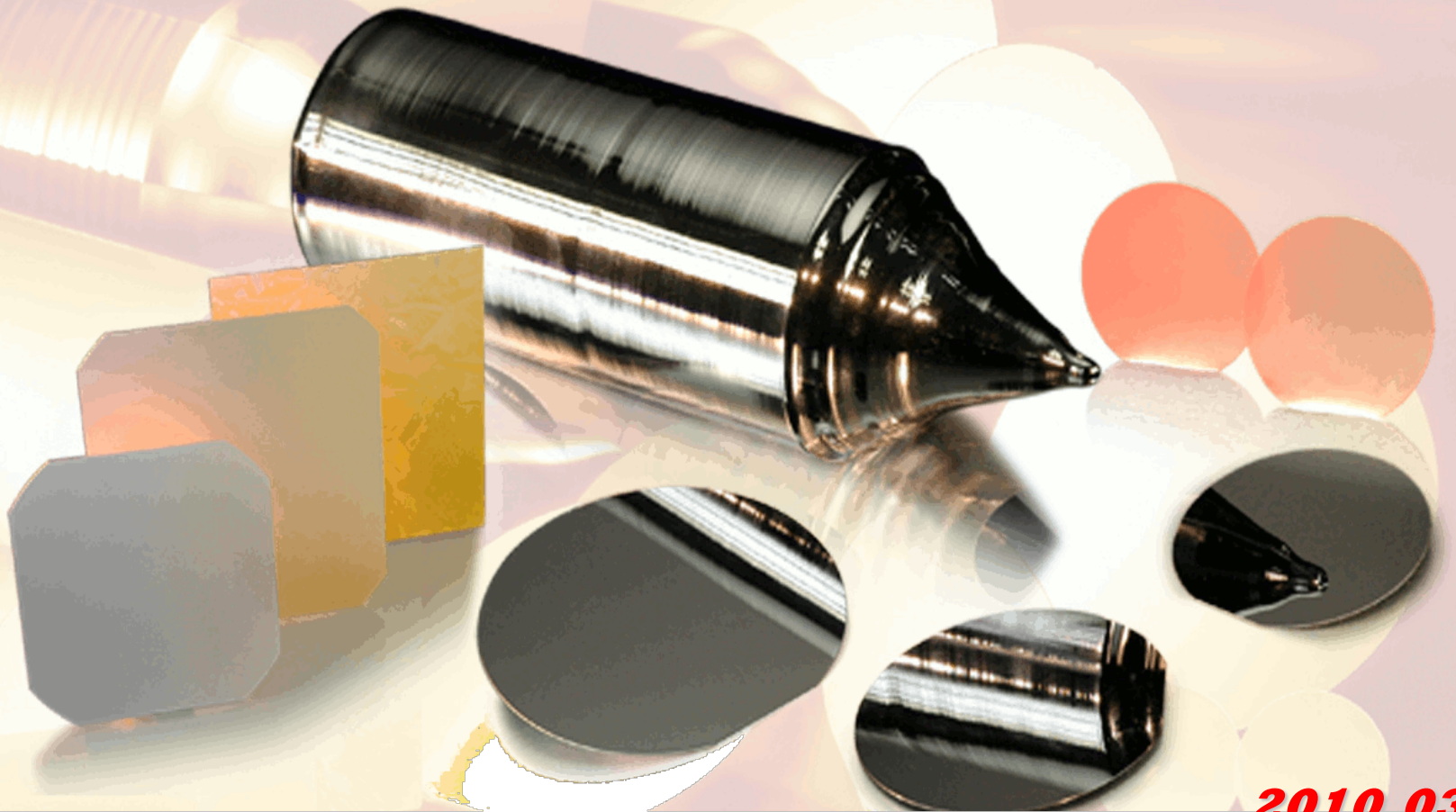




***Sino-American  
Silicon Products Inc.***



***2010.03***

# **Safe Harbor Notice**

*Any statements set forth of forward-looking statements that involve risks and uncertainties that could cause actual results to differ materially from those in the forward-looking statements.*

*Potential risks and uncertainties include, but are not limited to, such factors as fluctuations in product demand, the introduction of new products, the Company's ability to maintain customer and vendor relationships, technological advancements, impact of competitive products and pricing, growth in targeted markets, risks of foreign operations, foreign exchange rates, and other information detailed from time to time.*

# Company Profile

**Established**

**1981**

**Locations :**

**SAS / Hsinchu, Taiwan**

**SSC1 , 2 – Chunan, Taiwan**

**SST – Kunshan, China**

**GTI – TX, USA**



**Chairman**

**M.K.Lu**

**President**

**Doris Hsu**

**Employees**

**1,700**

**Main Products**

**Semiconductor Wafers**

**Solar Ingots / Wafers**

**Sapphire Wafers**

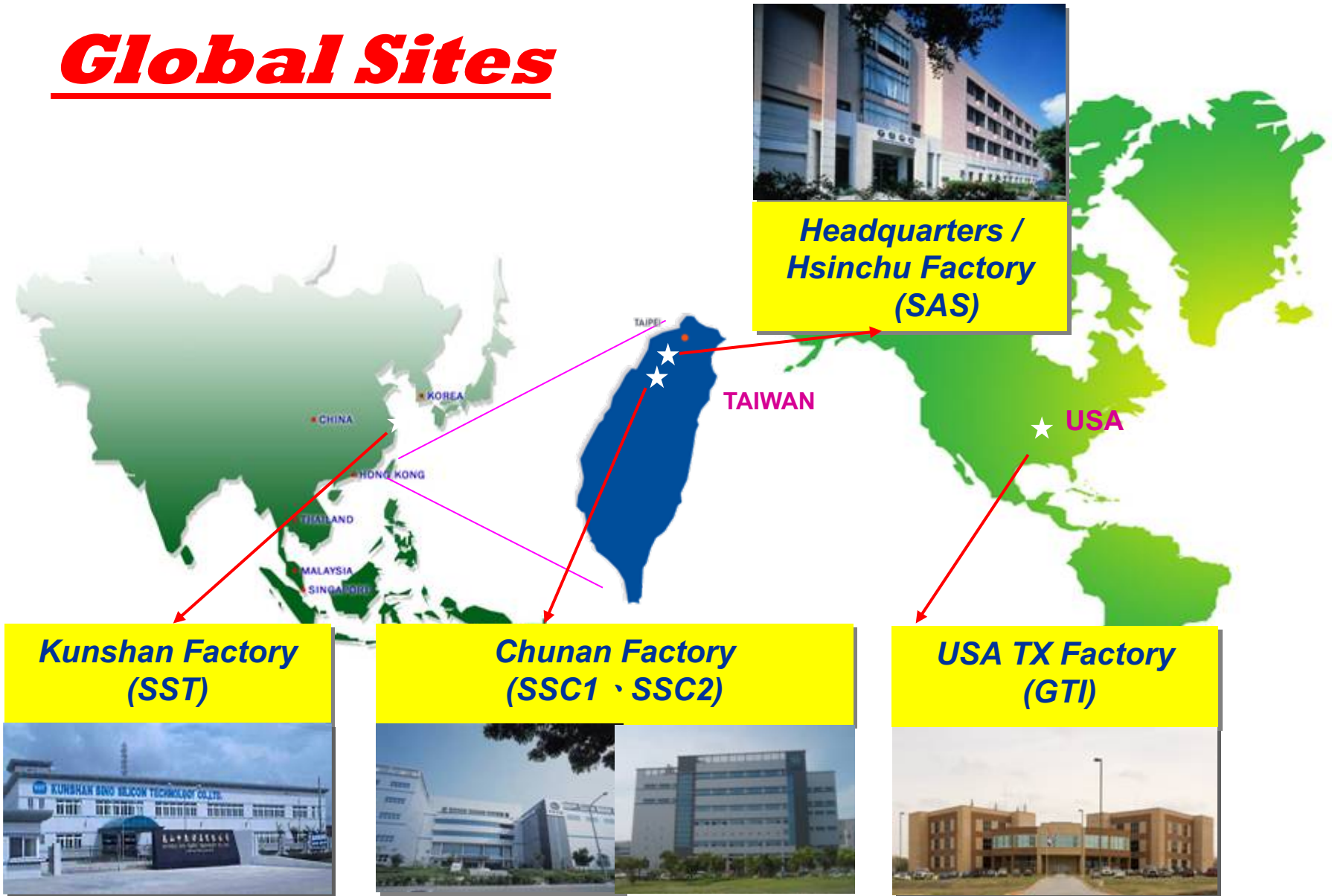
**Quality System**



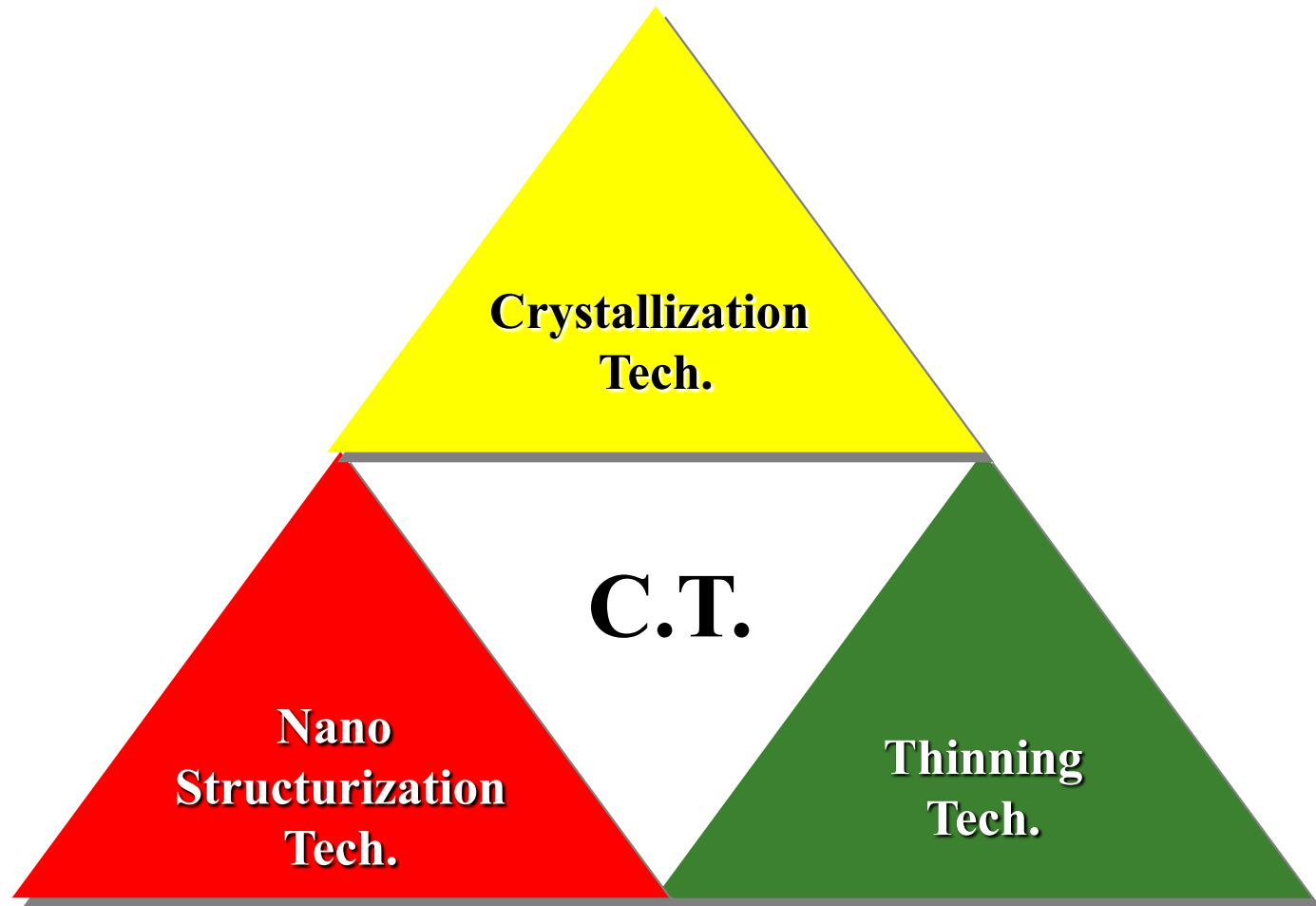
# **Milestones**

- 1981** Sino-American Silicon Products Inc. established
- 1999** SST established in China
- 2000** Enter Solar Ingot / Wafer Business
- 2001** SAS IPO in Taiwan ( OTC traded # 5483 )
- 2004** Receive Taiwan Government's 12th Excellent Enterprise Innovation Award
- 2006** SSC1 Founded in Chunan - Expansion for PV business
- 2007** Optoelectronics Business Unit established
- 2008** GlobiTech Inc. (TX USA) acquired
- 2008** Receive Taiwan Government's 16th Outstanding Enterprise Innovation Award
- 2009** SSC 2 operation starts
- 2009** Completed 9 Solar Farms in Italy

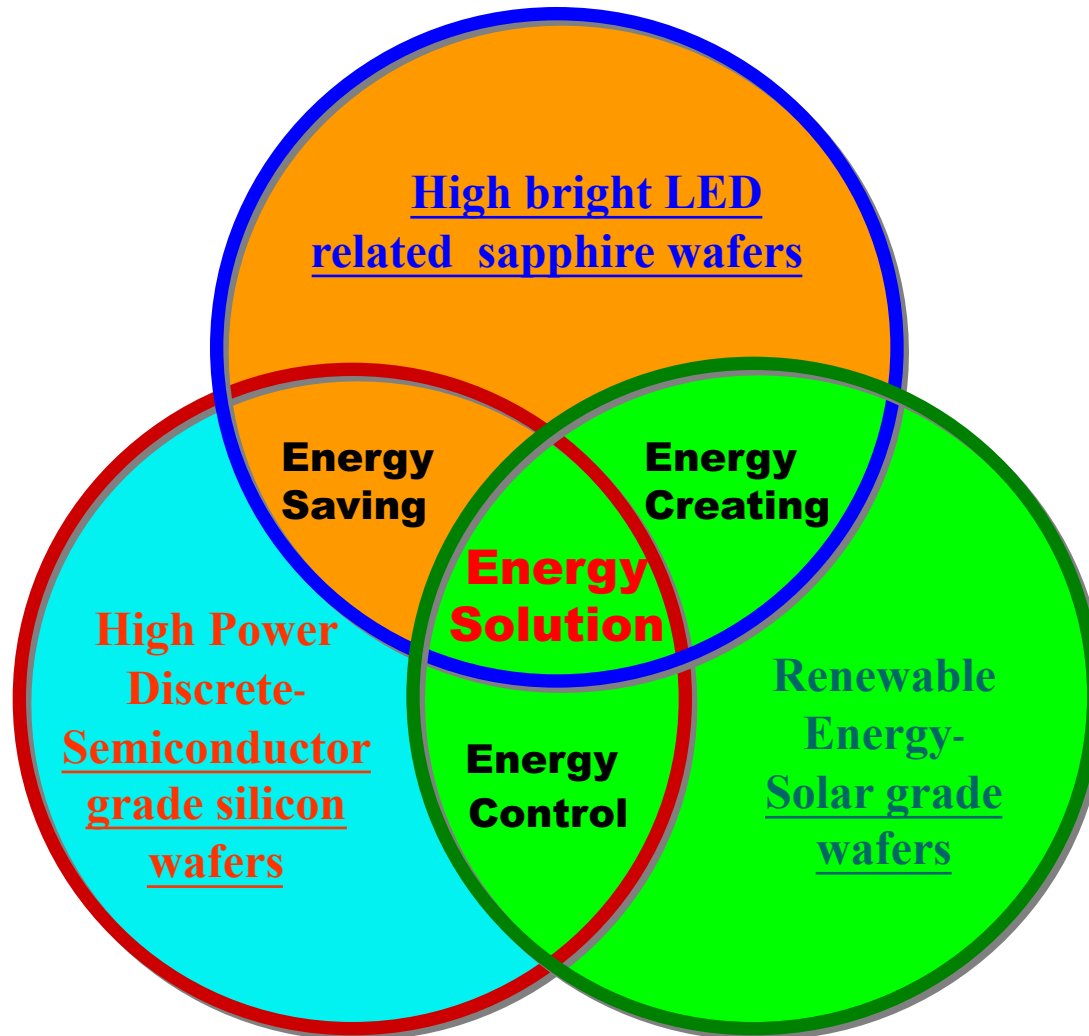
# Global Sites



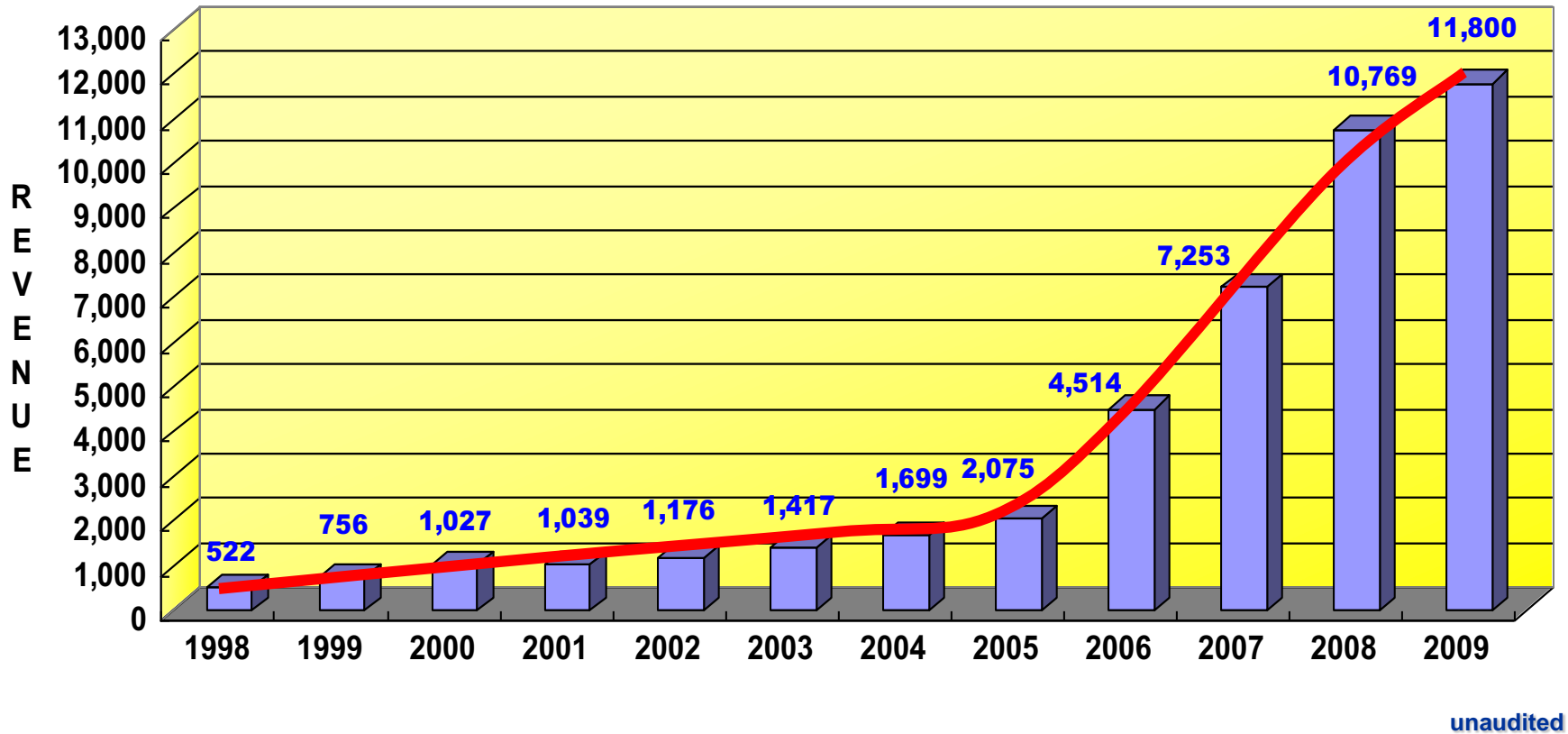
# ***SAS Core Technology***



# **Product Development Strategy**

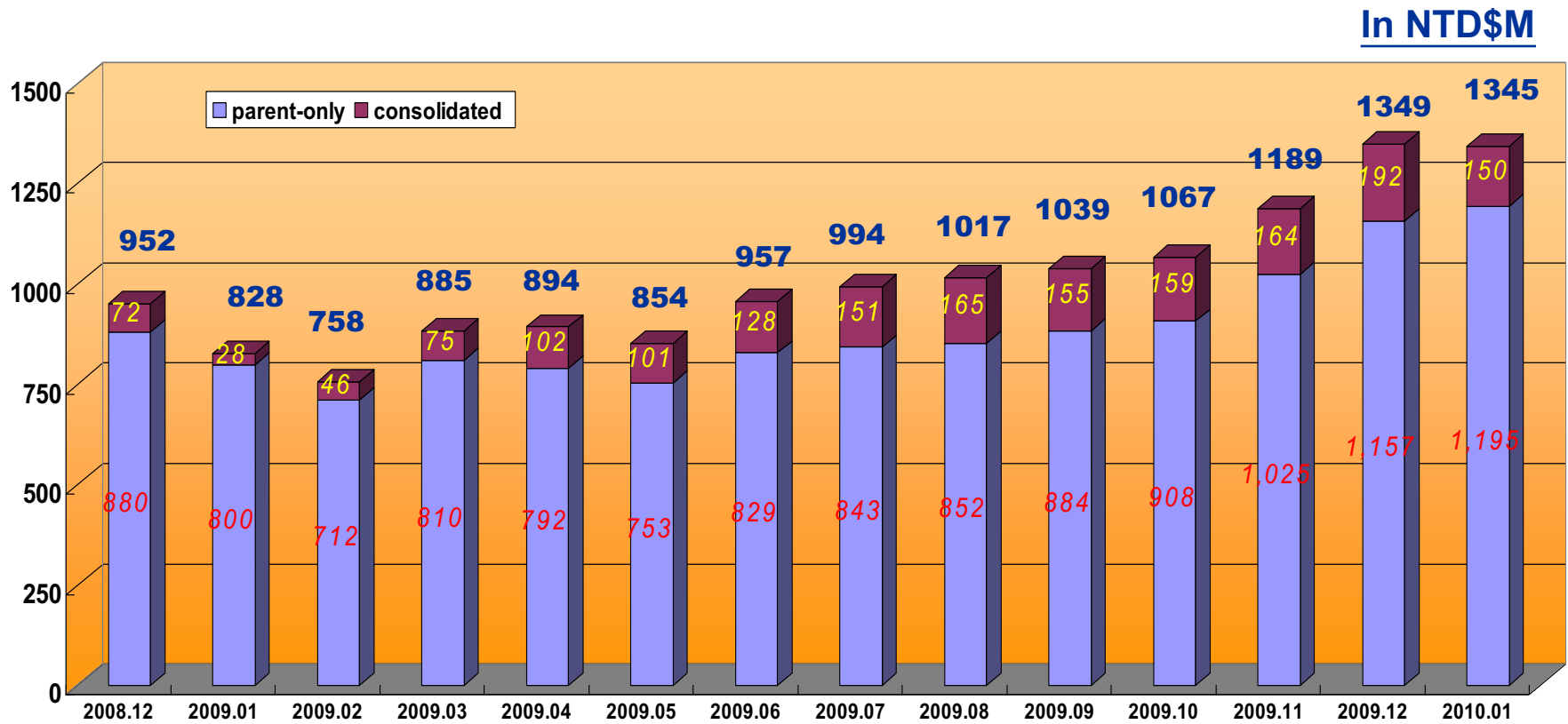


# 12 Years Sales Revenue Trend





# Year 2009 Sales Trend Chart



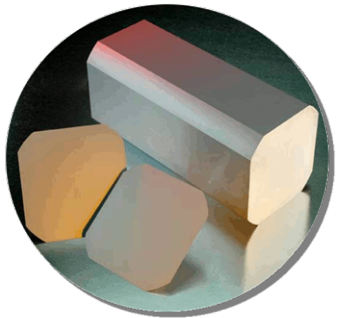
# Main Products



- Heavily-doped wafers
- Deep diffusion wafers
- Silicon-on-insulator
- Epitaxial wafers



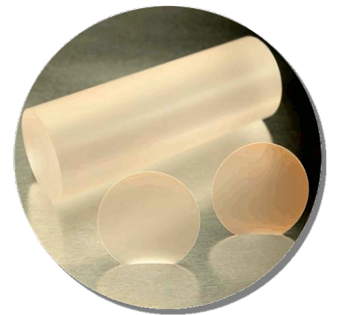
- Automotive power device
- Power discrete
- MEMS



- Mono-crystal ingots
- Thin Mono and Multi wafers



- Solar cell

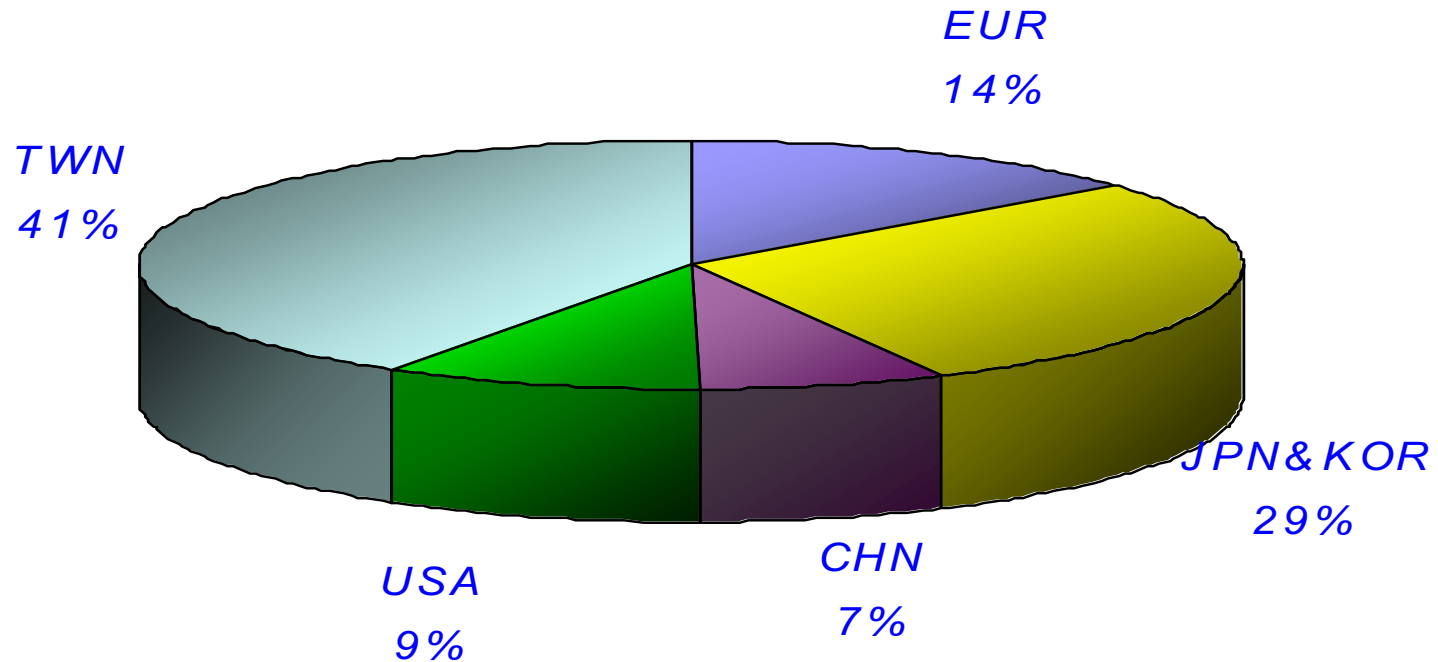


- Sapphire ingot
- Sapphire wafers



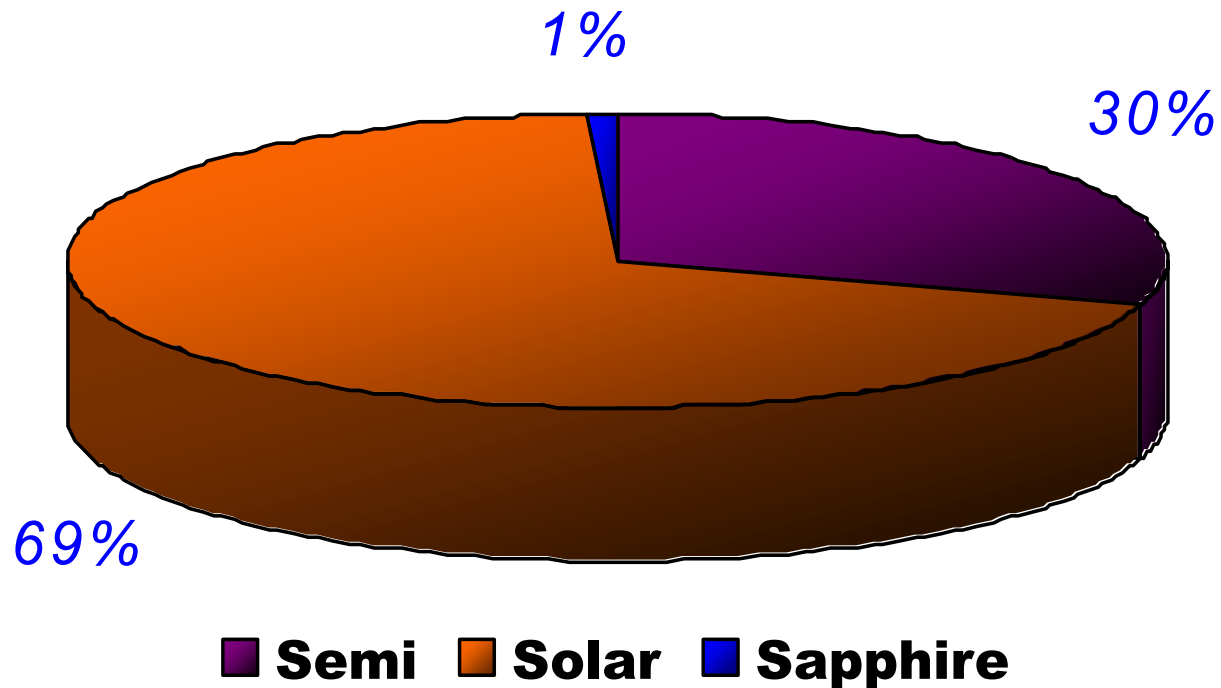
- Lighting LED lamp
- Back light LED

# **SAS Group Sales Break up** **by Region**



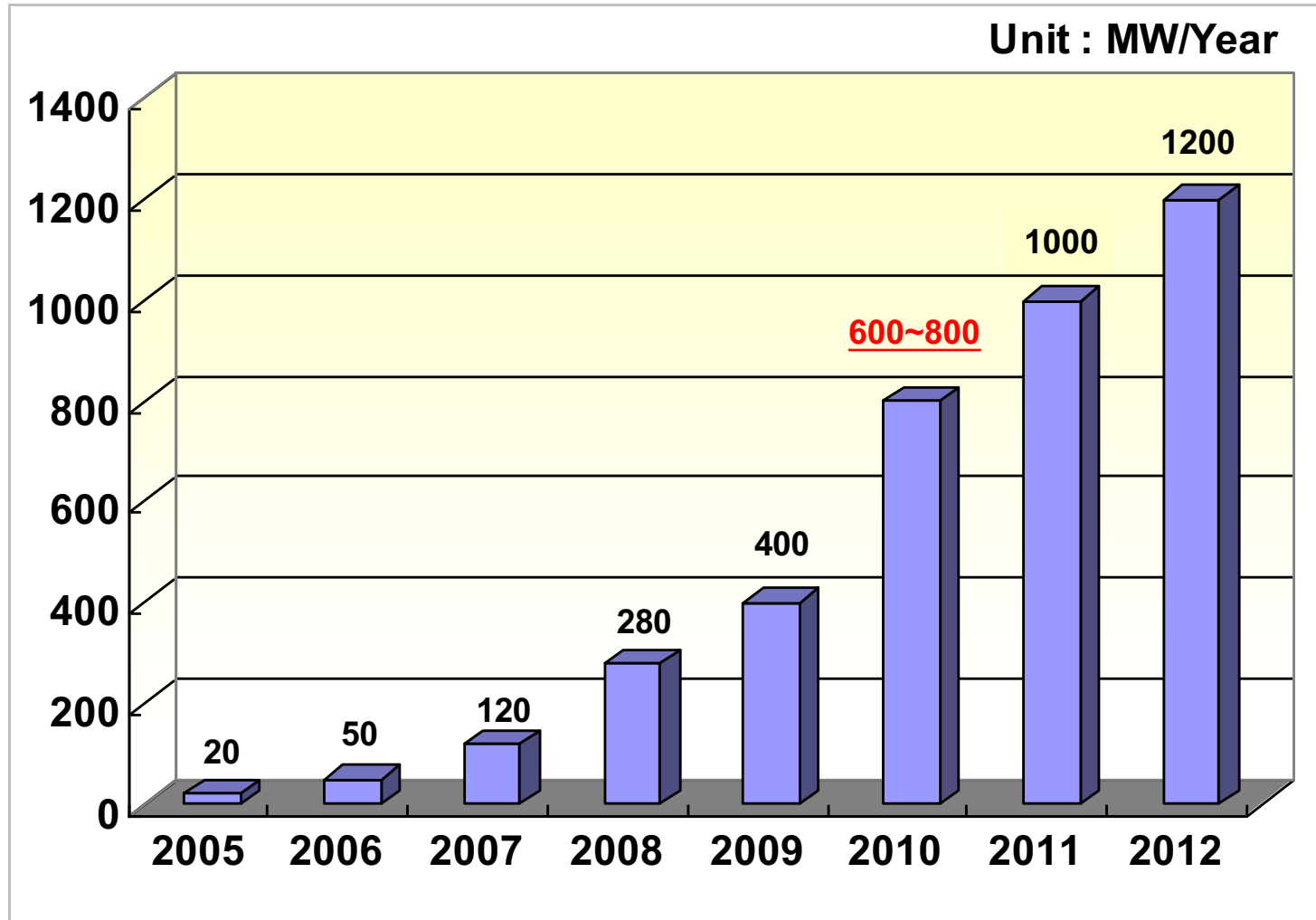
**Year 2009**

# **SAS Group Sales Break up by Business Unit**

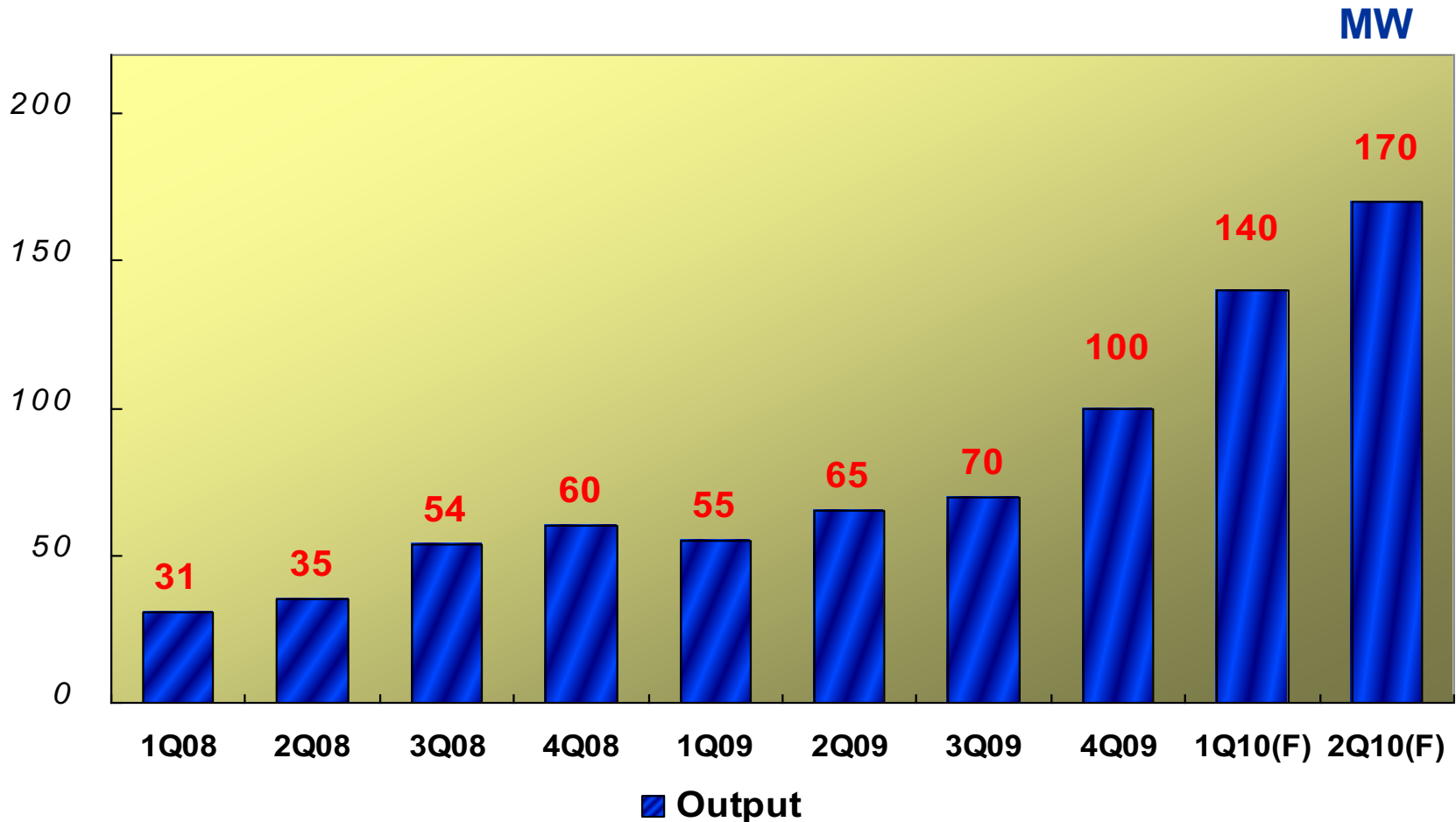


**Year 2009**

# Solar Capacity Expansion Plan



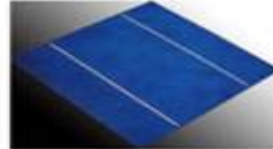
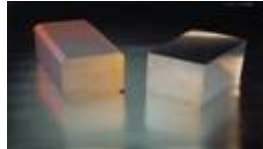
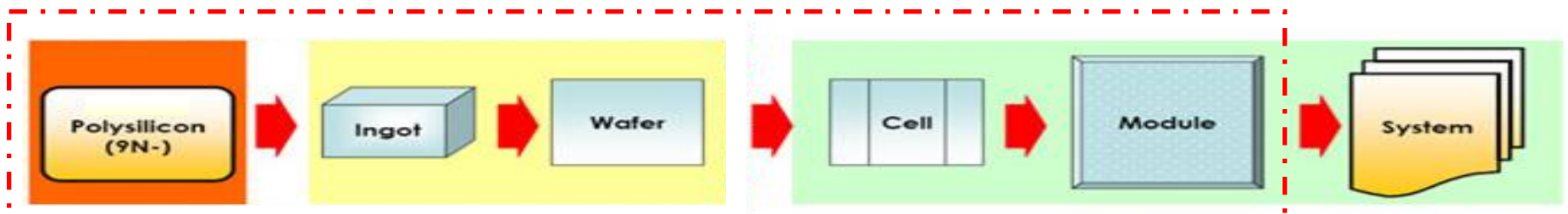
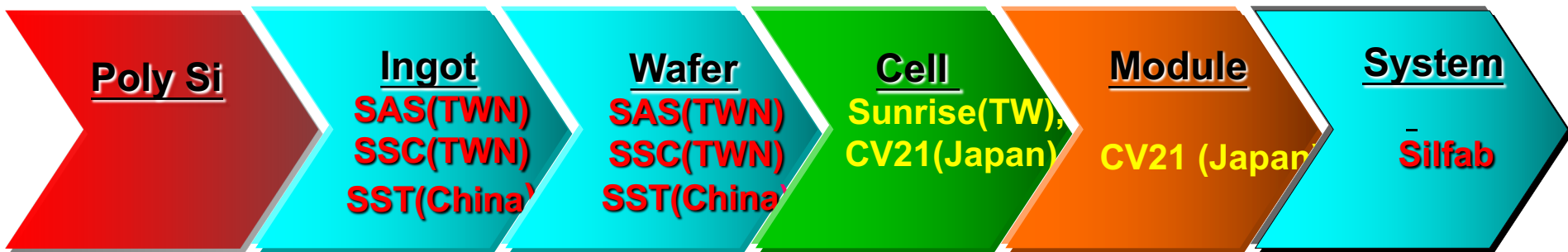
# **SAS Solar Product Shipment**



# *SAS PV Vertical Integration*

← Upstream

Downstream →



# **SILFAB**

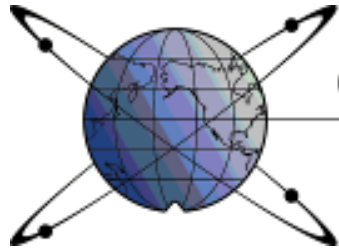
SAS partner with Silfab to develop solar farm projects in Italy, majority wafer provided by SAS. More projects in the pipe in Europe and USA.





# **SAS Semiconductor capacity**

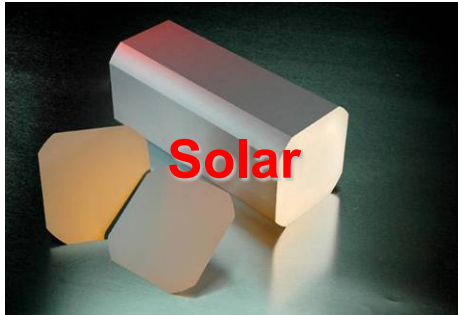
<b>ITEMS</b>	<b>SAS Group (Wafers/Month)</b>
<b><i>Non Polished Wafer</i></b>	<b>1000K 4" Eqv.</b>
<b><i>Polished Wafer 6" Equivalent</i></b>	<b>280K</b>
<b><i>EPI Wafer</i></b>	<b>200K</b>
<b><i>Diffusion Wafer</i></b>	<b>250K</b>

**GTI****GLOBITECH**  
DESIGNING EPI SOLUTIONS

- **Two epi reactor models available:**
  - **LV: Centura single-wafer**
  - **HV: EpiPro batch reactor**
- **100mm/125mm batch reactors**
- **Diameter – 100mm, 125mm, 150mm, 200mm**
- **Dopant – As, P, B**
- **Multi-layer Epi products available; P/N+, N/P+ available**
- **Advanced reactor control and data collection (RFID tracking)**



# **Glance on Business Units**



- Strong market demand.
- Full capacity utilization to June. 2010
- Pricing up atmosphere forming
- Ongoing Expansion plan target 800MW by year end



- Strong growth with worldwide V shape recovery.
- 40% growth expected for 2010.
- Full capacity utilization in SAS group (SAS,SST,GTI)
- 8" New Products brought on line from 2H10
- Capacity expansion planned from 3Q10

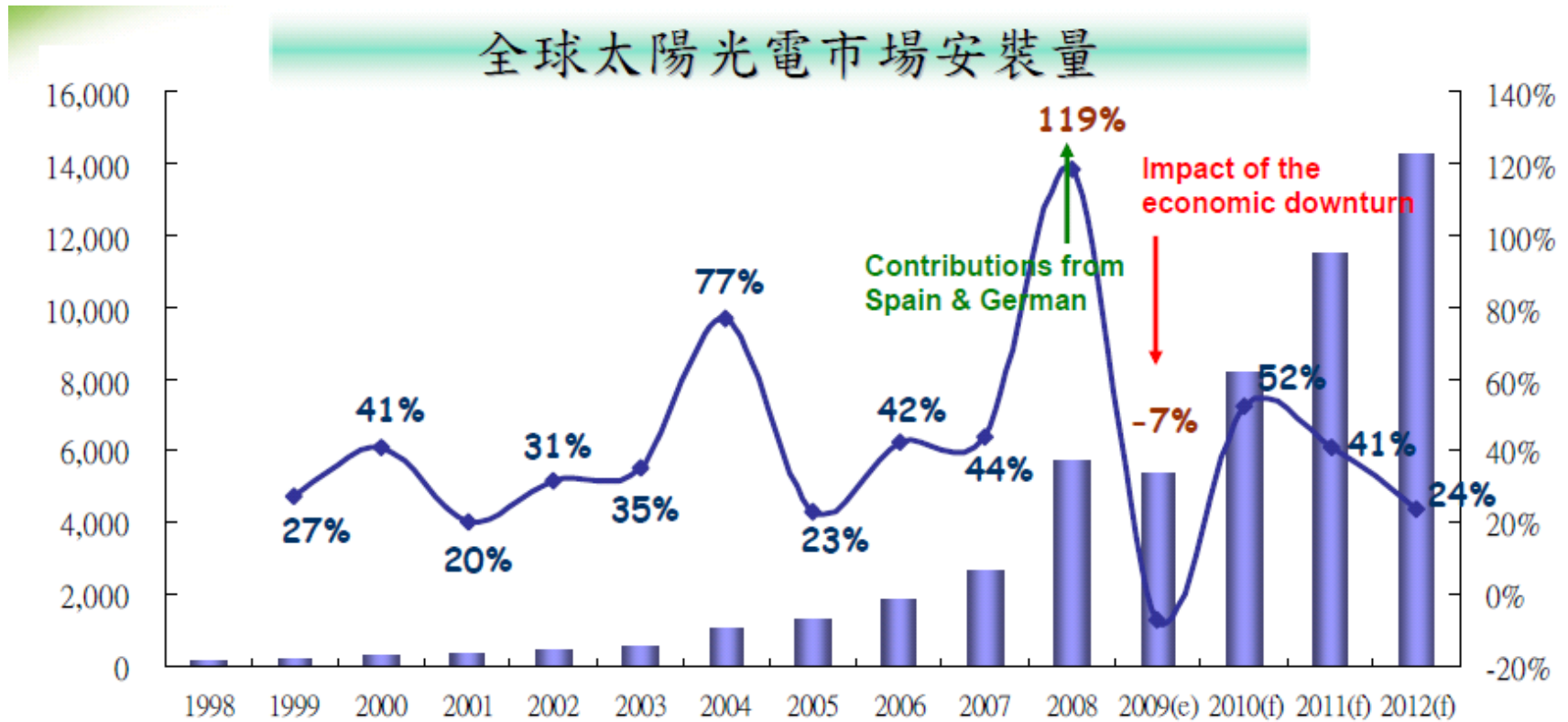


- Soaring demand continued.
- Pricing up 20% from 2Q10.
- Capacity expanded to 60K WPM, 100K WPM targeted by year end.
- Approaching 3" & 4" Niche market in Japan and Korea.

# **Market Dynamics**



# Global PV Installation

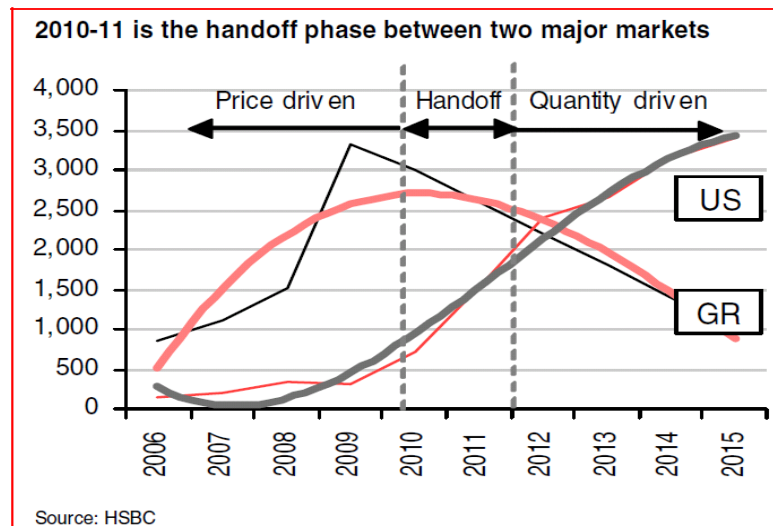


Source:PIDA 2010/01

# Global PV Regional Installation Analysis

MW	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009E	2010E	2011E	2012E
Europe	50	96	106	210	637	740	1,151	1,930	4,601	3,486	4,460	5,412	6,679
USA	22	29	44	63	90	111	146	218	353	766	1,725	3,135	3,549
Asia	142	155	225	263	302	340	405	323	619	893	1,731	2,665	3,625
the others	24	28	34	48	53	101	135	170	200	210	250	300	400
Total	238	308	409	584	1,082	1,292	1,837	2,641	5,773	5,355	8,166	11,512	14,253

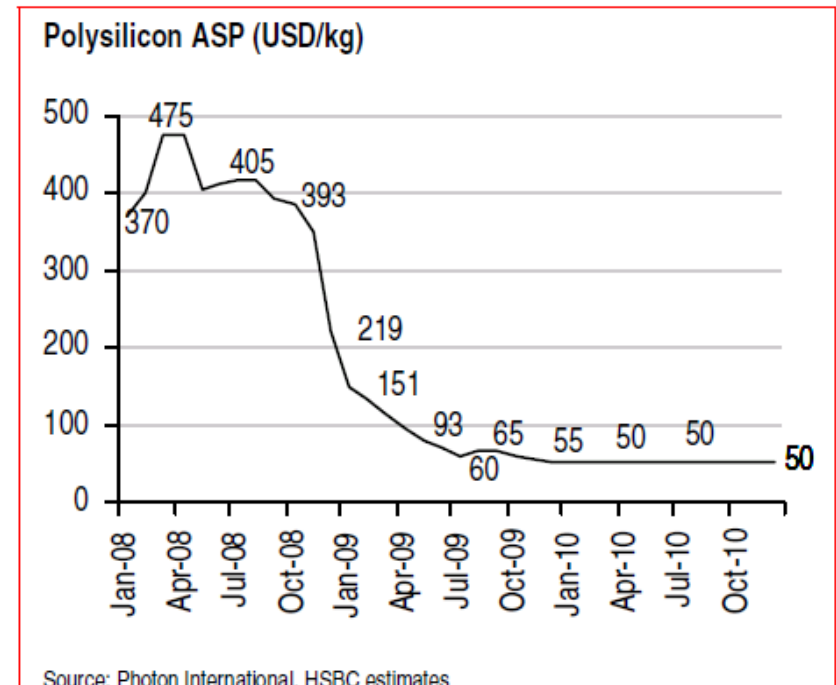
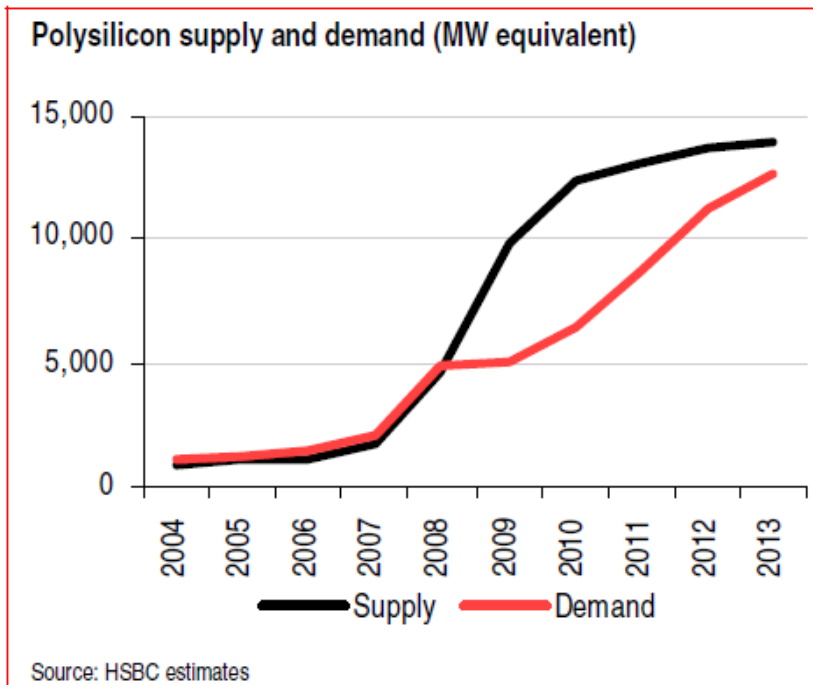
Source:PIDA 2010/01



Source: HSBC 2010/01/20











- Consensus of US will become the biggest solar market country in the future
- SAS are getting involved in North America solar business opportunity











# **Poly Price, How low will it go?**



Source: HSBC 2010/01/20

# ***Solar Cell Manufacture worldwide***

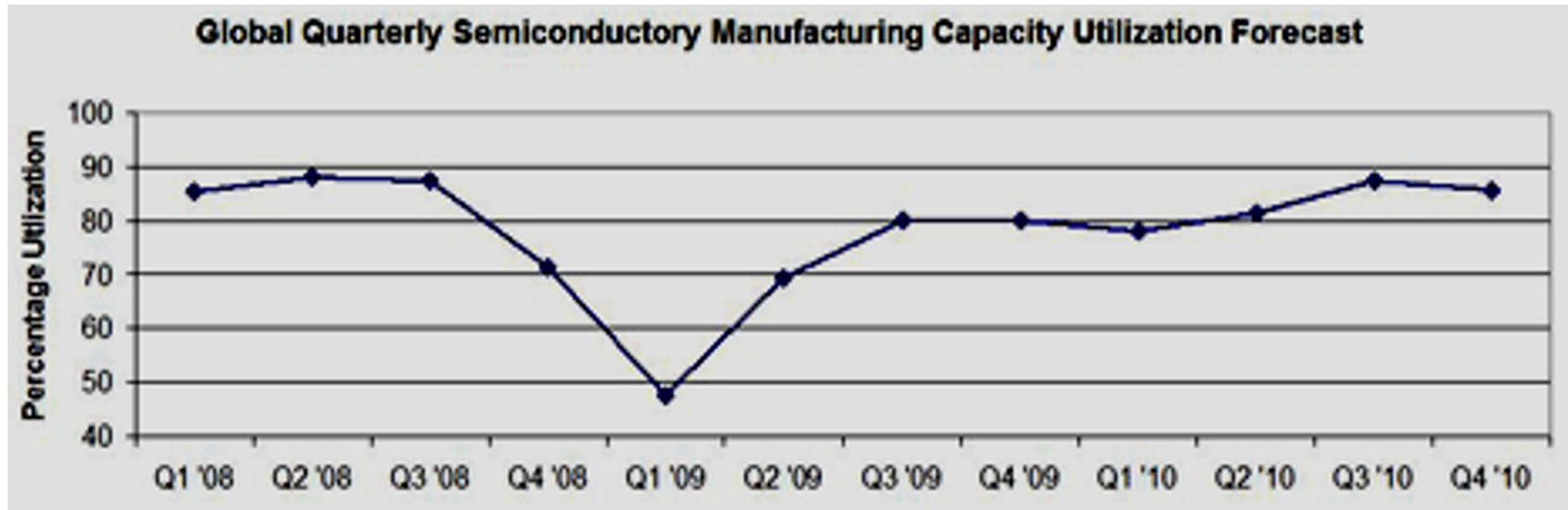
<b>2008</b>		
	China	33%
	Germany	19%
	Japan	16%
	Taiwan	12%
	USA	11%
	Korea	2%
	Spain	2%
	India	1%
	Italy	0%
	Others	4%

<b>2009</b>		
	China	30%
	USA	19%
	Taiwan	17%
	Japan	16%
	Germany	12%
	Korea	2%
	Spain	1%
	India	1%
	Italy	0%
	Others	2%



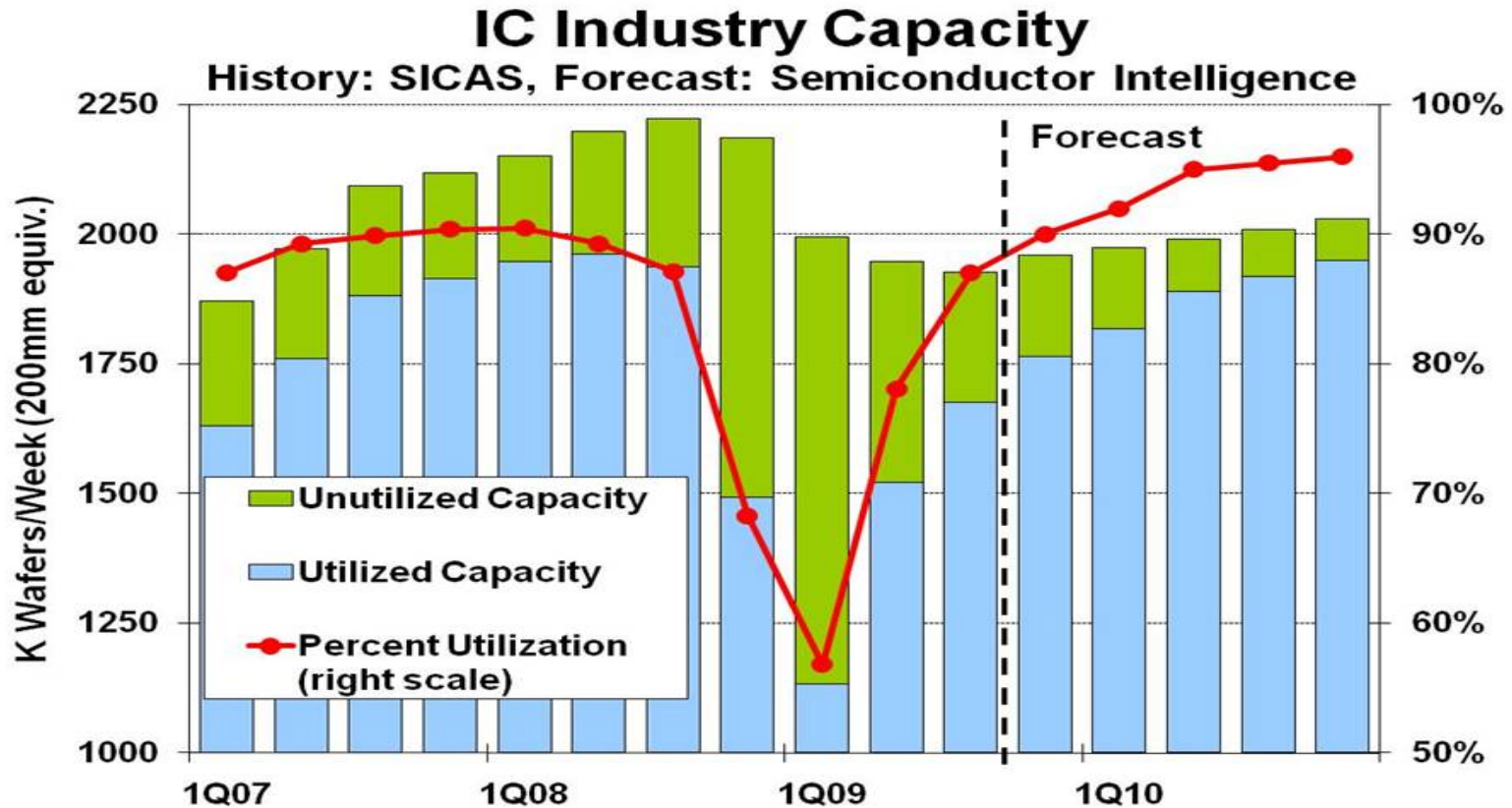
# **Strong V-shape Semiconductor Market Rebound**

**iSuppli anticipates that manufacturing run rates in the second half of 2010 will continue to drive up total factory utilization. The utilization rate is expected to continue to rise and peak at 87% in the third quarter of 2010 before declining slightly to 86% in the fourth quarter.**



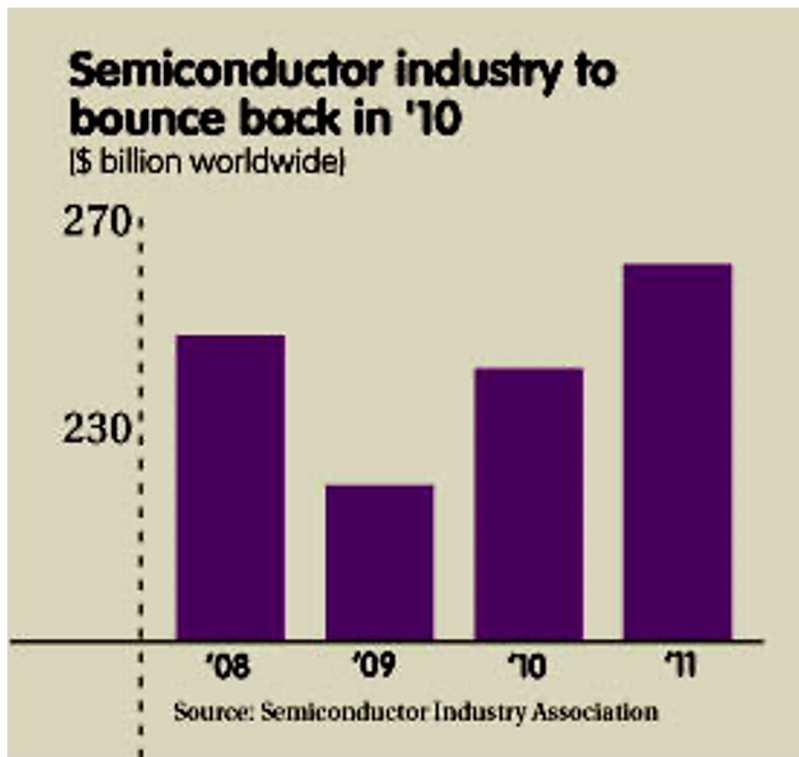
**Source: iSuppli 2010/01/22**

# **Strong V-shape Semiconductor Market Rebound**



Sources : SICAS, Semi Intelligence 2010/02/11

# ***Strong V-shape Semiconductor Market Rebound***



Sources : SIA, 2010/01/07

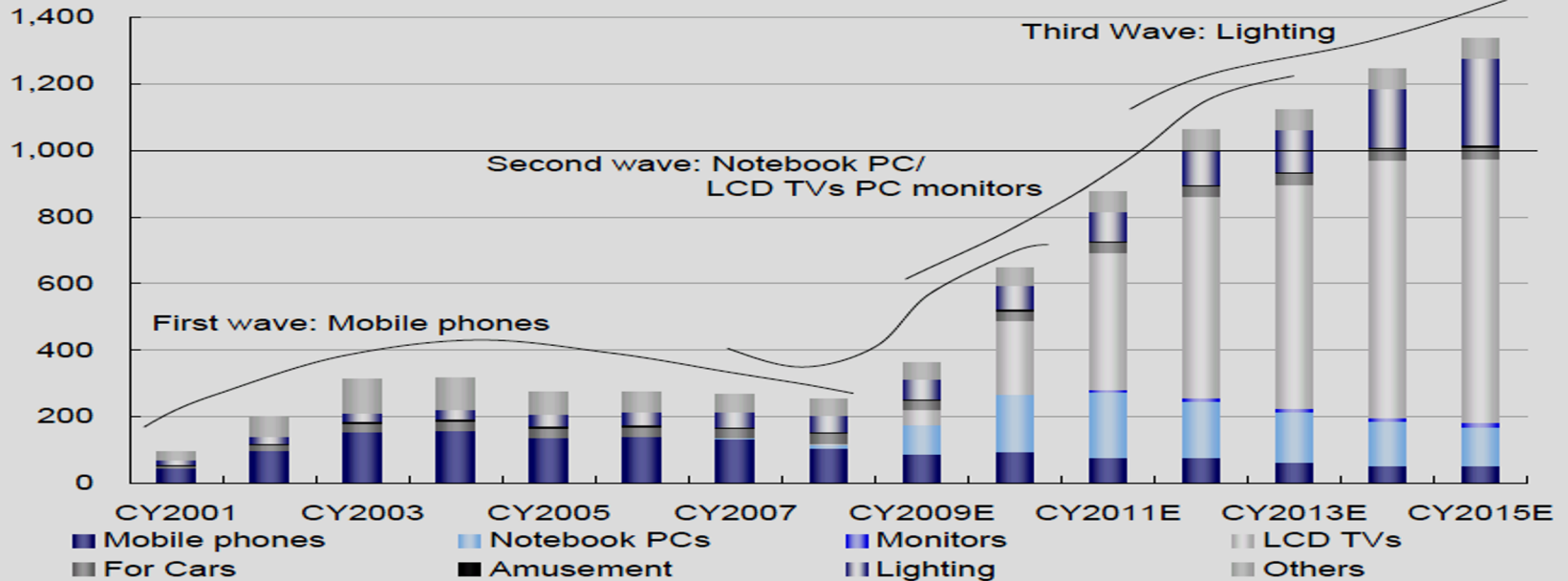
*“**W**e are now starting to see the first industry guidance revisions that tend to indicate even this range might be low. If the current growth momentum holds firm, 2010 chip market growth could easily hit 30 percent...”*

*Excerpted from the Global Semiconductor Monthly Report, Jan 2010*

# Rapidly Growing Sapphire Market

White LED market forecast by application

(¥b)



Source: Mizuho Security 2010/01/08

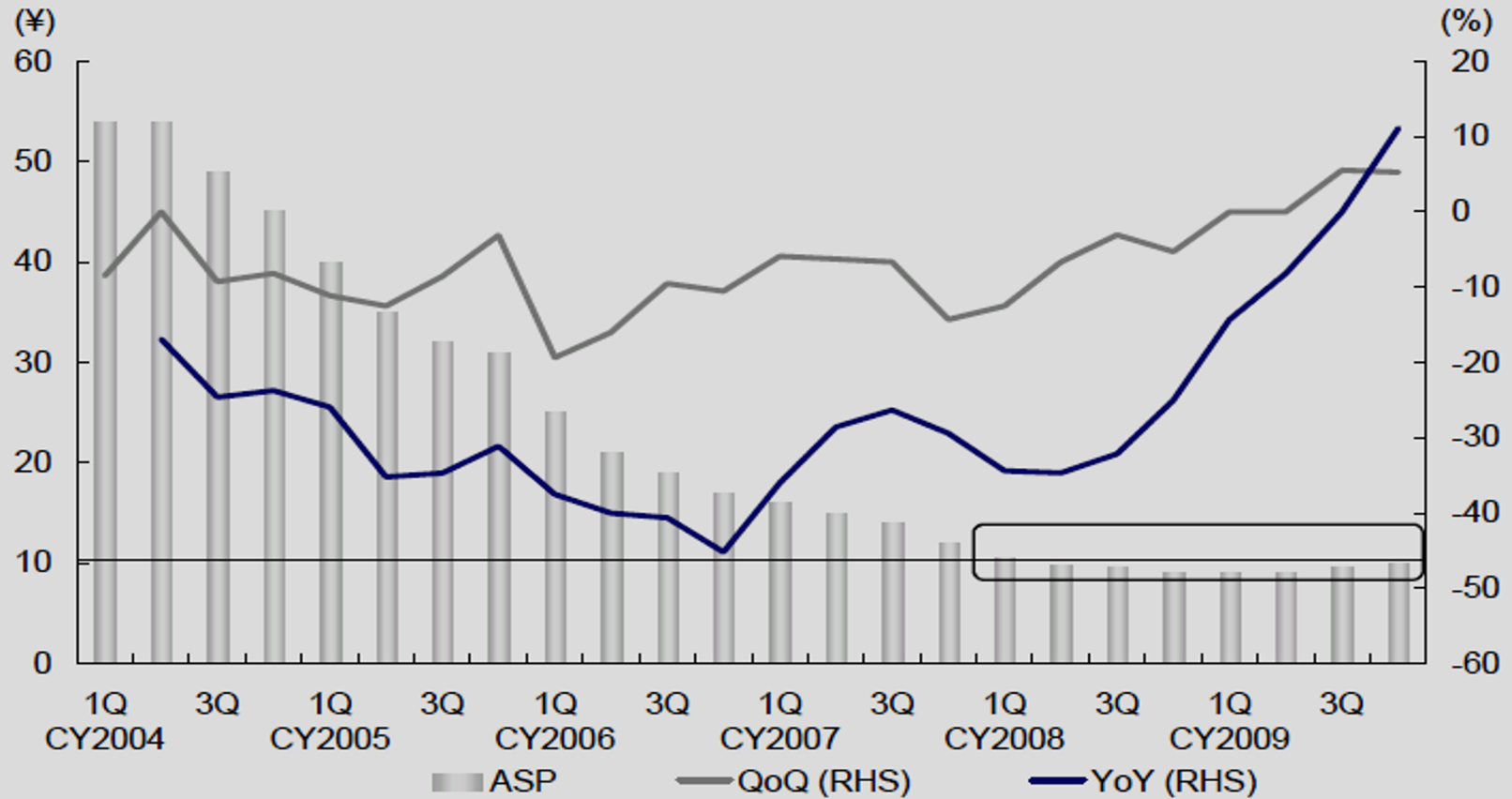
LED-demand forecasts (US\$m)

	2005	2006	2007	2008	2009E	2010E	2011E	2012E
LED total	6,125	6,640	7,453	7,915	8,113	11,492	14,791	16,858
YoY %	4	8	12	6	3	42	29	14
HB LEDs	3,920	4,230	4,577	5,082	5,630	8,885	12,184	14,251
Others	2,205	2,410	2,876	2,833	2,483	2,607	2,607	2,607

Source: Daiwa Security 2010/02/03

# White LED ASP Trend

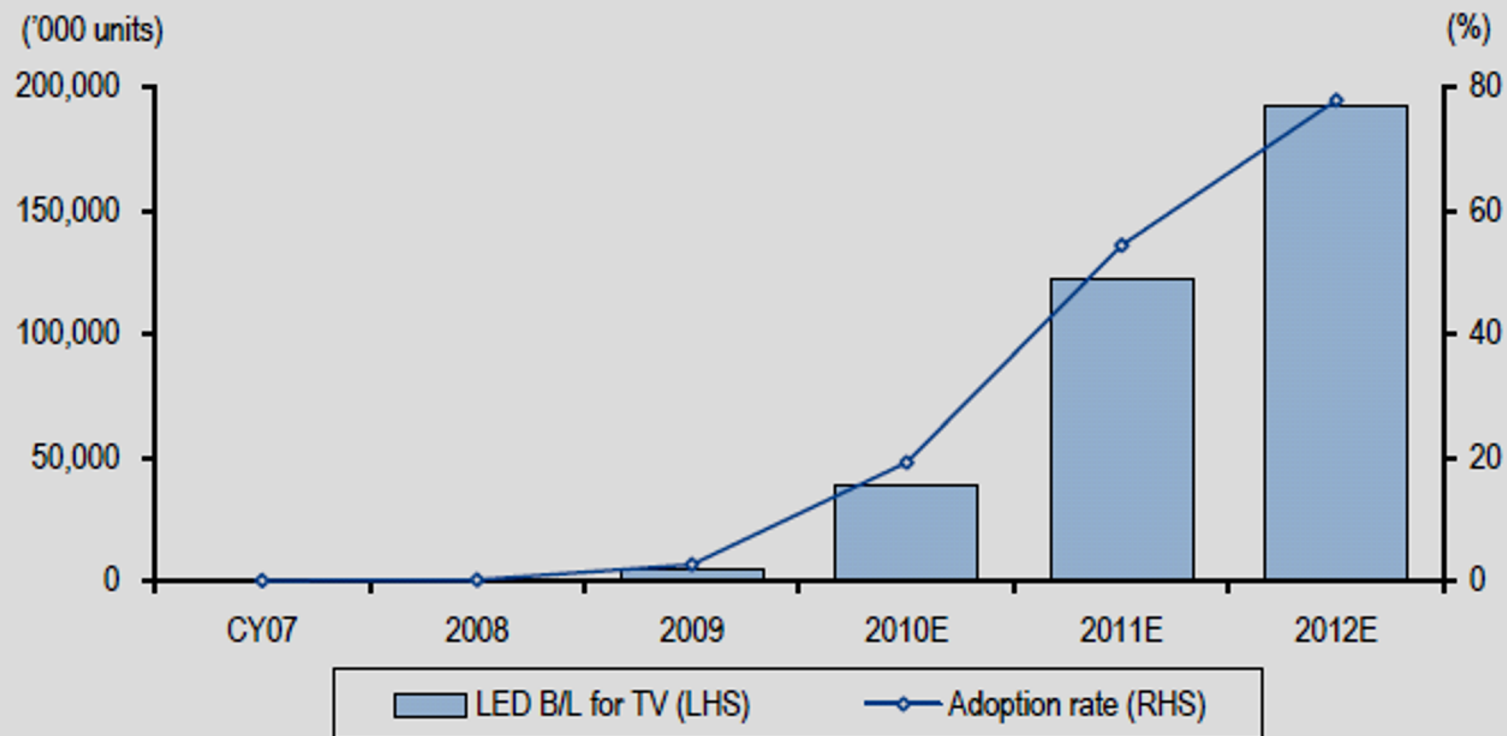
Figure 5. White LED prices (CY basis)



Source: Mizuho Security 2010/01/08

# **Driver: LED Backlight Application**

## LED backlights for TVs: shipments and adoption rate



Source: DisplaySearch, Daiwa forecasts



# SAS HQ

Manufacturing Area : 7,400 M2



# **SSC Fab 1**

- Plant Area : 12,000 M2
- Manufacturing Area : 27,400 M2





# ***SSC Fab2***

- Plant Area : 13,000 M<sup>2</sup>
- Manufacturing Area : 50,805 M<sup>2</sup>
- Construction Completion : June 2009





**SST**

**Manufacturing Area:  
4,000 M2**

***GTI***

**Plant Area : 120,000 FT 2**  
**Manufacturing Area : 8,000 FT 2**



**Thank you !**

<http://www.saswafer.com>

[5483 TT](tel:5483TT)

