

***Overview on
Taiwan Semiconductor Industry
(2007 Edition)***



Taiwan Semiconductor Industry Association
Rm. 1246, Bldg. 51, 195, Sec.4, Chung-Hsing Road
Chutung, Hsinchu, Taiwan 31015
TEL:+886-3-5913560 FAX:+886-3-5820056
<http://www.tsia.org.tw>

List of Content

I.	Preface-----	I-1
II.	Taiwan Semiconductor Industry in 2006 -----	II-1
III.	Taiwan IC Market-----	III-1
IV.	Outlook-----	IV-1
V.	Directory of Taiwan Semiconductor Companies -----	V-1

I. Preface

This *Overview on Taiwan Semiconductor Industry* is a translated excerpt from an ITIS (Industrial Technology Information Services) publication, which provides an overview of Taiwan semiconductor industry in 2006. Also included is a directory of Taiwan semiconductor companies. These data should be valuable to those who wish to establish business relationship in Taiwan.

ITIS is a market research project, which is supported primarily by the Taiwan government. For semiconductor portion of the project, research was conducted in Industrial Economics & Knowledge Center of Industrial Technology Research Institute (IEK/ITRI).

Since the establishment of the Electronics Research and Service Organization of the Industrial Technology Research Institute (ERSO/ITRI) in early 1970's and its successive spin-offs of UMC and TSMC in 1980's, the semiconductor industry in Taiwan has been growing at a very fast pace. Currently TSIA represents approximately 60% of worldwide IC foundry/package/testing revenue, around 25% of worldwide design revenue, and also around 25% of worldwide DRAM revenue. As the industry gains significant role in the global market place, information about Taiwan semiconductor industry is desirable worldwide. TSIA hopes this *Overview on Taiwan Semiconductor Industry* will serve as a useful reference for our global friends who seek to establish a closer connection with Taiwan semiconductor companies. We welcome your comments.

T.Y. Wu

President

Taiwan Semiconductor Industry Association

II. Taiwan Semiconductor industry in Year 2006

Overview of the Year

Semiconductor market of Asia, the fastest-growing area, reached US\$116.5 billion in 2006, a 12.7% increase from 2005. Taiwan semiconductor industry grew 24.6% in 2006, outpaced the worldwide average of 8.9% due to the dramatic growth of 30.5% in Taiwan manufacturing sector, with 17.2% increase in foundry and 52.8% increase in DRAM.

Taiwan IC revenue (including design, manufacturing, packaging, and testing) totaled NT\$1,393.3 billion, a 24.6% growth from 2005, with NT\$323.4 billion in design, a 13.5% increase, NT\$766.7 billion in manufacturing, a 30.5% up, NT\$210.8 billion in packaging, an 18.4% up, and NT\$92.4 billion in testing, a 36.9% rise.

In 2006, Taiwan IC product revenue reached NT\$652.3 billion (Table 1), a 30.7% increase from 2005. Memory products comprised 52.2%, up from the 48% of 2005 due to the stabilized price. Information applications, comprising 59.7% (59.2% in 2005), remained the largest application area. Consumer applications comprised 27.8% (29.1% in 2005), and communication ICs accounted for 11.4% (10.5% in 2005).

Table 1 Major Indices for Taiwan IC Industry

(NT\$B)

	2002	2003	2004	2005	2006	06/05 Growth
Industry Revenue	652.9	818.8	1,099.0	1,117.9	1,393.3	24.6%
IC Fabless	147.8	190.2	260.8	285.0	323.4	13.5%
IC Fabrication	378.5	470.1	623.9	587.4	766.7	30.5%
Foundry	246.7	309.0	398.5	373.5	437.8	17.2%
IC Packaging	94.8	117.6	156.6	178.0	210.8	18.4%
IC Testing	31.8	40.9	57.7	67.5	92.4	36.9%
Product Value	279.6	351.3	486.2	498.9	652.3	30.7%
Domestic Sales (%)	48.4%	47.9%	44.5%	43.2%	39.5%	-
Domestic Market	365.3	402.1	558.9	580.3	615.2	6.0%

Source : ITIS Project, IEK-ITRI (April 2007)

By the end of 2006, Taiwan semiconductor industry consisted of 262 IC fabless design houses, 8 wafer suppliers, 4 mask makers, 13 fabrication companies, 34 packaging houses, 36 testing houses, 15 substrate suppliers, and 19 chemical suppliers, etc. (Figure 1)

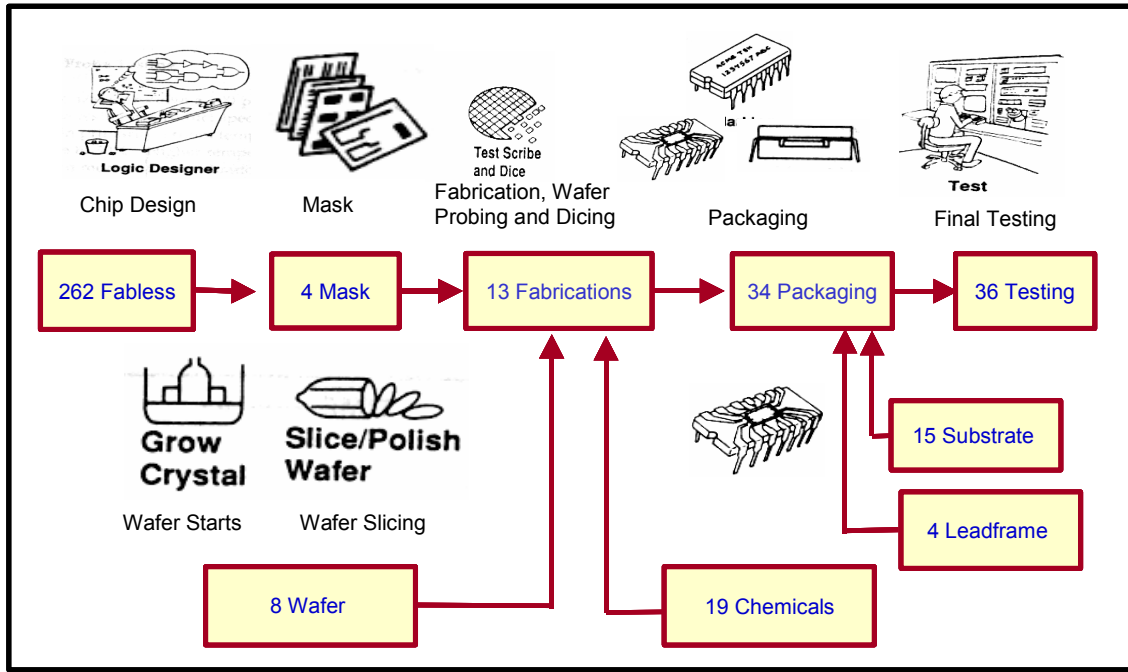


Fig. 1 Unique Disintegrated Infrastructure in Taiwan (2006)

IC Fabless Companies

Taiwan IC design revenue reached NT\$323.4 billion, up 13.5% from 2005 and outpaced the growth of worldwide semiconductor sales due to the new product launches and the strategic alliances among design companies.

1. Major Indices

There were 262 design houses in Taiwan in 2006. Revenue totaled NT\$323.4 billion (Table 2), which comprised 32.2% of the NT\$1,393.3 billion total Taiwan IC revenue. The export ratio has been rising since 2002 (over 50%) and reached 67% in 2006. It was mainly due to the direct shipment requests from large Taiwanese system assembly lines in China. R&D expense reached NT\$34.93 billion, which represented 10.8% of total fabless revenue, up from the 10% of 2005.

Table 2 Major Indices of Taiwan IC Fabless Business

	2003	2004	2005	2006	2007(e)
Gross Margin	37.0%	34.6%	36.0%	37.0%	37.2%
Operating Profit	21.4%	19.0%	20.1%	20.6%	20.9%
Net Margin After Tax	20.4%	15.0%	16.3%	16.8%	17.0%
Revenue Per Workforce(NT\$M)	15.14	12.42	11.24	12.73	13.39

Source : ITIS Project, IEK-ITRI (March 2007)

2. Application Types

ASSP (Application Specific Standard Product) remained the major application type (Table 3), comprising 88.9% of all applications and down from the 89.7% of 2005. ASIC (Application Specific Integrated Circuit) increased from the 10.3% of 2005 to 11.1%.

Thanks to the versatility and differentiation of consumer products and the strong demand for STB, MP3 Player, etc., consumer applications remained the largest application area, comprising 41.3% (39.9% in 2005); however, pressure of price decline has leveled off the growth a bit.

Intel's and AMD's focus on embedded market, and NVIDIA's and ATI's strong market shares due to their strength in graphic technology had shrunk the market share of Taiwan PC chipsets companies and deteriorated the revenue growth. The increased orders of LCD driver and controller ICs from Taiwan TFT-LCD monitor and notebook makers had boosted the revenue of related chip makers. However, information applications were not as strong as consumer applications in 2006, comprising 40% (45.6% in 2005).

Communication applications surged to 16.7% of all applications due to orders from multi-nationals for new-generation handset products.

Table 3 Major Product Application of Taiwan IC Fabless Companies

	ASIC				ASSP				
	Information	Communication	Consumer	Others	Information	Communication	Consumer	Others	Total
2003	1.5%	1.5%	1.2%	0.0%	58.0%	9.2%	26.7%	1.4%	100%
2004	2.1%	0.1%	6.4%	0.0%	46.4%	9.7%	33.2%	2.1%	100%
2005	2.5%	1.0%	6.8%	0.0%	43.1%	11.6%	33.1%	1.9%	100%
2006	2.0%	1.3%	7.8%	0.0%	38.0%	15.4%	33.5%	2.0%	100%
2007(e)	1.9%	1.4%	7.9%	0.0%	37.0%	16.6%	33.7%	1.5%	100%

Source : ITIS Project, IEK-ITRI (March 2007)

3. Major Product Types

The demands of TFT LCD monitor and color screen handsets have driven the growth of LCD driver and Controller IC. Logic ICs consisted of 73.4% (68.5% in 2005). 51.9% of the micro component revenue came from 8 bit MCU; while 21.6% from 16 bit MCU and 15.6% from 32 bit MCU, respectively, showing that local companies have been striving to develop high-end MCU products.

Niche memory revenue enjoyed a continued growth in 2006 due to the stabilized price of related products such as DVD player, graphic card, etc. However, memory comprised only 10.6%, down from 10.8% in 2005, due to the exception of revenue from ICSI, which was acquired by a foreign company. Thanks to the increased market shares of new products such as consumer electronics, internet and communication products, and notebooks, and the addition of RFIC sales, analog ICs grew to comprise 8.1% in 2006 (7.9% in 2005).

Table 4 Major Product Types by Taiwan IC Fabless Companies

	Memory	Micro Component	Logic IC	Analog IC	Total
2003	14.5%	12.3%	68.3%	4.9%	100%
2004	16.0%	9.4%	69.6%	5.0%	100%
2005	10.8%	12.8%	68.5%	7.9%	100%
2006	10.6%	7.9%	73.4%	8.1%	100%
2007(e)	10.2%	7.9%	73.5%	8.4%	100%

Source : ITIS Project, IEK-ITRI (March 2007)

4. Market Distribution

The major driving force for Taiwan design revenue growth in 2006 remained the expansion of overseas markets, which comprised 66.4% (66% in 2005) of the design revenue (Table 5).

China has become the major global assembly base for electronic products due to its potential internal market and low production costs. It has been ranked number one in consumer products such as DVD player and home applications. Taiwan system companies such as PC, NB, and motherboard makers have set up production lines in China. Therefore, China/HK has become the largest market segment for Taiwan IC design companies, comprising 56.4%, up from 54.8% of 2005.

Table 5 Market Distribution for Taiwan IC Fabless Companies

	Taiwan	HK/China	North America	Japan	South Korea	S-E Asia	Others	Total
2003	45.4%	33.5%	3.0%	3.5%	10.5%	1.5%	2.6%	100%
2004	36.7%	50.9%	1.8%	3.7%	3.0%	1.6%	2.3%	100%
2005	34.0%	54.8%	1.3%	3.0%	2.4%	2.5%	2.0%	100%
2006	33.6%	56.4%	1.2%	2.7%	2.2%	2.4%	1.5%	100%
2007(e)	32.0%	58.6%	1.0%	2.6%	2.2%	2.2%	1.4%	100%

Source : ITIS Project, IEK-ITRI (March 2007)

5. Top 10 Fabless Companies in Taiwan

Table 6 shows the top 10 Taiwan Fabless companies in 2006. Mediatek remained the number one, following by Novatek and Himax (LCD driver IC designers). The top nine companies were the same as those of previous year. Morning Star, which has replaced Genesis to become the global leader of LCD controller IC product, ranked the number 10 for the first time.

Table 6 Top 10 Fabless Companies in Taiwan, 2006

2005 Ranking	2006 Ranking	Company	2005 Revenue	2006 Revenue	Growth
1	1	Mediatek	465	529	13.8%
2	2	Novatek	260	314	20.8%
5	3	Himax	178	246	38.2%
3	4	VIA	191	214	12.0%
4	5	Sunplus	188	171	-9.0%
9	6	Phison	63	125	98.4%
7	7	Realtek	106	124	17.0%
8	8	Etron	67	105	56.7%
6	9	SiS	115	79	-31.3%
12	10	Morning Star*	56	73	30.4%

* : Estimation

Source : ITIS Project, IEK-ITRI (March 2007)

IC Fabrication

As of 2006, there were 13 IC wafer fabrication companies in Taiwan, including foundry companies such as TSMC, UMC, Vanguard, Episil, ATC, and AMPI; IDMs such as Winbond and MXIC; and memory manufacturers such as Powerchip, Nanya, Promos, Inotera, and Mosel.

Thanks to the increased 90nm and 65 nm productions of foundry companies and the capacity expansions of 12-inch fabs of DRAM makers, 2006 Taiwan manufacturing revenue increased 30.5% from 2005, reaching NT\$766.7 billion (Table 7).

Capital investment, mainly in 12-inch fab capacity expansions, increased around 30%, reaching NT\$278.7 billion, which represented 36.4% of total manufacturing revenue (higher than the 35% of 2005). R&D expense increased to 7.6% of total revenue.

Table 7 Major Indices of Taiwan IC Fabrication Business

Index/Year	2003	2004	2005	2006	2007(e)
# of Companies	13	13	13	13	13
Revenue (NT\$B)	470.1	623.9	587.4	766.7	835.0
Growth (%)	24.2%	32.7%	-5.9%	30.5%	8.9%
Line Width (μm)	0.09	0.09	0.065	0.065	0.045
Domestic: Export (%)	49% : 51%	49% : 51%	43% : 57%	41% : 59%	42% : 58%
Capital Investment/ Revenue (%)	24.4%	41.2%	35.0%	36.4%	32.5%
R&D/Revenue (%)	8.1%	5.4%	6.5%	7.6%	8.2%

Source : ITIS Project, IEK-ITRI (March 2007)

1. Top 10 IC Fabrication Companies in Taiwan

TSMC and UMC remained the top two IC fabrication companies in 2006 (Table 8). TSMC's revenue reached a record high again of NT\$313.9 billion, a 19% increase from its 2005 revenue of NT\$264.6 billion. UMC's revenue reached NT\$104.1 billion, up 15% from 2005. Revenue of Vanguard, the 3rd largest foundry in Taiwan, grew 26% from 2005 to reach NT\$13 billion.

Revenue of Winbond and MXIC, the IDMs, increased 24% and 23%, respectively, due to product strategy modifications.

Most DRAM makers enjoyed great revenue growths in 2006. The increasing capacity and yield of the 12-inch fabs, and the further shrink of process technology have raised the production of DRAM. Besides, the prices were stabilized. Promos, with the greatest growth of 104%, revenue reached NT\$60.1 billion (NT\$29.5 billion in 2005) due to the successful technology transition from Infineon's to Hynix's and new 12-inch fab capacity in central Taiwan. Powerchip, with its 12-inch Fab 12A, 12B, and the one newly acquired from MXIC- 12M, revenue grew 78%. Inotera, although no new 12-inch fab established, revenue grew 77% due to its further shrink of process technology. Nanya, the mother company of Inotera, also grew 51%. Mosel, the only one with negative growth in the top 10 due to adjustments of its operation strategy, revenue declined 68% and ranking drop from the 9th in 2005 to the 10th in 2006.

Table 8 Top 10 Fabrication Companies in Taiwan, 2006

(NT\$B)

2005 Ranking	2006 Ranking	Company	2005 Revenue	2006 Revenue	Growth
1	1	tsmc	264.6	313.9	19%
2	2	UMC	90.8	104.1	15%
3	3	Powerchip	51.6	92.1	78%
4	4	Nanya	49.8	75.1	51%
5	5	Promos	29.5	60.1	104%
7	6	Inotera	23.0	40.8	77%
6	7	Winbond	27.8	34.5	24%
8	8	MXIC	18.6	22.8	23%
10	9	Vanguard	10.3	13.0	26%
9	10	Mosel	15.6	5.1	-68%

Source : IEK-ITRI (March 2007)

2. Business Types

Memory accounted for 40.4% of total Taiwan IC manufacturing revenue in 2006 (33.6% in 2005). DRAM remained the major product type of memory products, comprising 91.2% (90.1% in 2005). Foundry revenue increased 17.2% in 2006 and accounted for 57.1% of total Taiwan IC manufacturing revenue, down from 63.6% of 2005. Foundry and memory remained the two major business segments, comprising 97% of Taiwan IC manufacturing business.

China foundries have been striving for better competitiveness; however, growth has been slowed down in 2006. Charter, the Singapore-based foundry, replaced SMIC of China to become the 3rd largest foundry due to its strategic alliances with international IDMs. Overall, Taiwan foundry remained number one in the global foundry market; however, market share declined slightly to 68% in 2006.

Table 9 Business Types of IC Fabrication in Taiwan

	Business Type (by revenue)						
	Standard Product, including ASSP				Customer Specific (ASIC)*	Foundry	Total
	Memory	Micro	Logic	Analog			
2002	27.3%	0.4%	6.6%	0.5%	0%	65.2%	100%
2003	28.7%	0.4%	5.2%	0%	0%	65.7%	100%
2004	34.2%	0.3%	1.7%	0%	0%	63.9%	100%
2005	33.6%	0.6%	2.2%	0%	0%	63.6%	100%
2006	40.4%	0.5%	2.0%	0%	0%	57.1%	100%

*: Full Custom and Semi-Custom IC designed for specific customers.

Source : ITIS Project, IEK-ITRI (March 2007)

3. Geographical Market and Customers

(1) Brand Products

Domestic market, comprising 45.3%, remained the largest market of Taiwan brand products. Japan, the second largest market, accounted for 15.5% due to the steady shipments of memory companies such as Powerchip. Sales to Europe declined from 7.9% of 2005 to 6.5%. Sales to China/HK increased from 13.7% in 2005 to 15.3%. Sales to North America rose to comprise 12%. (Table 10).

Table 10 Major Geographical Market for Taiwan Brand Products

	Taiwan	HK/China	S-E Asia	Japan	North America	Western Europe	Others	Total
2002	47.3%	11.1%	5.5%	10.8%	10.9%	13.0%	0.3%	100%
2003	50.8%	13.9%	4.0%	10.3%	7.4%	11.1%	2.5%	100%
2004	51.2%	14.6%	1.5%	15.1%	7.6%	8.3%	1.7%	100%
2005	46.0%	13.7%	3.6%	16.5%	10.1%	7.9%	2.2%	100%
2006	45.3%	15.3%	3.6%	15.5%	12.0%	6.5%	0.8%	100%

Source : ITIS Project, IEK-ITRI (March 2007)

(2) Foundry

North America remained the largest export region for Taiwan foundry business, reaching a record high of 67.7%, a 0.9% rise from 2005 (Table 11). Taiwan, with the

world second largest fabless business, was the second largest market, comprising 21%. Taiwan foundry sales to Europe declined slightly in 2006.

Table 11 Major Geographical Market of Taiwan IC Foundry

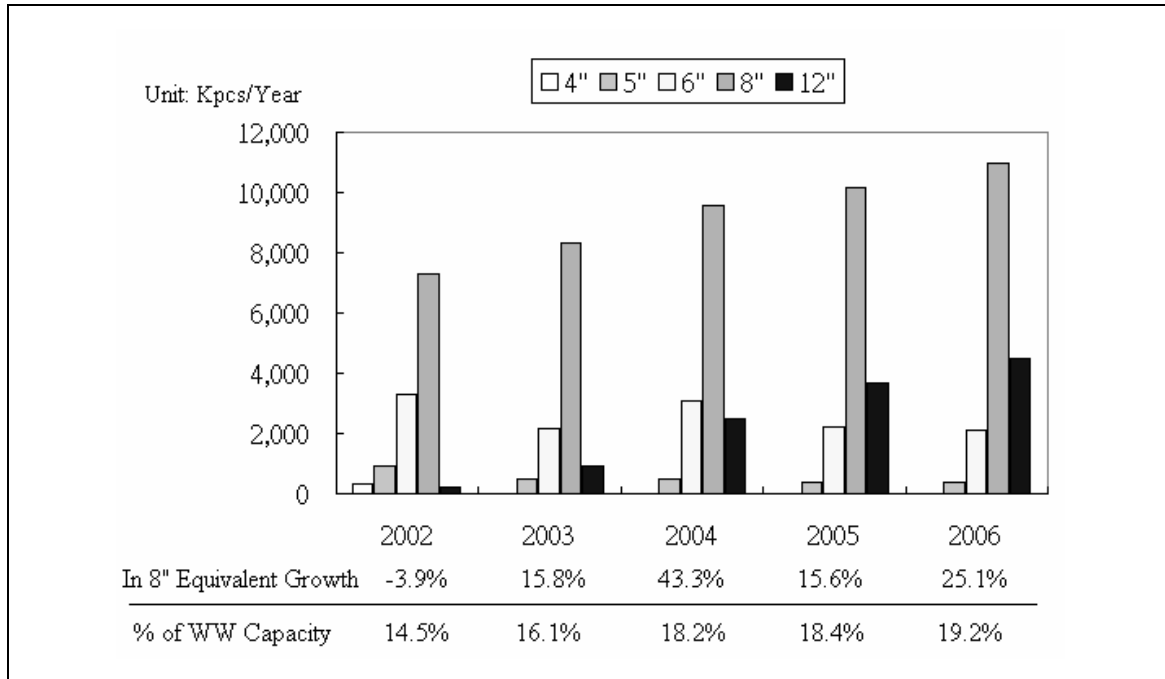
	Taiwan	North America	Western Europe	Others	Total
2002	22.5%	63.5%	7.0%	7.0%	100%
2003	22.9%	62.7%	8.0%	6.4%	100%
2004	18.6%	65.1%	10.2%	6.1%	100%
2005	21.0%	66.8%	6.9%	5.3%	100%
2006	21.0%	67.7%	6.1%	5.3%	100%

Source : ITIS Project, IEK-ITRI (April 2007)

(3) Capacity

Total Taiwan fabrication capacity (in 8” equivalent) grew 25.1% in 2006 (Figure 2) , comprising 19.2% of the worldwide capacity, up from the 18.4% of 2005, due to the capacity expansion in 12 inch fabs of foundry companies (such as tsmc and UMC) and memory makers (such as Powerchip and Promos). Total capacity of Taiwan 12-inch fabs increased 67.3% in 2006.

As of 2006, eleven 12-inch fabs are in mass production. Eight of them focus on DRAM (Powerchip with 3, Promos with 2, Inotera with 2, and Winbond with 1), the other three focus on foundry (two belong to tsmc and one belongs to UMC). In 2007, Powerchip will speed up its capacity expansion in the 12-inch fab facility acquired from MXIC and the facility set up jointly with Elpida, Rexchip. The second 12 inch fab of Inotera will start mass production too. Nanya and Promos both have new 12 inch fabs under construction. It is expected that the 12” fabs will still be the focus of Taiwan IC companies’ expansion plans.



Source : ITIS Project, IEK-ITRI (March 2007)

Figure 2 Taiwan IC Fabrication Capacity

(4) Process Technology

Taiwan CMOS process technology has advanced to 65 nm (Table 12). Taiwan foundry technology, mainly in logic products, is not only highly competitive in the global market but also surpasses the technology of multinationals. CMOS (RF) process technology has also entered 0.13 μ m. To be ready for the SoC era, Taiwan companies should strive to develop versatile process technologies including BiCMOS, Mixed-Signal/RF, etc.

Table 12 Comparison on Mass-Production Process Technology

Technology	Taiwan	Benchmarked Regions	Technology by Benchmarked Regions
CMOS (Logic)	0.065 μ m	US, Japan	0.065 μ m
CMOS (RF)	0.13 μ m	Europe, US	0.13 μ m
BiCMOS	0.35 μ m	US, Japan, Europe	0.25 μ m
Bipolar	0.6 μ m	US, Japan, Europe	0.35 μ m
GaAs MESFET	0.5 μ m	US, Japan	0.5 μ m
GaAs HBT	1.0 μ m	US, Japan	1.0 μ m

Source : IEK-ITRI (March 2007)

IC Packaging

The strong demand for communication ICs and consumer ICs, and demand for middle- and low-end system products in emerging markets have boosted the revenue of Taiwan packaging companies to NT\$210.8 billion, up 18.4% from 2005, with NT\$180.4 billion from domestic packaging, up 20.1%. PATI, the joint venture of ASE and Powerchip, entered the DRAM packaging/testing business and increased the total Taiwan packaging companies to 34 in 2006. (Table 13).

Table 13 Major Indices of Taiwan Packaging Industry

	2003	2004	2005	2006	2007(e)
# of Companies	38	37	33	34	34
Revenue (NT\$B)	97.6	131.2	149.0	180.4	209.0
Growth (%)	24%	34%	14%	21%	16%
Domestic:Export (%)	48% : 52%	47% : 53%	43% : 57%	43% : 57%	44% : 56%
Capital Investment/Revenue (%)	13.8%	18.9%	10.5%	11.2%	12.1%
R&D/Revenue (%)	2.7%	1.7%	1.2%	1.3%	1.4%

Source : ITIS Project, IEK-ITRI (March 2007)

1. Top 5 Packaging Companies

Table 14 shows the top 5 Taiwan packaging companies in 2006. Revenue of ASE group includes revenues from its overseas subsidiaries. Total revenue of top 5 companies comprised 70% of total Taiwan packaging revenue, flat from 2005. ASE and SPIL remained the top one and two. Greatek, focusing on lead frame packaging, remained the third, with revenue growth of 16.9%.

Table 14 Top 5 IC Packaging Companies

(NT\$B)

2005 Ranking	2006 Ranking	Company	2005 Revenue	2006 Revenue	Growth
1	1	ASE Group	68.90	76.82	11.5%
2	2	SPIL	38.77	50.71	30.8%
3	3	Greatek	6.50	7.60	16.9%
5	4	ChipMOS	5.43	7.56	39.2%
4	5	OSE	5.71	4.45	-22.1%

Source : ITIS Project, IEK-ITRI (March 2007)

2. Product Types and Market

The packaging revenue mainly came from QFP and BGA, accounting for 60%, with 43.1% from BGA. Other high-end packaging technologies such as CSP and flip chip also enjoyed high growth rates. The soft demand for driver ICs in Q3 has deteriorated the growth of TAB. TSOP comprised 15.8% due to the growing demand for Flash products used for portable electronics.

Table 15 Packaging Type Distribution by Domestic Packaging Revenue

	PDIP	SO*	PLCC	QFP	BGA	CSP	TAB (Including TCP)	Flip Chip	Others (Including Bump)	Total
2003	2.5%	18.2%	2.4%	23.9%	34.3%	4.6%	5.1%	2.9%	6.1%	100%
2004	1.1%	18.1%	2.2%	21.1%	36.6%	5.1%	5.5%	3.7%	6.6%	100%
2005	0.6%	20.3%	1.3%	15.5%	41.2%	6.8%	2.1%	5.6%	6.6%	100%
2006	0.4%	18.2%	1.1%	15.2%	43.1%	7.9%	1.6%	6.6%	5.9%	100%
2007(e)	0.4%	18.0%	1.1%	15.3%	43.3%	8.2%	2.3%	6.5%	4.9%	100%

SO*: including SOJ/SOP/TSOP

Source : ITIS Project, IEK-ITRI (March 2007)

Table 16 Packaging Type Distribution by Domestic Packaging Volume

	PDIP	SO*	PLCC	QFP	BGA	CSP	TAB (Including TCP)	Flip Chip	Others (Including Bump)	Total
2003	4.3%	37.9%	4.3%	17.2%	10.4%	2.8%	4.4%	1.9%	16.8%	100%
2004	3.3%	35.4%	3.5%	14.6%	11.8%	4.3%	5.2%	2.1%	19.8%	100%
2005	2.0%	34.5%	3.3%	13.0%	12.3%	4.8%	3.4%	2.5%	24.2%	100%
2006	1.3%	30.1%	2.8%	13.6%	11.6%	5.9%	3.7%	3.5%	27.5%	100%
2007(e)	1.3%	30.6%	2.7%	14.2%	12.7%	6.3%	4.0%	3.8%	24.4%	100%

SO*: including SOJ/SOP/TSOP

Source : ITIS Project, IEK-ITRI (March 2007)

Taiwan remained the largest market for its native packaging companies (Table 17 and 18). The increased outsourcing from IDMs in the North America has resulted in the packaging revenue growth from this region. The packaging demand for Flash products from IDMs of US and Japan, and demand for communication ICs from IDMs of US and Europe have boosted the packaging revenue from international IDMs.

Table 17 Geographical Distribution of Packaging Revenue

	Taiwan	North America	Japan	Europe	HK/China/S-E Asia/Others	Total
2003	48.5%	40.9%	5.5%	3.8%	1.3%	100%
2004	42.1%	41.9%	7.4%	4.5%	4.1%	100%
2005	41.3%	42.0%	7.5%	4.6%	4.6%	100%
2006	42.4%	41.3%	7.2%	3.9%	5.2%	100%
2007(e)	41.9%	41.5%	7.3%	3.5%	5.8%	100%

Source : ITIS Project, IEK-ITRI (March 2007)

Table 18 Geographical Distribution of Packaging Volume

	Taiwan	North America	Japan	Europe	HK/China/S-E Asia/Others	Total
2003	53.5%	31.6%	7.8%	4.8%	2.3%	100%
2004	52.6%	32.0%	8.6%	3.9%	2.9%	100%
2005	50.0%	32.5%	8.9%	4.0%	4.6%	100%
2006	49.3%	32.9%	6.9%	3.9%	7.0%	100%
2007(e)	49.0%	32.5%	6.5%	3.5%	8.5%	100%

Source : ITIS Project, IEK-ITRI (March 2007)

3. Packaging Industry Development

It is expected that Taiwan IC packaging sector will enjoy a 2-digit growth in 2007 and out-perform other semiconductor sectors in Taiwan. Memory will play a very important role in Taiwan packaging business due to the Vista impact. The 2008 Olympics will also boost the demand for related products such as TV, handsets, etc. The low-priced products will remain critical in 2007 due to the demand from the continued growing emerging markets.

IC Testing

Testing sector performed shinningly in 2006 with a high growth rate of over 30% due to the strong demand for memory testing. The capacity expansions for DDR II and the increased productions resulted from process shrink have boosted the price of

memory testing. Totally, testing revenue reached NT\$92.4 billion, a 36.9% growth from 2005. With the new testing company PATI, number of Taiwan testing companies increased to 36 from 35 of 2005 (Table 19). Most Taiwan companies continued their capacity expansion plans in 2006. Capital investment accounted for 38% of total testing revenue (35.6% in 2005).

Table 19 Major Indices of Taiwan IC Testing Business

	2003	2004	2005	2006	2007(e)
# of Companies	39	39	35	36	36
Revenue (NT\$B)	40.9	57.7	67.5	92.4	102.9
Growth (%)	29%	41%	17%	36.9%	11.4%
Domestic: Export (%)	57% : 43%	55% : 45%	59% : 41%	58% : 42%	57% : 43%
Capital Investment/ Revenue (%)	33.8%	50.3%	35.6%	38.0%	36.0%
R&D/Revenue (%)	2.5%	1.8%	2.0%	2.2%	2.3%

Source : ITIS Project, IEK-ITRI (March 2007)

1. Top 5 Testing Companies

The top 5 testing companies remained the same as those of 2005. Total revenue of the top 5 companies accounted for 65% of total Taiwan testing revenue in 2006, with PTI and ChipMos enjoying the highest growth rates.

Table 20 Top 5 IC Testing Companies

(NT\$B)

2005 Ranking	2006 Ranking	Company	2005 Revenue	2006 Revenue	Growth
1	1	ASE Group*	17.20	21.43	24.6%
2	2	KYEC	9.95	12.90	29.6%
3	3	PTI	7.77	11.03	42.0%
4	4	ChipMOS	5.88	9.25	57.3%
5	5	SPIL	4.30	5.64	31.1%

*: Including ASE Test and ASE Inc

Source : IEK-ITRI (March 2007)

2. Product Types and Market

Memory testing remained the major product type in 2006, accounting for 59.9% (Table 21). DRAM, one of the major testing products, comprised 25% of total testing products. Testing revenue from DRAM comprised 35% of total testing revenue. On the other hand, Flash testing has been growing fast due to the demand for multi-functional handsets. In anticipation of the unstable DRAM price, some testing companies even shifted production lines from DRAM to Flash.

Domestic market was the major market for the Taiwan testing business, comprising 57.9% (Table 22). North America, comprising 28.8%, was the second largest market. With the investment of multinational testing companies in China, orders from China have slowed down, accounting for 4%.

Table 21 Testing Type Distribution by Domestic Testing Revenue

	Memory	Logic & Micro-component	Mixed Signal	Linear	RF	Others	Total
2003	52.6%	23.4%	21.0%	1.4%	1.0%	0.6%	100%
2004	54.5%	20.3%	22.3%	0.9%	1.2%	0.8%	100%
2005	59.0%	21.0%	17.4%	0.4%	1.1%	1.2%	100%
2006	59.9%	21.3%	16.4%	0.2%	1.1%	1.0%	100%
2007(e)	60.0%	21.3%	16.5%	0.2%	1.3%	0.7%	100%

Source : IEK-ITRI (March 2007)

Table 22 Market Distribution for Taiwan IC Testing Revenue

	Taiwan	North America	Japan	Europe	HK/China/S-E Asia/Others	Total
2003	57.4%	30.9%	7.6%	2.1%	2.0%	100%
2004	55.6%	31.6%	8.4%	2.2%	2.2%	100%
2005	58.5%	29.0%	5.6%	1.1%	5.8%	100%
2006	57.9%	28.8%	5.7%	1.1%	6.4%	100%
2007(e)	57.8%	28.7%	5.7%	1.1%	6.6%	100%

Source : IEK-ITRI (March 2007)

III. Taiwan IC Market

In 2006, Taiwan IC market reached NT\$ 615.2 billion, a 6% increase from the NT\$580.3 billion of 2005. Imported ICs decreased 2.1% to NT\$357.2 billion and exported ICs decreased 6.1% to NT\$498.2 billion. Major driving forces were the increased shipments of down-stream PCs, DRAM modules, Internet and communication products, LCD Monitors, etc. 2006 Taiwan IC market comprised 16.2% of the Asia-Pacific market, down from 20.2% of 2005 due to the fast growing of China market. 2006 Taiwan IC market accounted for 9% of the worldwide IC market (9.3% in 2005), and 7.6% of the worldwide semiconductor market (7.9% in 2005).

South Korea, comprising 37.6%, remained the largest import region (mainly memory products including Flash and DRAM) for local demand (Table 23), following by China, Japan, Philippines, and Malaysia. With multinationals such as Intel and Samsung setting up packaging lines and Taiwan companies such as ASE and OSE setting up branches for serving local customers and shipping products directly to Taiwan, these countries have been the major import countries for Taiwan IC market these years.

Table 23 Top 10 Import Regions of Taiwan IC Market

(NT\$B)

Ranking	2005			2006		
	Country	Amount	Market Share	Country	Amount	Market Share
1	South Korea	133.6	36.6%	South Korea	134.3	37.6%
2	China	35.5	9.7%	China	37.9	10.6%
3	Philippines	30.8	8.4%	Japan	33.6	9.4%
4	Malaysia	30.8	8.4%	Philippines	30.0	8.4%
5	Japan	29.5	8.1%	Malaysia	27.5	7.7%
6	Singapore	28.9	7.9%	Thailand	19.6	5.5%
7	US	17.5	4.8%	US	15.4	4.3%
8	Thailand	10.4	2.9%	Singapore	14.3	4.0%
9	HK(China)	4.5	1.2%	Germany	4.3	1.2%
10	Germany	4.2	1.2%	HK(China)	2.1	0.6%
	Others	39.2	10.7%	Others	38.2	10.7%
	Total	364.9	100.0%	Total	357.2	100.0%

Source : Taiwan Customs, ITIS Project, IEK-ITRI (April 2007)

Table 24 Top 10 Export Regions of Taiwan IC Market

(NT\$B)

Ranking	2005			2006		
	Country	Amount	Market Share	Country	Amount	Market Share
1	HK(China)	197.6	37.2%	HK(China)	128.0	25.7%
2	China	95.6	18.0%	China	103.6	20.8%
3	Singapore	63.0	11.9%	Japan	97.1	19.5%
4	Japan	60.2	11.3%	Singapore	58.3	11.7%
5	US	26.3	5.0%	Thailand	26.4	5.3%
6	South Korea	19.2	3.6%	US	21.9	4.4%
7	Philippines	13.6	2.6%	Malaysia	17.9	3.6%
8	Malaysia	12.6	2.4%	South Korea	13.0	2.6%
9	Netherlands	12.3	2.3%	Philippines	7.0	1.4%
10	Thailand	9.2	1.7%	Netherlands	6.0	1.2%
	Others	21.3	4.0%	Others	19.0	3.8%
	Total	530.8	100.0%	Total	498.2	100.0%

Source : Taiwan Customs, IEK-ITRI (April 2007)

IV. Outlook

The Industrial Economics & Knowledge Center (IEK) of the Industrial Technology Research Institute (ITRI) predicts that the 2007 Taiwan IC revenue (including design, manufacturing, packaging and testing) will reach NT\$1,536.2 billion, a 10.3% growth from 2006, with NT\$361.5 billion from design sector, an 11.8% growth; NT\$833.4 billion in manufacturing, a 8.7% up (foundry with NT\$482.3 billion, a 10.2% up); NT\$237 billion in packaging, a 12.4% rise; and NT\$104.3 billion in testing, a 12.9% growth.

V. Directory of Taiwan Semiconductor Companies

Fabless

5V Technologies Ltd.

TEL:886-2-27888118

FAX:886-2-27887366

www.5vtechnologies.com

AAT

TEL:886-3-5633125

FAX:886-3-5633126

www.aatech.com.tw

ACARD

TEL:886-2-85122290

FAX:886-2-85122548

www.acard.com

AccFast

TEL:886-3-6662756

FAX:886-3-6662758

www.accfast.com.tw

Actrans System

TEL:886-3-5778366

FAX:886-3-5778369

www.actrans-inc.com

Acute

TEL:886-3-5790680

FAX:886-3-5775606

www.acutecomm.com.tw

Afatech

TEL: 886-2-29189958

FAX:886-2- 29189975

www.afatech.com

Agere Systems

TEL: 886-2-27255858

FAX:886-2- 27233838

www.agere.com

AIC

TEL: 886-3-5772500

FAX:886-3- 5772510

www.analog.com.tw

AIT

TEL:886-3-6560528

FAX:886-3-6565051

www.a-i-t.com.tw

Aimtron

TEL: 886-3-5630878

FAX:886-3- 5630879

www.aimtron.com.tw

Airoha

TEL: 886-3-6128800

FAX:886-3- 6118833

www.airoha.com.tw

Alchip Technologies

TEL: 886-2-27992318

FAX:886-2-27997389

www.alchip.com

Alcor Micro Corp.

TEL:886-2-87511984

FAX:886-2-55568980

www.alcormicro.com

ALI

TEL:886-2-87522000

FAX:886-2-87511001

www.ali.com.tw

Alpha

TEL:886-3-5736660

FAX:886-3-5736661

www.ealpha.com.tw

Altus

TEL:886-3-7587888

FAX:886-3-7587889

www.altus-tech.com

Ambarella

TEL:886-3-6668828

FAX:886-3-6661282

www.ambarella.com

AME

TEL:886-2-26278687

FAX:886-2-26592989

www.ame.com.tw

AMIC

TEL:886-3-5679966

FAX:886-3-5679977

www.amictechnology.com

AMIC Communication

TEL:886-3-5785818

FAX:886-3-5780689

www.amiccom.com.tw

Ampson

TEL:886-3-5725527

FAX:886-3-5725529

www.ampson.com.tw**Anachip**

TEL:886-3-5678234

FAX:886-3-5678268

www.anachip.com**ANPEC**

TEL:886-3-5642000

FAX:886-3-5642050

www.anpec.com.tw**Arques Technology**

TEL:886-2-89131333

FAX:886-2-89131366

www.arquestech.com**ASUKA**

TEL:886-3-6667117

FAX:886-3-6667104

www.asuka-semi.com.tw**AuMOS**

TEL:886-3-5790567

FAX:886-3-5775909

www.aumos.com.tw**Avisonic Technology**

TEL:886-3-5778077

FAX:886-3-6661301

www.avisonic.com**Biomorphic**

TEL:886-3-6686966

FAX:886-3-6686069

www.biomorphic.com**Amtek**

TEL:886-2-29998989

FAX:886-2-29992929

www.amtek-semi.com**AnaGlobe**

TEL:886-3-6668001

FAX:886-3-6661976

www.anaglobe.com.tw**APEC**

TEL:886-3-5750576

FAX:886-3-5737701

www.a-power.com.tw**ASIX**

TEL:886-3-5799500

FAX:886-3-5799558

www.asix.com.tw**Atech**

TEL:886-2-27396485

FAX:886-2-27396486

www.8tec.com**AverLogic**

TEL:886-2-87523988

FAX:886-2-87523989

www.averlogic.com**Aviq**

TEL:886-3-5633766

FAX:886-3-5633761

www.aviqtech.com**BSI**

TEL:886-3-5770398

FAX:886-3-5787439

www.bsi.com.tw**ANA**

TEL:886-2-26558628

FAX:886-2-26558676

www.anatek.com.tw**AnMO**

TEL:886-3-5357868

FAX:886-3-5358098

www.anmo.com.tw**APLUS**

TEL:886-2-27829266

FAX:886-2-27829255

www.aplusinc.com.tw**ASPEED**

TEL:886-3-5166080

FAX:886-3-5166090

www.aspeedtech.com**Attansic**

TEL:886-3-5169135

FAX:886-3-5169335

www.attansic.com**AVID**

TEL:886-3-5795222

FAX:886-3-6667279

www.avid.com.tw**Beyond Innovation**

TEL:886-2-27785939

FAX:886-2-27781050

www.bitek.com.tw**CFP**

TEL:886-3-5770755

FAX:886-3-5770756

www.cfpt.com.tw

Champion

TEL:886-3-5679979

FAX:886-3-5679909

www.championmicro.com.tw**Cheertek Corp.**

TEL:886-3-6667777

FAX:886-3-6667999

www.cheertek.com.tw**CHESEN**

TEL:886-2-82265589

FAX:886-2-82265181

www.chesen.com.tw**Chip Design**

TEL:886-2-22994908

FAX:886-2-22990133

www.cdt.com.tw**CHiPLUS**

TEL:886-3-5637887

FAX:886-3-5637877

www.chiplus.com**Cion**

TEL:886-3-6003888

FAX:886-3-6002888

www.cion.com.tw**CMSC**

TEL:886-3-5634866

FAX:886-3-5634863

www.cmssc.com.tw**C-Media**

TEL:886-2-87731100

FAX:886-2-87732211

www.cmedia.com.tw**CoAsia**

TEL:886-2-26557699

FAX:886-2-26557189

www.coasia.com.tw**Conwise**

TEL:886-3-5779880

FAX:886-3-5779870

www.conwise.com.tw**CTC**

TEL:886-3-5311161

FAX:886-3-5338403

www.ctcasic.com.tw**CYRUSTEK**

TEL:886-3-5910216

FAX:886-3-5910217

www.cyrustek.com.tw**D&W Technologies**

TEL:886-2-27857796

FAX:886-2-27859416

www.dwtech.com.tw**DATARiT**

TEL:886-3-5169089

FAX:886-3-5169087

www.ritdata.com**Davicom**

TEL:886-3-5798797

FAX:886-3-5794770

www.davicom.com.tw**DenMOS**

TEL:886-3-6669777

FAX:886-3-5667766

www.denmos.com.tw**DESTINY**

TEL:886-2-26552288

FAX:886-2-26552345

www.destiny.com.tw**Digiwell**

TEL:886-3-5782910

FAX:886-3-5639464

www.digiwell.com.tw**Digimove**

TEL:886-2-26550698

FAX:886-2-26551698

www.digimove.com**Dorado**

TEL:886-3-5169169

FAX:886-3-5169162

www.dorado-da.com**E-CMOS**

TEL:886-3-5785888

FAX:886-3-5783630

www.ecmos.com.tw**E-COM**

TEL:886-2-23970618

FAX:886-2-23979888

www.eecom.com.tw**EE Solutions**

TEL:886-3-5678568

FAX:886-3-5678611

www.e2-solutions.com.tw**ELAN**

TEL:886-3-5639977

FAX:886-3-5639966

www.emc.com.tw

ELANsat

TEL:886-3-5635105

FAX:886-3-5635107

www.elansat.com.tw**ENABLE**

TEL:886-3-5525233

FAX:886-3-5525236

www.enable-semi.com**Epicom**

TEL:886-3-5775776

FAX:886-3-5775180

www.epic.com.tw**Etoms**

TEL:886-3-6661766

FAX:886-3-6661765

www.etomscorp.com**Eureka**

TEL:886-3-5799255

FAX:886-3-5779253

www.eureka.com.tw**Faraday**

TEL:886-3-5787888

FAX:886-3-5787889

www.faraday-tech.com**Fortune**

TEL:886-2-28094742

FAX:886-2-28094874

www.ic-fortune.com**F3 Inc.**

TEL:886-3-5775535

FAX:886-3-5775532

www.f3.com.tw**ElecVision**

TEL:886-3-5798602

FAX:886-3-5643528

www.elevision.com**ENE**

TEL:886-3-6662888

FAX:886-3-6662999

www.ene.com.tw**ESMT**

TEL:886-3-5781970

FAX:886-3-5644432

www.esmt.com.tw**Etrend**

TEL:886-6-5050170

FAX:886-6-5050175

www.etrend.com.tw**EverMore**

TEL:886-3-5642060

FAX:886-3-5798303

www.emt.com.tw**FIT**

TEL:886-3-6562727

FAX:886-3-6560537

www.fintek.com.tw**Fotemedia**

TEL:886-2-25462100

FAX:886-2-25468022

www.fortemedia.com**Gemstone**

TEL:886-2-23886868

FAX:886-2-23882699

www.gemstone.com.tw**eMemory**

TEL:886-3-5631616

FAX:886-3-5632525

www.ememory.com.tw**Enova**

TEL:886-3-5772767

FAX:886-3-5772770

www.enovatech.net**ESSI**

TEL:886-3-5525686

FAX:886-3-5525696

www.essi.com.tw**Etron**

TEL:886-3-5782345

FAX:886-3-5779001

www.etrone.com.tw**EXPLORE**

TEL:886-3-5643595

FAX:886-3-5643596

www.epmi.com.tw**FocalTech Systems**

TEL:886-2-27850809

FAX:886-2-27854727

FRONTAND

TEL:886-3-5326601

FAX:886-3-5326692

www.frontand.com.tw**Generalplus**

TEL:886-3-5160211

FAX:886-3-5160212

www.generalplus.com

Genesys Logic, Inc.

TEL:886-2-89131888

FAX:886-2-89131688

www.genesyslogic.com.tw**GMT**

TEL:886-3-5788833

FAX:886-3-5784289

www.gmt.com.tw**GSTC**

TEL:886-2-28343826

FAX:886-2-28386492

www.gstc.com.tw**HiMARK**

TEL:886-3-5633056

FAX:886-3-5632886

www.himark.com.tw**Holylite**

TEL:886-3-5734589

FAX:886-3-5734690

www.holylite.com.tw**ICNexus**

TEL:886-2-27891200

FAX:886-2-27891201

www.icnexus.com.tw**ICSI**

TEL:886-3-5780333

FAX:886-3-5783000

www.icsi.com.tw**InCOMM**

TEL:886-2-26599609

FAX:886-2-26599603

www.incomm.com**G-Link**

TEL:886-3-5782833

FAX:886-3-5786641

www.glink.com.tw**Goldkey**

TEL:886-3-5633188

FAX:886-3-5635199

www.goldkey.com.tw**G-Time**

TEL:886-3-5733606

FAX:886-3-5733638

www.g-time.com.tw**Himax**

TEL:886-6-5050880

FAX:886-6-5050891

www.himax.com.tw**Iatec**

TEL:886-2-27311335

FAX: 886-2-27311336

www.iatec.com.tw**ICPlus**

TEL:886-3-5750275

FAX:886-3-5750473

www.icplus.com.tw**IDESYN**

TEL:886-3-6586257

FAX:886-3-6586332

initio

TEL:886-2-87516377

FAX:886-2-87510165

www.initio.com**Global Unichip Corp.**

TEL:886-3-5646600

FAX:886-3-5656000

www.globalunichip.com**Goyatek**

TEL:886-3-5631051

FAX:886-3-5631052

www.goya.com.tw**Henwood**

TEL:886-2-23650108

FAX:886-2-23650169

www.henwood.com**Holtek**

TEL:886-3-5631999

FAX:886-3-5631189

www.holtek.com.tw**ICATRiS**

TEL:886-2-26547688

FAX:886-2-26549188

www.icartisusa.com**iCreate**

TEL:886-3-5790000

FAX:886-3-5790088

www.icreate.com.tw**ILITEK**

TEL:886-3-5670095

FAX:886-3-5670096

www.ilitek.com**Inmax**

TEL:886-2-89131300

FAX:886-2-89131301

www.inmax.com.tw

Innochip

TEL:886-3-6663077

FAX:886-3-6661339

www.innochip.com.tw

ISSC

TEL:886-3-5778385

FAX:886-3-5778501

www.issc.com.tw

Jmicron Technology

TEL:886-3-5797389

FAX:886-3-5799566

www.jmicron.com

KTC

TEL:886-3-5798608

FAX:886-3-6663464

www.ktc.com.tw

LighTuning

TEL:886-3-6661789

FAX:886-3-6667722

www.lightuning.com

Magellan Discovery

TEL:886-2-87510388

FAX:886-2-87510399

www.magellandiscovery.com

m-Display

TEL:886-3-6662686

FAX:886-3-6662778

www.wistronopt.com.tw

Megawin

TEL:886-3-5750050

FAX:886-3-5750070

www.megawin.com.tw

INNO-TECH

TEL:886-2-87913636

FAX:886-2-87913699

www.inno.com.tw

IST

TEL:886-2-87977911

FAX:886-2-87977915

www.ist4u.com

King Billion

TEL:886-3-5526168

FAX:886-3-5526188

www.kingb.com.tw

Leadtrend

TEL:886-3-6118686

FAX:886-3-6118688

www.leadtrend.com.tw

LSI Logic

TEL:886-2-27187828

FAX:886-2-27188869

www.lsilogic.com

Magic Pixel Inc.

TEL:886-3-6668822

FAX:886-3-6668811

www.magicpixel.com.tw

Media Scope

TEL:886-2-82276582

FAX:886-2-22286833

www.mstcweb.com

Memes Technology

TEL:886-2-55590500

FAX:886-2-55556622

www.memes.com.tw

IPLIB

TEL:886-3-5169288

FAX:886-3-5169283

www.iplib.com

ITE Tech. Inc.

TEL:886-3-5798658

FAX:886-3-5794803

www.ite.com.tw

Kolorific

TEL:886-2-26558289

FAX:886-2-26558755

www.kolorific.com

Legend Design

TEL:886-3-6111888

FAX:886-3-6111889

www.legendDesign.com

MacroTech

TEL:886-3-5636090

FAX:886-3-5785545

www.macrotech.com.tw

MaxNova

TEL:886-3-5634567

FAX:886-3-5632727

www.maxnova.com

MediaTek

TEL:886-3-5670766

FAX:886-3-5787610

www.mtk.com.tw

MemoCom Corp.

TEL:886-3-5730808

FAX:886-3-5720518

www.memocom.com.tw

Mentor Grathics

TEL:886-2-87252032

FAX:886-2-27576027

www.mentorg.com.tw

metanoia

TEL:886-3-5776123

FAX:886-3-5776132

www.metanoia-technologies.com

Microblock

TEL:886-3-5790068

FAX:886-3-5797534

www.mblock.com.tw

MicroLinks

TEL:886-7-6579551

FAX:886-7-6579561

www.mltc.com.tw

Mobile Devices

TEL:886-3-5586589

FAX:886-3-5586582

www.mdv.com.tw

Mobile Magic Design

TEL:886-3-6668188

FAX:886-3-5635888

MosArt

TEL:886-2-29599180

FAX:886-2-29599323

www.mosart.com.tw

MOS Design

TEL:886-2-22783733

FAX:886-2-22783633

www.mosdesign.com.tw

Motorola

TEL:886-2-27058000

FAX:886-2-23254957

www.motorola.com.tw

MPS

TEL:886-2-25040656

FAX:886-2-25040516

www.monolithicpower.com

MSK Technology

TEL:886-2-85225985

FAX:886-2-85225965

www.msk-international.com

M-SQUARE

TEL:886-3-6661028

FAX:886-3-6661928

www.msquaretech.com

Mstar Semiconductor

TEL:886-3-5526006

FAX:886-3-5526009

www.mstarsemi.com

MuChip

TEL:886-3-6668000

FAX:886-3-6668060

www.mu chip.com

Myson-Century

TEL:886-3-5784866

FAX:886-3-5784349

www.myson.com.tw

NEC electronic

TEL:886-2-25150000

FAX:886-2-25152255

www.nec.com.tw

NEODIO

TEL:886-2-82271525

FAX:886-2-82271530

www.neodio.com.tw

Neotec

TEL:886-3-5525989

FAX:886-3-5525789

www.neotec.com.tw

NIKO-SEM

TEL:886-2-26953467

FAX:886-2-26952281

www.niko-sem.com

Novatek

TEL:886-3-5670889

FAX:886-3-5770132

www.novatek.com.tw

NXP

TEL:886-7-3612511

FAX:886-7-3680909

www.nxp.com

OTI

TEL:886-3-5537511

FAX:886-3-5555804

www.oti.com.tw

Orise Technology

TEL:886-3-6661660

FAX:886-3-6661800

www.orisetech.com

Pan Signal

TEL:886-3-5545370

FAX:886-3-5516479

Pericom

TEL:886-2-66160588
FAX:886-2-66151388
www.ptlsemi.com.tw

Phison

TEL:886-3-5833899
FAX:886-3-5833666
www.phison.com

PRESCOPE

TEL:886-2-86658068
FAX:886-2-86658060
www.prescope.com

Quantek

TEL:886-2-29106186
FAX:886-2-29106336
www.quantek-inc.com

Rato

TEL:886-2-27773088
FAX:886-2-27773087
www.rato.com.tw

Realtek

TEL:886-3-5780211
FAX:886-3-5774713
www.realtek.com.tw

RichTek

TEL:886-3-5526789
FAX:886-3-5526611
www.richtek.com

SEAWARD

TEL:886-2-27120307
FAX:886-2-27120191
www.seawardinc.com.tw

PGC

TEL:886-2-26582233
FAX:886-2-26580915
www.pgc.com.tw

PixArt

TEL:886-3-5795317
FAX:886-3-5795305
www.pixart.com.tw

Princeton

TEL:886-2-66296288
FAX:886-2-29174598
www.princeton.com.tw

RAiO

TEL:886-3-5637888
FAX:886-3-5637666
www.raio.com.tw

Raydium

TEL:886-3-6661818
FAX:886-3-5661919
www.rad-ic.com

Red Falcon

TEL:886-2-27097718
FAX:886-2-27097705
www.redfalcon.com.tw

SamHop

TEL:886-2-22182820
FAX:886-2-22185797
www.samhop.com.tw

SCI

TEL:886-2-27827898
FAX:886-2-27882911
www.syschips.com

Phase Link

TEL:886-2-29100248
FAX:886-2-29100249
www.phaselink.com

PMT

TEL:886-3-5633616
FAX:886-3-5633696
www.pmt.com.tw

Prolific Technology Inc.

TEL:886-2-26546363
FAX:886-2-26546161
www.prolific.com.tw

Ralink

TEL:886-3-5678868
FAX:886-3-5678818
www.ralinktech.com.tw

RDC

TEL:886-3-5662866
FAX:886-3-5631498
www.rdc.com.tw

RFIC

TEL:886-2-26981022
FAX:886-2-26981032
www.rfintc.com

Samsung

TEL:886-2-26568686
FAX:886-2-26568688
www.samsung.com

Silicon Based

TEL:886-3-5777897
FAX:886-3-5779832
www.sbt.com.tw

Silicon Data

TEL:886-3-5678238

FAX:886-3-5678222

www.silicon-data.com.tw**Silicon Motion, Inc.**

TEL:886-3-5526888

FAX:886-3-5526988

www.siliconmotion.com**Silicon Touch**

TEL:886-3-5645656

FAX:886-3-5645626

www.siti.com.tw**Sino Matrix**

TEL:886-3-5640786

FAX:886-3-5640785

SiS

TEL:886-3-5166000

FAX:886-3-5166668

www.sis.com**Sita Technology Corp.**

TEL:886-3-5526500

FAX:886-3-5526895

Sitronix

TEL:886-3-5526500

FAX:886-3-5526501

www.sitronix.com.tw**Skymedi**

TEL:886-3-5781638

FAX:886-3-5781626

www.skymedi.com.tw**SmartASIC**

TEL:886-2-87977889

FAX:886-2-87976829

www.smartasic.com.tw**SMARTCHIP**

TEL:886-2-82262811

FAX:886-2-82262812

www.smartchip.com.tw**SMedia**

TEL:886-3-6661166

FAX:886-3-5670055

www.smediatech.com**Socle Technology**

TEL:886-3-5163166

FAX:886-3-5163177

www.socle-tech.com.tw**Solid State System**

TEL:886-3-5526568

FAX:886-3-5526566

www.3system.com.tw**SONiX**

TEL:886-3-5510520

FAX:886-3-5510523

www.sonix.com.tw**SOTA**

TEL:886-3-5643939

FAX:886-3-5643737

www.fameg.com**SP**

TEL:886-3-5510989

FAX:886-3-5534889

S&Q

TEL:886-2-66111177

FAX:886-2-66106777

www.sq.com.tw**Star**

TEL:886-3-5678855

FAX:886-3-5679225

www.starsemi.com**ST**

TEL:886-2-23788088

FAX:886-2-23789188

www.st.com**STORLINK**

TEL:886-3-5163488

FAX:886-3-5163409

www.storlinksemi.com**Sunext**

TEL:886-3-6661311

FAX:886-3-6661338

www.sunext.com**Sunplus**

TEL:886-3-5786005

FAX:886-3-5786006

www.sunplus.com.tw**SunplusIT**

TEL:886-3-5632822

FAX:886-3-6687799

www.sunplusit.com**Sunplus mMobile Inc.**

TEL:886-3-5786005

FAX:886-3-5786006

www.sunplusmm.com

SyncMOS

TEL:886-3-5792982

FAX:886-3-5792956

www.syncmos.com.tw**Syncpower**

TEL:886-2-26558178

FAX:886-2-26558468

www.syncpower.com**SYNIC**

TEL:886-3-5169188

FAX:886-3-5169111

www.syncomm.com.tw**Syntek Design**

TEL:886-3-5773181

FAX:886-3-5778010

www.skt.com.tw**Syntronix**

TEL:886-3-5631986

FAX:886-3-5631980

www.syntronix.com.tw**System General**

TEL:886-2-29173005

FAX:886-2-29111283

www.sg.com.tw**TASC**

TEL:886-2-26983007

FAX:886-2-26983008

www.tascorp.com.tw**TECHSOFT**

TEL:886-3-4273535

FAX:886-3-4226073

www.techsoft.com.tw**Tenor Electronics Corp.**

TEL:886-2-29189858

FAX:886-2-29189086

www.tenorcorp.com**TenX**

TEL:886-3-82571700

FAX:886-3-82571701

www.tenx.com.tw**Terax Communication**

TEL:886-3-5798528

FAX:886-3-5798651

www.terax.com.tw**Terawins**

TEL:886-2-82278277

FAX:886-2-82278333

Terminus Technology Inc. TI

TEL:886-2-27865672

FAX:886-2-27864018

TI

TEL:886-2-29435141

FAX:886-2-29409980

www.ti.com.tw**TITC**

TEL:886-3-5829011

FAX:886-3-5829028

www.imaging-tek.com**tmTech**

TEL:886-3-5787720

FAX:886-3-5787166

www.tmtch.com.tw**Tontek Design**

TEL:886-2-82265916

FAX:886-2-82265929

www.tontek.com.tw**Topro**

TEL:886-3-5632515

FAX:886-3-5641728

www.topro.com.tw**Topshine**

TEL:886-2-87973677

FAX:886-2-87973667

www.topshine.com.tw**TOPSOC**

TEL:886-2-26558258

FAX:886-2-26558609

www.topsoc.com.tw**Trendchip**

TEL:886-3-5910108

FAX:886-3-5910156

www.trendchip.com.tw**Trident**

TEL:886-2-26577686

FAX:886-2-26278727

www.trident.com.tw**TROJAN**

TEL:886-3-5400467

FAX:886-3-5160233

www.trojan.com.tw**Trumpion**

TEL:886-2-25587855

FAX:886-2-25581012

www.trumpion.com.tw

ubec

TEL:886-3-5729898

FAX:886-3-5718599

www.ubec.com.tw

USBest

TEL:886-3-6686961

FAX:886-3-6686965

www.usbest.com.tw

VastView

TEL:886-3-5637423

FAX:886-3-5637481

www.vastview.com.tw

VOS

TEL:886-2-22185324

FAX:886-2-22185453

www.viaoptical.com

WavePlus

TEL:886-3-5636025

FAX:886-3-5636800

www.waveplus.com.tw

WinLead

TEL:886-3-5169091

FAX:886-3-5169095

www.winlead.com.tw

XGI

TEL:886-3-5165958

FAX:886-3-5165957

www.xgitech.com

Yobon

TEL:886-2-89132358

FAX:886-2-89132525

www.yobon.com.tw

Ulead Technology

TEL:886-3-5345968

FAX:886-3-5345986

www.uleadtek.com.tw

UTC

TEL:886-2-29995013

FAX:886-2-29991561

www.unisonic.com.tw

VIA

TEL:886-2-22185452

FAX:886-2-22185453

www.viatech.com.tw

V-TAC

TEL:886-2-26951620

FAX:886-2-26959367

www.vtac.com.tw

WEIDA

TEL:886-3-5630128

FAX:886-3-5630178

www.weida.com.tw

Winson

TEL:886-3-5544099

FAX:886-3-5544900

www.winson.com.tw

Xtramus

TEL:886-2-82276611

FAX:886-2-82276622

www.xtramus.com

Yuantonix

TEL:886-3-5739593

FAX:886-3-5739478

www.yuantonix.com

UltraChip

TEL:886-2-87978947

FAX:886-2-87978910

www.ultrachip.com

Uwave

TEL:886-3-5779889

FAX:886-3-5776966

VITI

TEL:886-3-5536679

FAX:886-3-5536637

VXIS

TEL:886-3-5630888

FAX:886-3-5630889

www.vxis.com.tw

Weltrend

TEL:886-3-5780241

FAX:886-3-5794278

www.weltrend.com.tw

WYS

TEL:886-3-5799866

FAX:886-3-5799855

www.wys.com.tw

YMC

TEL:886-3-5526035

FAX:886-3-5526036

www.ymc.com.tw

Zentel

TEL:886-3-5799599

FAX:886-3-5799299

www.zentel.com.tw

IC Fab.

AMPI

TEL:886-3-5770033

FAX:886-3-5778211

www.ampi.com.tw

EPISIL

TEL:886-3-5779245

FAX:886-3-5776289

www.episil.com

Inotera

TEL:886-3-3272988

FAX:886-3-3282383

www.inotera.com

Mosel-Vitec

TEL:886-3-5783344

FAX:886-3-5665888

www.mosel.com.tw

MXIC

TEL:886-3-5786688

FAX:886-3-5632888

www.macronix.com

NANYA

TEL:886-3-3281688

FAX:886-3-3960997

www.nanya.com

ProMos

TEL:886-3-5798308

FAX:886-3-5663300

www.promos.com.tw

PSC

TEL:886-3-5795000

FAX:886-3-5788565

www.psc.com.tw

tsmc

TEL:886-3-5636688

FAX:886-3-5670121

www.tsmc.com

UMC

TEL:886-3-5782258

FAX:886-3-5779392

www.umc.com

VIS

TEL:886-3-5770355

FAX:886-3-5789851

www.vis.com.tw

Winbond

TEL:886-3-5770066

FAX:886-3-5796024

www.winbond.com.tw

IC Packaging

ACE

TEL:886-3-5983232

FAX:886-3-5976565

www.ace-tek.com.tw

ASE

TEL:886-7-3617131

FAX:886-7-3613094

www.asegroupe.com.tw

CET

TEL:886-2-2223315

FAX:886-2-2227458

www.cetsemi.com

Chant World

TEL:886-7-3634567

FAX:886-7-3657789

www.cwti.com.tw

Chipbond

TEL:886-3-5678788

FAX:886-3-5678789

www.chipbond.com.tw

ChipMos

TEL:886-3-5770055

FAX:886-3-5668995

www.chipmos.com

FATC

TEL:886-5-5574888
FAX:886-5-5574636
www.fatc.com.tw

IMPAC

TEL:886-3-4335998
FAX:886-3-4335995
www.impac.com.tw

Lingsen

TEL:886-4-25335120
FAX:886-4-25327724
www.lingsen.com.tw

NXP

TEL:886-7-3612511
FAX:886-7-3680909
www.nxp.com

Powertest

TEL:886-3-5889698
FAX:886-3-5979900
www.pti.com.tw

SIPS

TEL:886-3-5753490
FAX:886-3-6669922
www.sipsemi.com

TI

TEL:886-2-29435141
FAX:886-2-29409980
www.ti.com.tw

TMC

TEL:886-3-5979402
FAX:886-3-5979406
www.tmc.com.tw

Fupo

TEL:886-3-5799339
FAX:886-3-5630331
www.fupo.com.tw

ISTC

TEL:886-7-8210088
FAX:886-7-8313399
www.ist.com.tw

MEICER

TEL:886-3-4616666
FAX:886-3-4617777
www.meicer.com.tw

OSE

TEL:886-7-3613131
FAX:886-7-3632319
www.ose.com.tw

SANYO

TEL:886-4-25343141
FAX:886-4-25330041
www.set.tw.sc-sanyo.com

SPIL

TEL:886-4-25341525
FAX:886-4-25358362
www.spil.com.tw

TICP

TEL:886-7-8158800
FAX:886-7-8159456
www.ticp.com.tw

UST

TEL:886-3-5972777
FAX:886-3-5972891
www.ust.com.tw

Greatek

TEL:886-3-7638568
FAX:886-3-7628323
www.greatek.com.tw

Kingpak

TEL:886-3-5535888
FAX:886-3-5538196
www.kingpak.com.tw

Nanotech

TEL:886-3-3245666
FAX:886-3-3245088
www.nanotechsemi.com.tw

Power ASE Technology

TEL:886-3-4633113
FAX:886-3-4634874

Sigurd

TEL:886-3-5959213
FAX:886-3-5944495
www.sigurd.com.tw

TEP

TEL:886-3-5529911
FAX:886-3-5520420

TH

TEL:886-2-26790122
FAX:886-2-26705147
www.theil.com

Walton

TEL:886-7-8111330
FAX:886-7-8214758
www.walton.com.tw

Xin Tec Inc.

TEL:886-3-4331818

FAX:886-3-4331515

www.xintec.com.tw

IC Testing

ACE

TEL:886-3-5983232

FAX:886-3-5976565

www.ace-tek.com.tw

ASE

TEL:886-7-3617131

FAX:886-7-3613094

www.asegroup.com.tw

Chant World

TEL:886-7-3634567

FAX:886-7-3657789

www.cwti.com.tw

FATC

TEL:886-5-5574888

FAX:886-5-5574636

www.fatc.com.tw

Greatek

TEL:886-3-7638568

FAX:886-3-7628323

www.greatek.com.tw

Aegis

TEL:886-3-4718398

FAX:886-3-4716377

www.agsti.com.tw

ASE Test

TEL:886-7-3636641

FAX:886-7-3636663

ChipMos

TEL:886-3-5770055

FAX:886-3-5668995

www.chipmos.com.tw

Fupo

TEL:886-3-5799339

FAX:886-3-5630331

www.fupo.com.tw

IMPAC

TEL:886-3-4335998

FAX:886-3-4335995

www.impac.com.tw

Ardentech

TEL:886-3-5971000

FAX:886-3-5971399

www.ardentec.com.tw

CET

TEL:886-2-2223315

FAX:886-2-2227458

www.cetsemi.com

Eutrend Technology

TEL:886-3-5633328

FAX:886-3-5633347

Giga Solution

TEL:886-3-6116168

FAX:886-3-5630100

www.giga-solution.com

ISTC

TEL:886-7-8210088

FAX:886-7-8313399

www.ist.com.tw

KYEC

TEL:886-3-5751888

FAX:886-3-5753800

www.kyec.com.tw**Kingpak**

TEL:886-3-5535888

FAX:886-3-5538196

www.kingpak.com.tw**Lingsen**

TEL:886-4-25335120

FAX:886-4-25327724

www.lingsen.com.tw**Meicer**

TEL:886-3-4616666

FAX:886-3-4623815

www.meicer.com.tw**Nanotech**

TEL:886-3-3245666

FAX:886-3-3245088

www.nanotechsemi.com.tw**NXP**

TEL:886-7-3612511

FAX:886-7-3680909

www.nxp.com**OSE**

TEL:886-7-3613131

FAX:886-7-3632319

www.ose.com.tw**PAT**

TEL:886-3-5977300

FAX:886-3-5986024

www.panther.com.tw**Power ASE Technology**

TEL:886-3-4633113

FAX:886-3-4634874

Powertest

TEL:886-3-5889698

FAX:886-3-5979900

www.pti.com.tw**Sanyo**

TEL:886-4-25343141

FAX:886-4-25330041

www.set.tw.sc-sanyo.com**Signality**

TEL:886-3-5822863

FAX:886-3-5824106

www.signality.com.tw**Sigurd**

TEL:886-3-5959213

FAX:886-3-5944495

www.sigurd.com.tw**SPIL**

TEL:886-4-25341525

FAX:886-4-25358362

www.spil.com.tw**Test Service**

TEL:886-3-5970670

FAX:886-3-5970671

www.testserv.com.tw**Thai Lin**

TEL:886-3-5985959

FAX:886-3-5983012

www.thailin.com.tw**TI**

TEL:886-2-29435141

FAX:886-2-29409980

www.ti.com.tw**TMC**

TEL:886-3-5979402

FAX:886-3-5979406

www.tmc.com.tw**True Test**

TEL:886-3-5973838

FAX:886-3-5973737

www.truetest.com.tw**VATE**

TEL:886-3-5770345

FAX:886-3-5794379

www.vate.com.tw**Walton**

TEL:886-7-8111330

FAX:886-7-8111889

www.walton.com.tw**WINSTEK**

TEL:886-3-5936565

FAX:886-3-5936363

www.winstek.com.tw

Silicon Wafer

EPISIL

TEL:886-3-5779245

FAX:886-3-5784804

www.episil.com

FKS

TEL:886-2-81752410

FAX:886-2-27178567

www.fstech.com.tw

MEMC

TEL:886-3-5791201

FAX:886-3-5790294

www.memc.com

PSi

TEL:886-3-5641888

FAX:886-3-5670888

www.psi.com.tw

San Chih Semi

TEL:886-3-4833345

FAX:886-3-4833347

www.tatung.com/scsc/

Shin-Etsu

TEL:886-3-5771188

FAX:886-3-5771199

www.shinetsu.co.jp

Sino-American

TEL:886-3-5772233

FAX:886-3-5781706

www.saswafer.com

Waferworks

TEL:886-3-4815001

FAX:886-3-4815002

www.waferworks.com

Mask

PSMC

TEL:886-3-5679933

FAX:886-3-5678158

www.psmc.com.tw

TCE

TEL:886-3-3643300

FAX:886-3-3649911

www.tce.com.tw

TMC

TEL:886-3-5781370

FAX:886-3-5780752

Tooling

Cadence

TEL:886-3-5778951
FAX:886-3-5780422
www.cadence.com.tw

EverCAD

TEL:886-3-5678400
FAX:886-3-5670411
www.evercad.com

Mentor Graphics

TEL:886-2-87252032
FAX:886-2-27576027
www.mentorg.com.tw

Springsoft

TEL:886-3-5794567
FAX:886-3-5799000
www.springsoft.com

Synopsys

TEL:886-2-23453020
FAX:886-2-27576009
www.synopsys.com

Discrete

Frontier

TEL:886-3-9285889
FAX:886-3-9282025
www.frontierelec.com.tw

General Semiconductor, Inc. Hi-Sincerity

TEL:886-2-29113861
FAX:886-2-29160846
www.vishay.com

TEL:886-2-25212056
FAX:886-2-25632712
www.hsmc.com.tw

LITE-ON Semi

TEL:886-2-29160230
FAX:886-2-29158475
www.liteon-semi.com

Mospec

TEL:886-6-5991621
FAX:886-6-5995486
www.mospec.com.tw

Photron

TEL:886-3-5985889
FAX:886-3-5982557
www.photron.com.tw

Prosperity

TEL:886-3-3885216
FAX:886-3-3885219

Rectron Ltd.

TEL:886-2-28806888
FAX:886-2-28801888

TSC

TEL:886-2-89131588
FAX:886-2-89131788
Chinese.ts.com.tw

Opto-Semiconductor

CSC

TEL:886-2-22239696

FAX:886-2-22239377

www.csctw.com.tw

Everlight

TEL:886-2-22602000

FAX:886-2-22698197

www.everlight.com

Hexawave

TEL:886-3-5785100

FAX:886-3-5770512

www.hw.com.tw

High Light

TEL:886-3-5785688

FAX:886-3-5782882

www.highlightled.com.tw

King Bright

TEL:886-2-22499224

FAX:886-2-22403981

www.kingbright.com

Ledtech

TEL:886-2-22186891

FAX:886-2-22181222

www.ledtech.com.tw

Lite-On

TEL:886-2-87982888

FAX:886-2-87982863

www.liteon.com

m-Display

TEL:886-3-6662686

FAX:886-3-6662778

www.wistronopt.com.tw

Opto Tech

TEL:886-3-5638951

FAX:886-3-5779576

www.opto.com.tw

Sinonar

TEL:886-3-5783366

FAX:886-3-5781812

www.sinonar.com.tw

Tyntek

TEL:886-37-582997

FAX:886-37-582908

www.tyntek.com.tw