

Welcome !

New Business Service Introduction:
OCA Optical Bonding Service

LCD Module/ EMS/ SMT/ DIP
Manufacturer/ Design
in Taiwan



晶發科技股份有限公司





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Basic Information

Company Name	GI FAR Technology co., Ltd. 晶發科技股份有限公司
Establish	Since 1998
Capital	USD 1,130,000
Employees	About 50 persons (In March 2022,growing up)
Core Business	EMS&LCM Design/Manufacturing (COB, COG, TAB, TFT, Optical Bonding Service, SMT, DIP Process)



Gi Far Milestone

- 1998 ● Established in New Taipei City, Taiwan
- 2000 ● ISO Certification passed, Launch
R&D interface: USB, RS232, Wi Fi System module
- 2002 ● R&D interface: USB, RS232
- 2004 ● Gi Far invested in TFT technology and start TFT LCD business
- 2005 ● Start to develop LCM solution:
USB/RS232/RS485/Wireless system
- 2007 ● R&D TFT LCD Control, interface: MCU/RS232/USB
- 2009 ● LCD Module release: FSC
Produce Monochrome LCD Module
- 2010 ● Purchase owned new factory, land: 3,300m² in Taiwan
The total capital increase to US\$4KK
- 2012 ● Launch process for interface: TFT RS232/SPI/I2C, etc...
- 2013 ● Expand production lines, Construct new factory
- 2016 ● Move to the New factory
- 2018 ● SMT / DIP lines finished
- 2020 ● OCA Optical Bonding Service (Equipment moved in since Nov. 29, 2020)
- 2022 ● Awarded the certification of AS9100:D/JISQ9100:2016/EN9100:2018 Aerospace QMS standard by AFNOR on March 16.
- 2022 ● Awarded the certification of IATF 16949: 2016 Automotive QMS standard by AFNOR on April 6.
- 2023 ● Estimated a new SMT line is expected at the end of 2023

Gi Far Technology Co., Ltd.

EMS · LCD Module · SMT · DIP Manufacturer/Design in Taiwan

Module Category

**Product
Technology**

**COB / COG / COF / TAB
/TFT OLED LCM
/EMS / SMT/ DIP**

Gi Far Modules



TFT Solution
JD7 series: 3.5, 4.3, 7.0"



RS232/RS485
UART Display



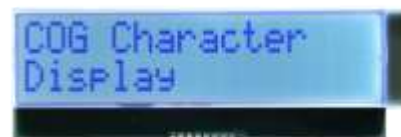
USB UART Display



RS232/RS485
UART Display



Custom Design



COG Character



COG Graphic



TFT LCM



TAB LCM



COB Graphic



COB Character

Module Application

Industry field Manufacturer equipment field	Industry auto controller, Automobile & Motorcycle & Bike (4/3/2 wheelers), Industrial PC (1U/2U), etc....
Medical device field	Sporting, Industrial, Medical equipments, etc...
Home appliance field Consumer electronics field	Printer, Calculator, Translator, Gaming device, Databank, MP3, POS system, etc....
Communication field	Cellular phone, Wireless phone, Fax machine, Pager, Navigator, etc...
Civil Aviation/Aerospace /Military field (Army, Navy, Air Force)	Aircraft cockpit display, aircraft entertainment display, training equipment display, Defense & Military equipment display.

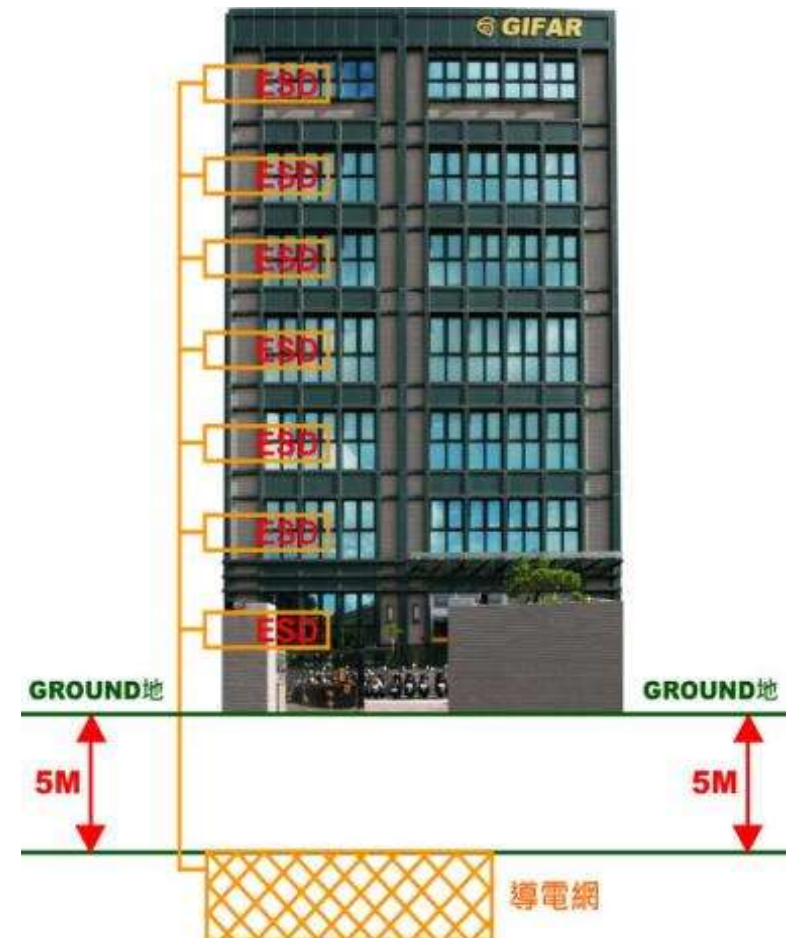
Facility – Clean room

- ✓ Clean room 10,000 class
- ✓ Humidity Control

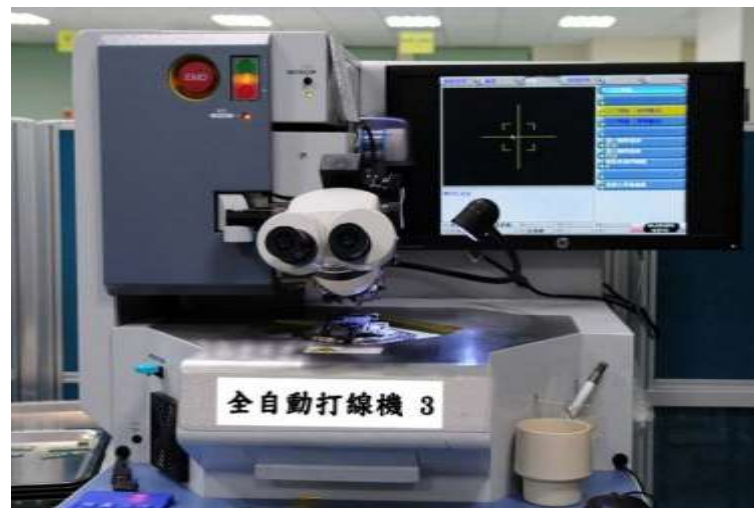
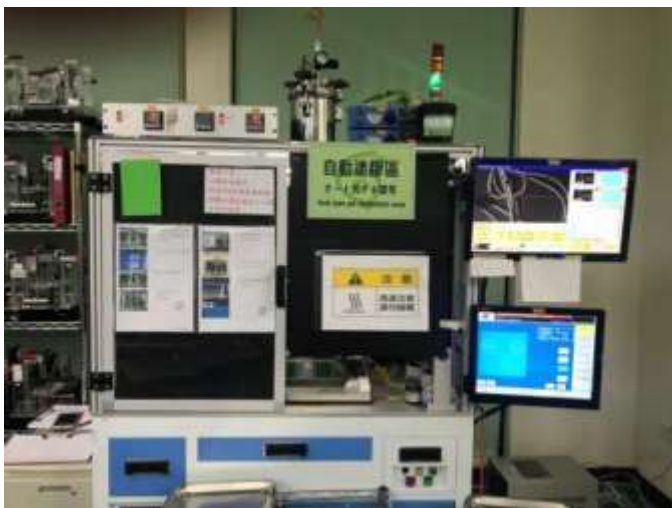


Facility – ESD protection

- ✓ Whole building ESD Protection
- ✓ Discharge to underground 5M
- ✓ ESD protection
- ✓ Relative equipment, using ESD slippers



Facility – Wire bonding line



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Facility – New SMT



- Maximum size of the board: 65cmx37cmx2.5cm(length)x(width)x(thickness)
- Minimum size of the board: 5cmx5cmx0.8mm (length)x(width)x(thickness)
- Minimum size of the parts: 0201*1~□74mm/50*150mm
- IC minimum pitch: 0.2mm is the minimum
- BGA pitch: 0.25mm is the minimum
- BGA diameter: 0.1mm
- Lead-Free process
- Single, double side work

Equipment – DIP-eras 2020



- **DIP-eras 2020**
Selective Wave Soldering machine

Equipment – X-RAY Counting Machine 、 X-RAY Inspection Machine



- X-RAY Counting Machine



- X-RAY Inspection Machine

PCB SMT

PCB SMT 、 DIP 、 Assembly

PCB SMT 、 DIP	PCB SMT 、 DIP	PCB SMT 、 DIP	PCB Assembly
			
			

FPC SMT

FPC SMT

FPC SMT	FPC SMT	FPC SMT
		
		

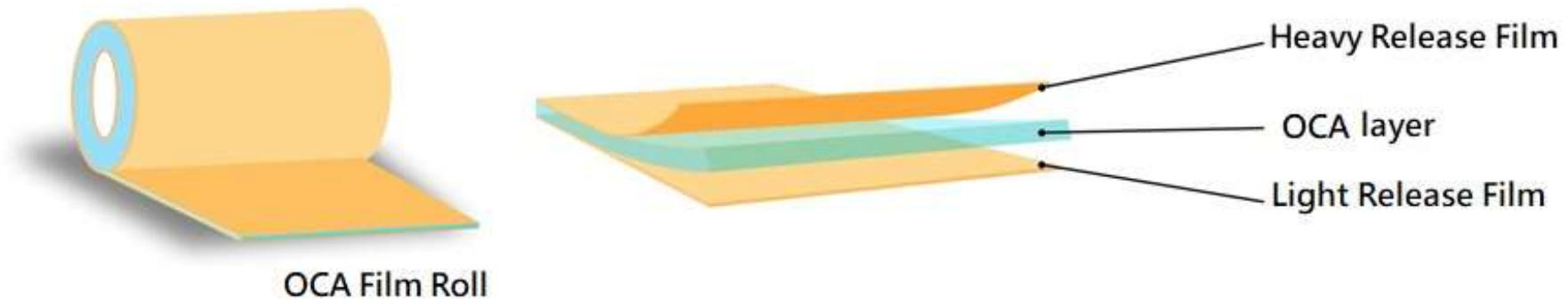
Module Capacity

➤ **COB 16x2 Character LCM**

18000 pcs / 24H

OCA Optical Bonding Service

• Features of Optical Clear Adhesive (OCA)



- 1.Reduce reflection rate, reduce LCD or AMOLED display Luminous loss, increase display brightness, provide high transmittance, and reduce power consumption.
- 2.Increase contrast ratio especially under strong light.
- 3.Higher strength in combined surface connections.
- 4. Avoid the Newton Ring.
- 5.Surface more smooth and seamless without wrinkle, bubble, partial.
The displaying image is almost not affected by OCA optical adhesive.
- 6.No boundary, extended view area, excellent air bubble removing result,
Touch Panel high yield rate, no yellowing, repairable after delivery.

Advantage:

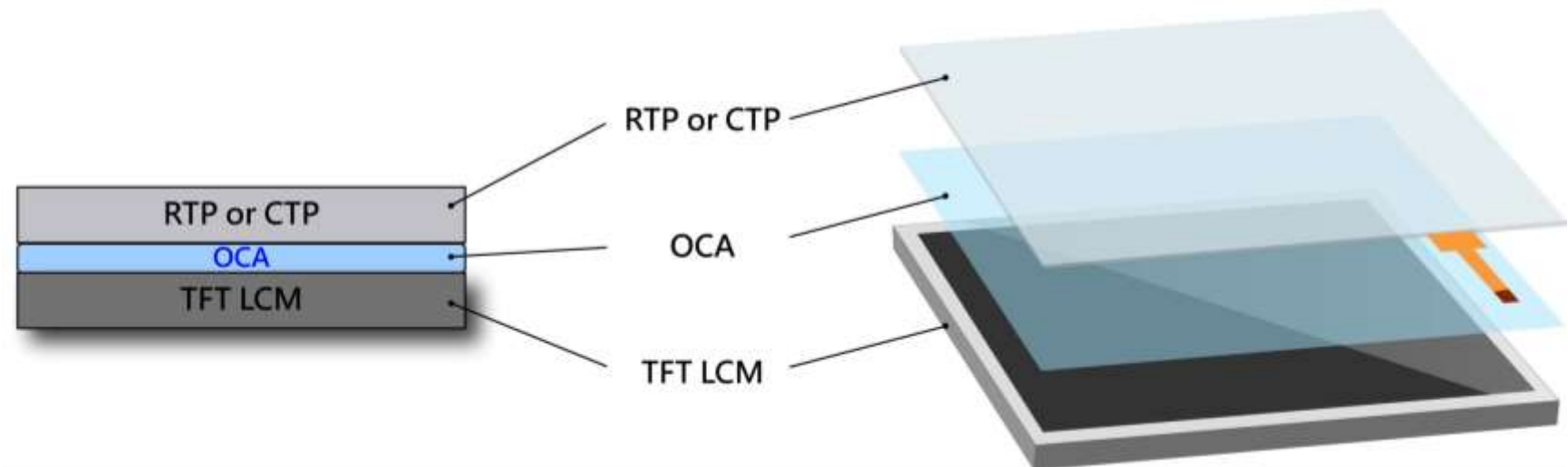
- High Transparent
- High Transmittance
- Low Haze Rate
- High Adhesive
- No Defective Pixel
- No bubble
- Water resistance
- High Temperature resistance
- Anti-UV

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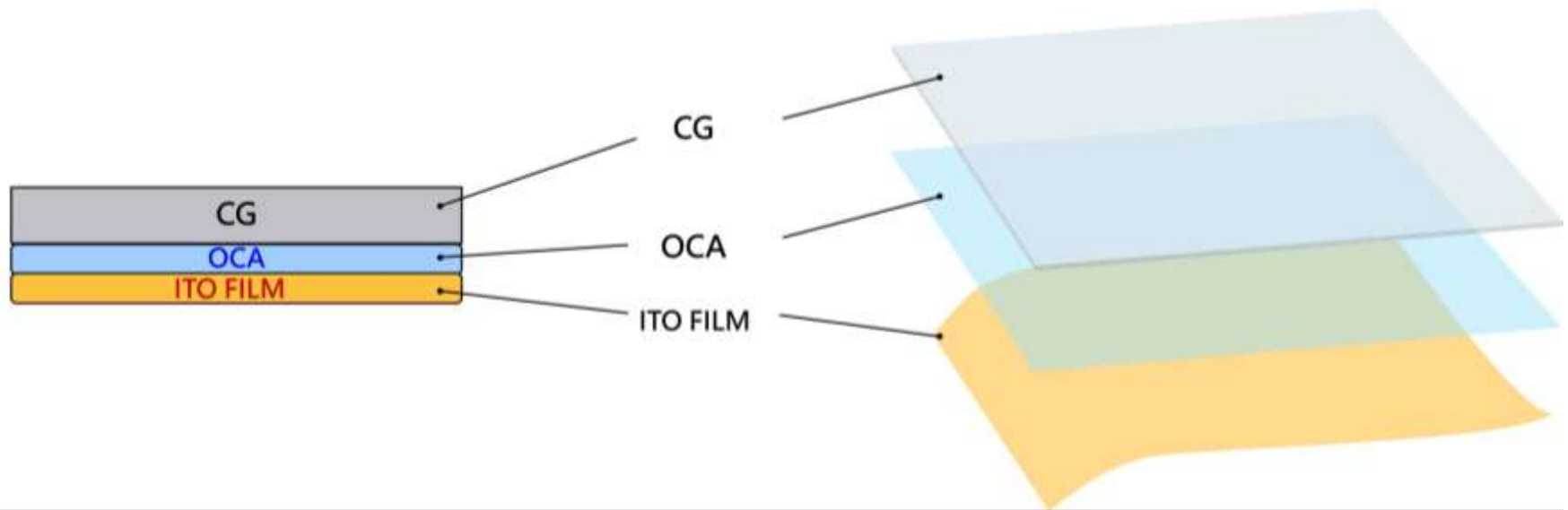
OCA Optical Bonding Service

- OCA Optical Bonding
 1. Hard to Hard: G2G



OCA Optical Bonding Service

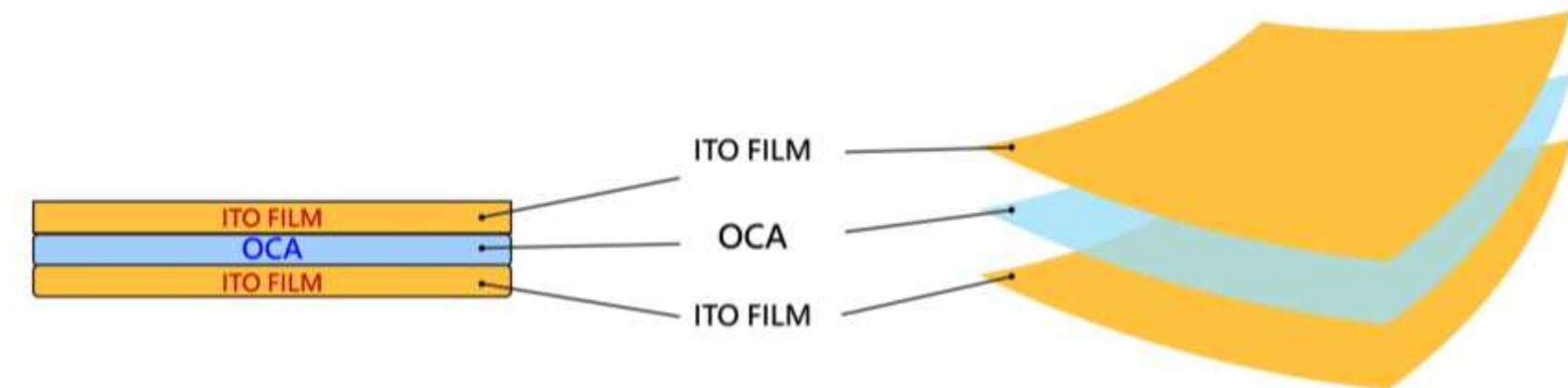
- OCA Optical Bonding
2. Soft to Hard: S2G



OCA Optical Bonding Service

- OCA Optical Bonding

3. Soft to Soft: S2S



OCA Optical Bonding Process

Type 1: Ambient Lamination

Lamination Speed : Tack Time 30sec~60 sec

Lamination Accuracy : $\pm 0.1\text{mm}$

Lamination Dimensions (mm) : 500x600 (max.)

Lamination Gap : 0~~10mm

Lamination Pressure : 35 ~ ~ 130Kg

Type 2: Vacuum Lamination

Lamination size: max. 27-inch (Diagonal)

Lamination speed: It depends on case by case basis.

OCA Optical Bonding Process Facility

Ambient Lamination & Vacuum Lamination Equipments



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Quality Policy: Only Customer Satisfaction

Satisfaction in Quality 、 Lead time 、 Cost 、 Service

✓ **Quality:**

IQC/ IPQC/ FQC to ensure the quality

100% IQC/FQC for some specific projects

✓ **Lead time:**

Safe stock & forecast schedule to make shorter lead time.

✓ **Cost:**

Forecast materials purchase to get the best cost.

✓ **Service:**

Customer orientation/Global service

Strong technical support/Quick response.

Reliability Assurance (For Monochrome)

Condition Test Items	Test	Standard Temperature Type	Wide Temperature Type
Thermal Shock		-10°C(30min) → 25°C(5min) → 50°C(30min), 10 cycles	-20°C(30min) → 25°C(5min) → 70°C(30min), 10 cycles
High Temperature Storage		60°C, for 120 hours	80°C, for 120 hours
Low Temperature Storage		-20°C, for 120 hours	-30°C, for 120 hours
Operation at High Temperature		50°C, for 120 hours	80°C, for 120 hours
Operation at Low Temperature		-10°C, for 120 hours	-20°C, for 120 hours
High Temperature/High Humidity		40°C 90% RH	40°C 90% RH

Notes:

The table above is applied to LCD size: 40*20mm

The value may be different by LCD size.

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Reliability Assurance (For TFT)

Condition Test Items	Test	Standard Temperature Type	Wide Temperature Type
Thermal Shock		-10°C(30min) →25°C(5min) →50°C(30min), 10 cycles	-20°C(30min)→25°C(5min) →70°C(30min), 10 cycles
High Temperature Storage		60°C, for 240 hours	80°C, for 240 hours
Low Temperature Storage		-20°C, for 240 hours	-30°C, for 240 hours
Operation at High Temperature		50°C, for 240 hours	80°C, for 240 hours
Operation at Low Temperature		-10°C, for 240 hours	-20°C, for 240 hours
High Temperature/High Humidity		40°C 90% RH	40°C 90% RH

Notes:

The table above is applied to LCD size: 40*20mm

The value may be different by LCD size.

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Quality Assurance(ISO14001/ISO9001)



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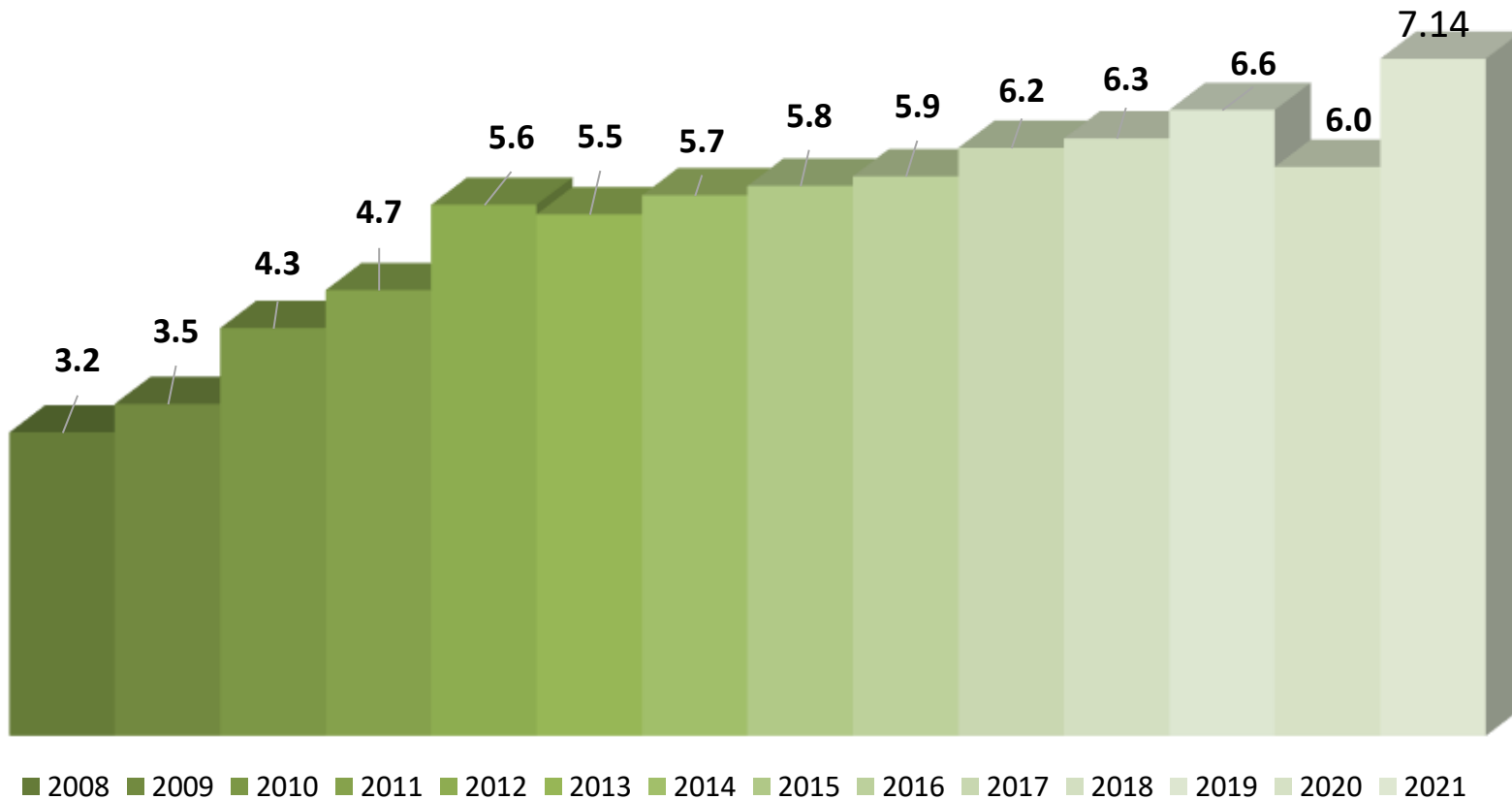


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Sales Turnover

Unit: USD/Million



Business Partners



Gi Far Tchnology Co., Ltd.

EMS 、 LCD Module 、 SMT 、 DIP Manufacturer/Design in Taiwan



Win-Win Partnership

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