in a better light.

EPISTAR and Lextar had jointly established a joint venture Ennostar Incorporation (TW stock code 3714), the best transnational investment platform of the compound semiconductor industry through share swap on January 6, 2021

EPISTAR is a member of Ennostar Inc, and not listed on Taiwan Stock Market now. For more investment information, please visit [www.ennostar.com](http://www.ennostar.com)

## Full Spectrum LED Product Portfolio



## Contact Information

- ◆ TEL: +886 3 567 8000
- ◆ FAX: +886 3 578 3080
- ◆ Email: sales@EPISTAR.com
- ◆ 21, Li-hsin Rd., Hsinchu Science Park, Hsinchu 300, Taiwan





# 華興電子工業股份有限公司

LEDTECH ELECTRONICS CORP.



# ENERGYLED CORPORATION

華能光電科技股份有限公司

### 企業宗旨與經營理念

華興電子工業股份有限公司創立於西元 1977 年，以立足台灣、放眼世界的宏觀理念，貫徹全球化的運籌佈局，致力於專業分工以及資源整合，強化我們的核心技術與優勢能力，最重要的是發揮團隊合作精神，以追求華興公司永續經營與回饋社會的使命。四十多個年頭以來，華興秉持著「誠信」、「負責」、「精益求精」的座右銘，專業生產發光二極體指示燈與顯示器，四十年來不斷的培育人才，研發新產品，更新自動化生產設備，以滿足客戶的需求。

### 有關子公司華能光電

華能光電成立於西元 2007 年，為華興集團旗下的子公司，擁有業界數十年經驗之經營團隊和先進研發技術團隊組合而成的專業 LED 照明公司。我們擁有豐富的 LED 封裝及 LED 模組設計與組裝技術作後盾，故更了解如何運用 LED 的光特性去製造出符合客戶需求的產品，更致力開發節能環保，更高光效率及高光品質的光源與應用。

### 核心力量與競爭優勢

我們專業堅強的經營團隊成員們共累積超過 230 年以上的 LED 產業經驗，長期合作之銷售通路據點分佈全球超過 70 個國家，擁有穩定的供應鏈與策略合作夥伴，專精於 LED、電子、光學、導熱、材料、效率、結構技術之整合，具創新研發能力，提供高品質、高信賴的產品達到符合市場客戶的需求。

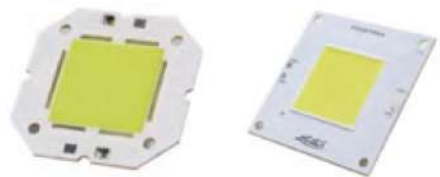
### 主要產品介紹

#### (一) LED 封裝



- LED Lamp
- SMD LED
- Based LED
- Flexible Light Strip
- LED Display
- LED Backlight
- Rigid Light Strip
- High Power LED

#### (二) LED 照明模組



利用 COB 照明模組 3W~200W，製成球泡燈、坎燈、泛光燈、天井燈、路燈等各式產品。

### (三) LED 照明應用產品

類別	燈管類	燈具類	射燈類	球泡類
產品	T5	坎燈	MR11	
	T8	泛光燈	MR16	
	T9	天井燈	GU10	E26
	T12	格柵燈	PAR30	E27
	(一般 / 低溫)	中東燈	PAR38	
		山型燈	AR11	
		工事		

### 產品特色與優勢

LED 與傳統產品相較之下無紫外光問題、使用壽命長、發光效率佳，符合環保需求，可確實達到節省電之效益。我司產品皆經過長時間信賴度測試與壽命試驗，不僅低光衰，演色性更可高達 97%，燈具設計具有有效散熱。此外，最新產品使用 COB 技術之熱電分離設計，能有效降低熱阻，提升元件壽命，減少維修，在產品亮度、色溫 BIN 區集中上更是品質的保證，能取代單點 LED 光源，光形更易設計，解決照明產品重影，降低組裝成本問題。我們透過定制化的服務，讓產品更能夠契合消費者的需求。

### 認證與專利

目前華興已通過 ISO14001、ROHS Compliance 環境系統認證，QS-9000、ISO-9002、ISO-9001(2000)、TS-16949 品質認證、UL 安規認證與 CE 認證，為台灣少數獲得 CNS 認證與節能標章的廠商之一，並在 2010 年得到國家級高新技術企業之榮譽，截至 2012 年 4 月已於全球取得共 224 個專利。

### 成功案例

華興集團深耕市場，為低溫照明的領導者，佈局橫跨全球各大洲前三大冷凍、冷藏、冰櫃、冷飲自動販賣機之製造商。至今年 4 月於全球銷售超過 25,000,000 支 LED 燈管 / 燈條，在低溫照明、商業空間、交通運輸、特殊照明、一般空間照明等不同領域上皆有許多成功案例，如下：

- 低溫照明：冷凍倉儲、蛋糕展櫃、超市、便利商店。
- 商業照明：百貨專櫃、化妝品展櫃、超市、量販店、工廠、便利商店、餐廳、地下街商品店。
- 交通運輸：公車、列車、地鐵。
- 特殊照明：大樓外觀裝飾、有機農場、博物館、藝廊、美術館。
- 一般照明：超市、銀行、學校、辦公室、會議廳、體育館、地下停車場。

### 展望未來

隨著消費者對於節能環保、永續地球的意識提升，並配合各國政府政策的提倡與法規的訂立，未來全球將走向 LED 照明的新世紀。華興集團秉持初衷，掌握元件封裝應用技術與成本優勢，專注研發 LED 產品應用，並結合市場需求，盼提供更高品質、高效能、低成本之產品，為客戶創造更大的效益。選擇華興產品，將是你最明智的選擇！

### 華興子公司 華能光電 成功案例分享



低溫照明  
案例：台灣全家便利商店



商業空間照明  
案例：日本地下街商品店



交通運輸照明  
案例：義大利巴士



特殊照明  
案例：臺灣國立故宮博物院



一般空間照明  
案例：日本超市



## Company Profile

Established in 2007, EnergyLED Corporation, a subsidiary of a Taiwan public-listed company LEDTECH, with 44 years of LED packaging experience from LEDTECH, has dedicated in being a total LED lighting provider by supplying the LED lighting finished products based on the self-supplied LED lighting components.

### We specialize in



Flood Light



Gen IV High Bay Light



High Wattage Spot Light



Low Temperature Lighting

and many more...

We look forward with much interest to exploring LED lighting market with you.

## Contact Information

- ◆ Jack Huang
- ◆ TEL: 886 2 22186891 Ext.2802
- ◆ Email: jack\_huang@energyled.com.tw



# 閱康科技股份有限公司

## MATERIALS ANALYSIS TECHNOLOGY INC.



# MATERIALS ANALYSIS TECHNOLOGY INC.

## 閱康科技股份有限公司

### 公司簡介

閱康科技成立於 2002 年，為涵蓋電子、電機、材料分析實驗室為內涵的技術服務公司，提供半導體產業鏈上 IC 設計、製造、封裝、測試等各階段所需的分析服務，無論是設備型號、機台數皆遠優於各大學和研究機構，在世界上居於領先的地位。閱康放眼全球，跨足海外建立實驗室和業務辦事處，至今已於全球共有十二處據點。

閱康科技完善的分析檢測系統如同人體的醫療體系，從理科檢查、內科診療、外科手術、到醫學中心的病理研究；對失效樣品，進行非破壞性檢測、電性分析、物性分析到材料分析，提供客戶醫療級的分析檢測服務。

閱康科技是台灣率先通過 ISO-9001、IECQ-17025、ISO-27001、TUV NORD Certification(Automotives)、ANSI/ESD S20.20 以及 ISO/IEC-

15408 等多項認證的獨立實驗室，並榮獲經濟部工業局頒發之工業精銳獎。本公司顯微尺寸量測結果為少數可回溯至美國國家標準研究院 (National Institute of Standards and Technology, NIST) 驗證的測量標準片，並通過國際大廠客戶現場稽核，提供客戶國際認證品質等級的精確分析數據。

隨著科技不斷推進，閱康發展領域持續加深加廣，因應 AI 人工智慧、機器學習、安全加密等大數據時代來臨，量子計算已成為全球科技產業熱門議題，其硬體核心在製作及分析的困難度極高，閱康提前布局不同量子結構所需的先進檢測技術，迎接量子時代的技術挑戰。凡有晶片製造的需求存在就是閱康服務的責任與價值，我們持續投資先進分析設備，強而有力的分析能量讓客戶在全球供應鏈中更具競爭力。

### 主要產品 / 服務

閱康以成為「高科技產業的最佳研發伙伴」為願景，持續以專業的分析服務提供高科技產業技術精進的品質對策，協助提升客戶產品在市場上的競爭力，以促進高科技產業的研究發展。

- **可靠度測試服務 (RA) :**  
針對不同產品階段提供元件可靠度、板階可靠度、系統可靠度，以及針對車用元件的可靠度服務。閱康可靠度實驗室為確保實驗品質與穩定性，均採用國際知名設備品牌，讓閱康客戶享有最穩定的測試機台與最佳測試環境。
- **非破壞性分析 :**  
包含「光學顯微鏡 (OM)」、「3D 光學顯微鏡 (3D OM)」、「2D X-ray」、「3D X-ray」、「超音波掃描顯微鏡 (SAT)」、「白光干涉儀 (OP)」以及「時域反射儀 (TDR)」等，透過不破壞樣品的手法，觀察半導體封裝或 PCB 內的缺陷定位。
- **電性故障分析 (EFA) :**  
閱康提供「InGaAs」、「OBIRCH」、「Thermal EMMI」、「C-AFM」、「AFM/SEM-based Nano-probing」、「EBIC/EBAC」、「EBIRCH」等完整電性故障分析服務，協助客戶驗證及量測半導體電子元件的參數與特性，如電壓-電流、電容-電壓特性曲線、電阻、電容、電感值量測或訊號波形等，藉此了解元件的失效行為以推測可能的故障機制，並決定後續的分析動作。
- **FIB 線路修補 :**  
閱康科技具備多平台單粒子束聚焦式離子束 (Single Beam FIB, SB-FIB) 顯微鏡提供 IC 線路修補服務，我們一天 24 小時、一星期七天的運作，提供客戶最即時服務，保證 24 小時之內完成客戶的委託案件是閱康給客戶的承諾。

- **樣品製備處理 :**  
各項樣品製備處理服務，包含「TEM 試片製備」、「化學蝕刻去封膠」、「雷射蝕刻去封膠」、「乾式蝕刻及研磨去層次」、「離子研磨」、「IC 封裝打線服務」、「Rework Station」以及「雷射植球」等服務。
- **材料分析 (MA) :**  
閱康科技同時擁有多部 Hitachi S-8020、S-4800 等一系列超高解像能的場發射型電子顯微鏡 (FE-SEM)，可搭配精準的樣品製備，如 CP (ion milling) 或嫻熟的 delayer 方式，對樣品表面及橫截面做微區放大觀察及元件尺寸量測。穿透式電子顯微鏡 (TEM) 則用於觀察樣品的精細結構，影像解析度可達奈米級的原子解像力。閱康另有「FIB」、「DB P-FIB」、「EELS」、「EELS」等重要材料分析工具，可為客戶提供奈米等級精確定位與觀察分析。
- **表面分析 (SA) :**  
閱康提供表面分析服務包含「二次離子質譜儀 (SIMS)」、「展阻分析儀 (SRP)」、「掃描式電容顯微鏡 (SCM)」、「X 光光電子能譜儀 (XPS)」、「歐傑電子能譜分析儀 (FE-AES)」、「原子力顯微鏡 (AFM)」、「薄膜厚度輪廓測量儀 (α-step)」、「光學膜厚測量儀 (Thin Film Analyzer)」、「傅立葉轉換紅外光譜儀 (FTIR)」等。
- **物理化學特性分析 (CA) :**  
化學分析中三大主要質譜技術 (ICP-MS / GC-MS / LC-MS)，閱康皆可提供分析服務，可對樣品進行定性或定量測定，提供包括其物理或機械性質、成份組成、外觀尺寸、粒子分布型態、聚集或團聚程度、溶解及分散狀況、表面電性及表面化學等資訊。
- **整合性分析 :**  
包含「競爭產品分析」、「專利分析鑑定」、「第三者鑑定報告」及訓練課程等。

### 亮點介紹

隨著半導體及材料產業的快速發展，閱康科技除了提供專業完整的分析服務外，更於 2021 年以科技部「基礎研究核心設施服務中心」為合作平台，啟動與臺灣大學、臺灣師範大學、清華大學、陽明交通大學、中央大學、中興大學、成功大學、中山大學等八校的產學合作計畫，每年投入新台幣 2,000 萬元，補助 20 件以開發高科技產品和製造、封裝、測試與系統等主題，並運用先進分析檢測技術的研究計畫，支持學術單位在創新元件、材料及創新構想的先期研究及開發。並特別於公司網站的技術文章專區開設「科技新航路 | 合作專欄」，每月邀請產學研界的教授及專家專文撰寫介紹目前最熱門、最先進的科技研究發展內容，攜手客戶及早掌握下一世代的關鍵產業技術。

### 連絡資訊

- ◆ 聯絡人姓名 / 職稱：吳方琪 / 行政助理
- ◆ 地址：300094 新竹市科學工業園區力行一路 1 號 1A3
- ◆ Email: kikiwu@ma-tek.com

- ◆ 電話：03-611-6678 #4310
- ◆ 傳真：03-563-0777

### Company Profile

Founded in 2002, Materials Analysis Technology Inc. (MA-tek) is a world-class technical service company covering electronics, electrical machinery, and material analytical labs. As an indispensable working partner, MA-tek provides QRA related technical services in many industrial parks to match customer needs in the supply chain of the electronic industry. MA-tek has set up 12 labs, situated throughout the world, to provide prompt and convenient service to our customers.

Employing medical services to combat human diseases, MA-tek possesses similar functional systems such as scanning acoustic tomography (SAT), X-Ray topography, electron microscopes, and hot emission microscopes for fault isolation. We are able to support yield enhancement in product engineering and wafer processing with powerful EFA and PFA tools. With the aids of the same logical diagnostic, analysis, consultancy, and FIB circuit editing, MA-tek has been well regarded as an analysis research center for new design products, in-process wafers, and field return products.

MA-tek was approved by the Industrial Bureau of the Ministry of Economic Affairs to provide R&D services and intellectual property rights services at the beginning of the establishment in 2002. MA-tek was certified by ISO-9001 management certification, IECQ-17025 laboratory certification, ISO-27001, ISO/IEC-15408 CC EAL6 in Information Security and also passed the on-site audits by international customers. Our microscopic size measurement results can be traced back to the National Institute of Standards and Technology (NIST) to verify the measurement standards, which can provide customers with international-level high-quality analysis services.

With the continuous advancement of science and technology, MA-tek's future development areas continue to deepen and expand, ranging from 5G development and AI to data center construction and other frontend trends, all of which are opportunities for MA-tek to elaborate its strengths. Wherever there is a demand for chip manufacturing, it is the responsibility and value of MA-tek's service. We continue to invest in advanced analysis equipment to provide customers with strong and powerful support to make customers more competitive in the global supply chain.

### Main Product/ Service

With the vision of becoming "The Best R&D Partner in the High-tech Industry", MA-tek continues to provide quality countermeasures for high-tech industry technological advancement with professional analysis services. The scope of MA-tek's services covers the rapid debugging and physical verification in the electronic product design phase, as well as the precise positioning of the fault areas of the micro and nano products, structure observation, material composition and other static and dynamic test analyses; ranging from manufacturing process development, manufacturing process integration, to basic academic research, quality control, patent litigation, failure analysis, competitive product structure analysis or customer returns related issues, these are all within the scope of services.

**Reliability Testing Services (RA) :**  
MA-tek provides component level reliability, board level reliability, system level reliability, and reliability services for automotive. In order to ensure the quality and stability of experiments, MA-tek's reliability laboratory uses internationally renowned equipment brands, so that MA-tek customers will have the most stable testing machines and the best test environments.

**Non-destructive Analysis :**  
The non-destructive analysis provided by MA-tek includes "Optical Microscopy (OM)", "3D Optical Microscopy (3D OM)", "2D X-ray", "3D X-ray", "Scanning Acoustic Tomography (SAT)", "Optical Profilers (OP)", and "Time Domain Reflectometry (TDR)".

**Electrical Failure Analysis (EFA) :**  
MA-tek provides comprehensive electrical failure analysis services such as "InGaAs", "OBIRCH", "Thermal EMMI", "C-AFM", "AFM/SEM-based Nano-probing", "EBIC/EBAC", "EBIRCH", etc. MA-tek also provides probe measurement services for hard needles and soft needles for the chip level (mainly for electrical measurement and verification after circuit repair). To operate in coordination with the setup of the probe station and needle base, which can tap six needles at the same time, there is a laser cutting system equipped on the probe station which can be used for positioning.

**FIB Circuit Repair :**  
MA-tek has a total of 15 Single Beam FIB (SB-FIB) microscopes that can provide IC circuit repair services. We operate 24 hours a day, 7 days a week to provide the customers with the most immediate services and to guarantee the completion of customers' commissioned cases within 24 hours. This is MA-tek's commitment to customers.

**Sample Preparation :**  
MA-tek provides various sample preparation services, including "TEM Sample Preparation", "Chemical Decap", "Laser Decap", "Delayer & Parallel Lapping" and "IC Packaging & Bonding".

**Materials Analysis (MA) :**  
The Electron Microscope (TEM) is the fastest and most effective method for observing the fine structure of surfaces. MA-tek also has a series of ultra-high resolution devices such as the Hitachi S-8020 and S-4800 Field Emission-SEM (FE-SEM), which can be paired with precise sample preparation, such as CP (ion milling) or a highly skilled delayer method, to perform micro-area magnification observation and component size measurement on the sample surface and cross-section; the magnification can reach hundreds of thousands of times. The additional Energy Dispersive Spectrometry of X-ray (EDS) can perform qualitative and semi-quantitative analysis of micro-zone materials, which is of great help to the analysis of material composition or foreign body composition.

**Surface Analysis (SA) :**  
MA-tek provides various Surface Analysis services, including "Secondary Ion Mass Spectrometry (SIMS)", "Spreading Resistance Probe (SRP)", "Scanning Capacitance Microscope (SCM)", "X-ray Photoelectron Spectroscopy (XPS)", "Field-emission Auger Electron Microscope (FE-AES)", "Atomic Force Microscope (AFM)", "Thin Film Analyzer (α-step)", "Optical Thin Film Analyzer", and "Fourier Transform Infrared Spectroscopy (FTIR)", etc.

**Physicochemical Characteristics Analysis (CA) :**  
Mass Spectrographic Analysis is an important technology to identify the structure of substances, the mass spectrometry shows the signal intensity of elements with different masses in the sample to identify unknown compounds. MA-tek can provide analysis services for the three major mass spectrometry techniques in chemical analysis (ICP-MS/GC-MS/LC-MS).

**Integrated Analysis :**  
The Integrated Analysis services provided by MA-tek include "Failure Analysis Process", "Integrated Project Service" and "Competitive Product Analysis".

### Highlights

Considering the rapid development of the semiconductor and materials industries, MA-tek has decided that, in addition to providing comprehensive and professional analysis services, we had launched the "New Technology Channel | Collaboration Column" on our official website, where we invite professors and experts from the industry, academic and research circles to share and discuss various topics of interest, striving to continuously bring the most advanced scientific and technological research and development content to all of our customers and partners thereby.

### Contact Information

- ◆ Address : 1A3, 1F, No.1, Li-Hsin Rd. I, Hsinchu Sciencebased Industrial Park, Hsinchu City, Taiwan 30078, R.O.C.
- ◆ Email : marketing@ma-tek.com
- ◆ TEL : +886-3-611-6678
- ◆ FAX : +886-3-563-0777



# 鼎元光電科技股份有限公司

TYNTEK CORPORATION



# TYNTEK CORPORATION

鼎元光電科技股份有限公司

## 公司簡介

鼎元光電科技股份有限公司為 LED、Silicon Device 及光通訊元件專業製造商，秉持品質、創新、服務、環保的經營理念，並提供最優質的服務，客戶遍及中國、日本、韓國、歐洲和美國。

## 主要產品

### 化合物半導體元件

#### 1.Visible LED Chip

GaP /GaP	Red,Green
GaAsP/GaP	Yellow ,Orange Red
AlGaAs/GaAs	SH,DH,DDH high brightness Red
AlGaInP/GaAs	As Type Yellow,Green,Orange, Red
AlGaInP/Si	Wafer Bond Red,Yellow

#### 2.Infrared LED Chip

GaAs/GaAs	940nm Infrared LED
AlGaAs/GaAs	940nm Infrared LED
AlGaAs/AlGaAs	700 ~ 900nm Infrared LED
AlGaAs/Si	Wafer Bond 730 ~ 940nm Infrared LED

#### 3.Opto Fiber Communication Device Chip

InGaAs/InP	1300nm LED and Photo diode
AlGaAs/GaAs	850nm Photo diode and VCSEL

#### 4.OEM and ODM service in compound semiconductor devices.

### 矽半導體元件

#### 1.Photo-Transistor Chip

Photo-coupler
Photo-interrupter
Photo-Switch
Ambient Sensor

#### 2.Photo-Diode Chip

Standard Type for Remote controller
Data Communication
Smoke Sensor
Optical Encoder
Ambient Sensor

#### 3.Zener-Diode /TVS Chip

ESD Protection
Surge Protection
Voltage Regulation

#### 4.OEM and ODM service in Bi-polar silicon devices.

## 連絡資訊

- ◆ 地址 : 350 竹南科學工業園區科中路 15 號
- ◆ TEL : +886-37-582997
- ◆ FAX : +886-37-582908
- ◆ E-Mail : service@serv.tyntek.com.tw

## About Us

Tyntek is the LED, Silicon Device, and Opto Fiber Communication Device professional manufacturer. Based on our quality, innovation, service and environmental protection management belief, we provide the superior service. Also, Tyntek's customers are all over the global including China, Japan, Korea, Europe, and U.S.A.

## Products & Service

### Compound Semiconductor Devices

#### 1.Visible LED Chip

GaP /GaP	Red,Green
GaAsP/GaP	Yellow ,Orange Red
AlGaAs/GaAs	SH,DH,DDH high brightness Red
AlGaInP/GaAs	As Type Yellow,Green,Orange, Red
AlGaInP/Si	Wafer Bond Red,Yellow

#### 2.Infrared LED Chip

GaAs/GaAs	940nm Infrared LED
AlGaAs/GaAs	940nm Infrared LED
AlGaAs/AlGaAs	700 ~ 900nm Infrared LED
AlGaAs/Si	Wafer Bond 730 ~ 940nm Infrared LED

#### 3.Opto Fiber Communication Device Chip

InGaAs/InP	1300nm LED and Photo diode
AlGaAs/GaAs	850nm Photo diode and VCSEL

#### 4.OEM and ODM service in compound semiconductor devices.

### Silicon Semiconductor Devices

#### 1.Photo-Transistor Chip

Photo-coupler
Photo-interrupter
Photo-Switch
Ambient Sensor

#### 2.Photo-Diode Chip

Standard Type for Remote controller
Data Communication
Smoke Sensor
Optical Encoder
Ambient Sensor

#### 3.Zener-Diode /TVS Chip

ESD Protection
Surge Protection
Voltage Regulation

#### 4.OEM and ODM service in Bi-polar silicon devices.

## Contact Information

- ◆ Address : No.15, Kejung Rd., Chunan Science Park , Chunan , Miaoli County 350, Taiwan (R.O.C.)
- ◆ TEL : +886-37-582997
- ◆ FAX : +886-37-582908
- ◆ E-Mail : service@serv.tyntek.com.tw

EVERLIGHT 億光電子工業股份有限公司

EVERLIGHT EVERLIGHT ELECTRONICS CO.,LTD.

EVERLIGHT ELECTRONICS CO.,LTD.

億光電子工業股份有限公司

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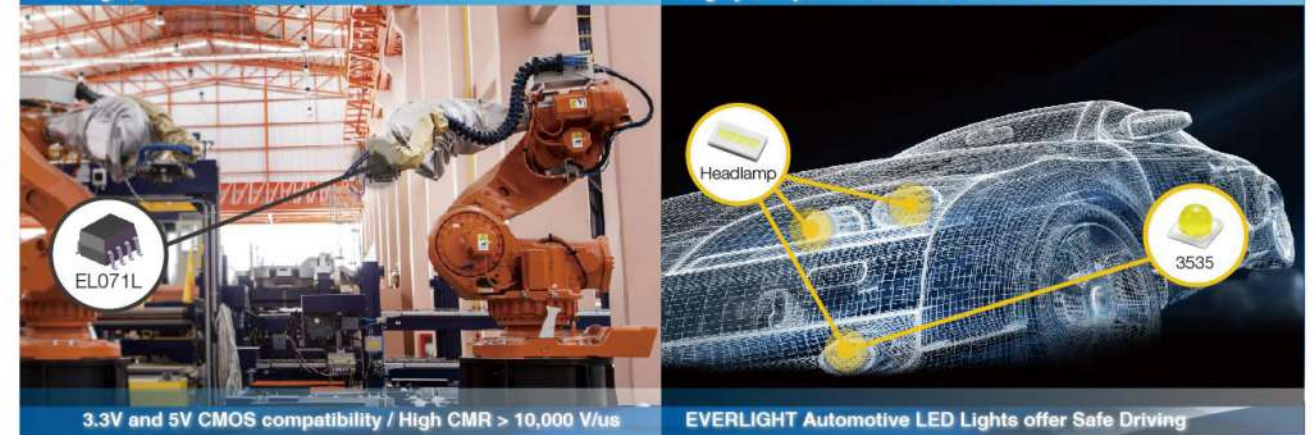
新北市樹林區中華路6-8號  
+886 2 2685 6688

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No. 6-8, Zhonghua Rd., Shulin Dist., New Taipei City 23860, Taiwan, R.O.C.  
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# PLAYNITRIDE 鏢創科技股份有限公司

PLAYNITRIDE INC.

# PLAYNITRIDE

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鏢創科技股份有限公司

## 公司簡介

PlayNitride Inc. 成立於 2014 年，集結一群目標「改變世界」的夥伴要為氮化物產業帶來新思維，透過創新的研發技術和多元的商業模式，現已成為 MicroLED 技術領域的領導廠商之一，以提供客戶最大價值。

目前，PlayNitride Inc. 是多家全球頂尖企業的合作夥伴，其中包括台 / 韓 / 日顯示器大廠與知名品牌系統商。展望未來，從晶片至系統，並擴及至新型態的顯示應用科技如 AR/VR、穿戴式裝置 / 手機或車載應用等，PlayNitride Inc. 將扮演 "MicroLED Display Ecosystem" 的上下游整合角色，持續專注開發關鍵技術，提供 MicroLED 顯示器的不同產品或解決方案，與合作夥伴一同邁向 MicroLED 顯示應用的世界。

## 主要產品 / 服務

鏢創擁有 PixelLED 的 MicroLED 製造技術以及 SMAR-Tech 的 MicroLED 缺陷修補技術，讓 MicroLED 除了可使用在傳統顯示器的優化提升外，更可提供許多創新的顯示科技應用，被視為終極顯示技術。

依據應用需求的不同，目前主要分為三大解決方案：

1. PixelLED Display – MicroLED 使用低溫多晶矽面板；主要以主動顯示技術 (Active Matrix) 為主，基板為玻璃材質或 PI 軟板材質，可做出透明、可撓曲的 MicroLED 顯示面板。主要使用於車用或是各類消費性電子產品。
2. PixelLED Matrix – MicroLED 使用印刷電路板；使用鏢創獨家的 PixelLED Matrix 技術，將 MicroLED 晶片以 4x4 像素為單位進行封裝，結合成熟的表面黏著技術 (SMT) 製成打件於印刷電路板 (PCB) 上，製成 5 吋的顯示模組。主要使用於大型看板或是電視螢幕之產品。
3.  $\mu$ -PixelLED – MicroLED 使用 CMOS 基板；將 MicroLED 晶片微小化至 5 $\mu$ m 以下尺寸，以極高的排列密度，做出小於 0.5 吋具有超高亮度與解析度的微型顯示器，作為 AR 應用之強光源顯示器。

除了上述之產品技術差異外，鏢創顯示科技會按客戶需求提出不同的解決方案，與各關鍵廠商攜手為客戶量身打造合作方式。



## 亮點介紹

MicroLED 有著節能省電、高亮度、高解析度、可撓曲或透明、反應無延遲且可靠度穩定等特色。在未來的各項發展趨勢上成為重要的元件。

像是 MicroLED 本身即具備環保概念，在特性上相較傳統 LCD 僅有 10% 的耗電量，且鏢創推出的解決方案之一即是透過拼接的方式，客製化製作大型顯示看板，並能在顯示器損壞時以模組為單位更換，不製造廢棄家電的浪費，極具環境友善的特色。

正對元宇宙的趨勢，MicroLED 本身的超高解析度、超高亮度與輕薄的特性正是 AR 眼鏡的影像來源，在元宇宙的七大核心要素中成為硬體的元件之一，參與整個供應鏈。

零碳排的世界趨勢中，電動車的發展成為各國施政綱要，在自動駕駛的未來，車內的影音娛樂或是安全警示將更加仰賴顯示器的輔助，讓顯示器無所不在。而車內顯示器對於可靠度的要求、以及形狀的可撓曲性，甚至是透明度的要求，都指向 MicroLED 顯示器的特性，因而獲得強烈的關注。在未來的世界上，MicroLED 顯示器將全程參與。



## 連絡資訊

- ◆ 聯絡人姓名 / 職稱：劉應蒼 / 行銷總監
- ◆ 地址：苗栗縣竹南鎮科中路 13 號
- ◆ Email：inquiry@playnitride.com
- ◆ 電話：037-586610

## Company Profile

PlayNitride Inc. was formally established in 2014, gathered a group of companions aim to "Change the world" and bring through the innovative R&D and diverse business models, PlayNitride has become a leading company in the field of MicroLED technology, enabling our customers to shape the future.

At present, PlayNitride is a reliable partner of many global top companies, including Taiwan/Korean/Japanese display manufacturers and well-known brand system vendors.

Looking toward the future, PlayNitride will dedicate ourselves to integrate "MicroLED Display Ecosystem" from wafer to system, and further to new emerging applications with extensive experience in the MicroLED display.

PlayNitride also provides a broad range of products and services including research and development in the field of compound semiconductors and in the field of microscale semiconductors for our customers.

## Main Product/ Service

With the PixelLED MicroLED manufacturing technology and SMAR-Tech (Selective Mass Addressable Repair Technology), PlayNitride owns the core technology of MicroLED, which can upgrade the user experience from traditional LCD displays and also provide more creative display applications. Thus, MicroLED is believed to be the ultimate display technology.

According to different applications, here PlayNitride provides three solutions:

1. PixelLED Display – MicroLED on TFT (Thin-Film Transistor): Driving by Active Matrix technology and taking glasses or PI (Polyimide) materials as backplanes, MicroLED display can be transparent or exible which is applied to the automotive or consumer electronics products.
2. PixelLED Matrix – MicroLED on PCB (Printed Circuit Board): With the exclusive PixelLED Matrix technology, PlayNitride

seals MicroLED chips into a "4x4 pixels" unit matrix and utilizes the mature SMT (Surface-Mount-Technology) process to mount the matrix onto the PCB to produce a 5-inch display module which can tile to any aspect ratio or size by customization, which is applied to the large signage board or any screen products.

3.  $\mu$ -PixelLED – MicroLED on CMOS (Complementary Metal-Oxide-Semiconductor): Scaling down the MicroLED chip size to under 5 $\mu$ m to produce an ultra-high-resolution display which can also perform ultra-high brightness as the micro size MicroLED display, which is applied to the resource of AR glasses.

Besides, PlayNitride can also provide customized solutions with key suppliers to fulfill different inquiries from customers.

## Identity Introduction

For MicroLED itself, there are so many advantages, such as low power consumption, high brightness, high resolution, transparent, flexible, fast response time, and excellent reliability. Which is born to be a key component of further display development.

MicroLED technology is eco-friendly, compared with traditional LCD, the power consumption is 10% only. PixelLED Matrix technology from PlayNitride can provide tiling screen by customization, and the tiling feature allows the module of signage to be replaced when it is damaged, without creating waste of full display replacement, which is extremely environment friendly.

Facing the trend of Metaverse, MicroLED displays in  $\mu$ -PixelLED technology can perform ultra-high resolution, extremely high brightness, and thin size. It is perfect as the image source of AR glasses.

On the way of "Net Zero Emissions" world, the development of the electric car is a necessary policy all over the world. In the future, the media entertainment system and security support will count on displays all around the car. MicroLED display can fulfill the high reliability requirement of automotive and be flexible or transparent, which is in the spotlight of the automotive industry.

In the further, MicroLED Display will be anywhere.

## Contact Information

- ◆ Name：Falcon Liu / Marketing Director
- ◆ Address：No. 13, Kezhong Rd., Zhunan Township, Miaoli County 350401, Taiwan (R.O.C.)
- ◆ Email：inquiry@playnitride.com
- ◆ TEL：+886-37-586610



# AMA Association for Sensors and Measurement

AMA Association for Sensors and Measurement



# AMA Association for Sensors and Measurement

AMA Association for Sensors and Measurement

## Company Profile

AMA is the first contact for sensor and measuring technology and provides a comprehensive overview of sensors, measuring, and testing technology in its detailed industry directory. The Association cultivates an innovation dialog at the leading trade fair SENSOR+TEST, at community stands of major fairs worldwide, and at the Sensor and Measurement Science International (SMSI). AMA also offers technology seminars and theme days focusing on topics in the area of sensor and measuring technology.

## Services

The AMA Association is an industry association and thus allocates the broad spectrum of sensor and measuring fields to specialized committees and study groups. Technical developments, trends in the sensor and measuring industry, questions on standardization, or the support of marketing activities: the AMA always links up and networks its members.

AMA have 450 members in the following area :

- I. Sensors
  - S.01 Sensors and sensing elements by measured parameter
  - S.02 Sensors and sensing elements by measurement principle
  - S.03 Sensor components and accessories
  - S.04 Equipment for the production of sensors and actuators
  
- II. Measurement Technology
  - M.01 Telemetry system and components
  - M.02 Modeling and simulation, HiL
  - M.03 Measuring equipment
  - M.04 Measuring equipment with integrated sensor
  - M.05 Measurement modules, measurement data acquisition systems
  - M.06 Software
  - M.07 Measurement components and accessories
  - M.08 Image processing
  - M.09 Testing equipment
  
- III. Services
  - D.01 Research and Development, R&D, and knowledge transfer
  - D.02 Contract manufacture, production
  - D.03 Calibration and Testing
  - D.04 General contracting services



**AMA Innovation Award**  
AMA Innovation Award for outstanding research and development work.



**Trade Fairs**  
Besides the SENSOR+TEST, AMA offers participation at the AMA Centers at other fairs in Germany and abroad.



**Seminars**  
Seminars for vocational qualification in high-technology areas.



**AMA Conferences**  
International networking platforms for sensor and measuring technology

## Contact Information

- ◆ Address: Sophie-Charlotten-Str. 15 14059 Berlin/Germany
- ◆ Tel.: +49 (0) 30 2219 0362 -0
- ◆ Fax: +49 (0) 30 2219 0362 -40
- ◆ Email: [info@ama-sensorik.de](mailto:info@ama-sensorik.de)
- ◆ Website: <https://www.ama-sensorik.de/en/>

# 會員 Member

Taiwan Optoelectronic Semiconductor Industry Association



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