



Lighting the New World



ACE Royal Tech Inc.

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Chairman	Bosco Foo (傅佩文)
Capital	USD 110 million (Dec., 2010)
Sales Revenue	USD 153 million (2011 Forecast)
Employees	950 (Taiwan) 250 (Wuhan , China)
Locations	SBIP, Taiwan : Headquarters/R&D Center/Silicon line Jhunan fab. Taiwan : LED and Silicon line Wuhan factory : chip process & inspection Taipei, Taiwan : Applied Products Application
Capacity	3,800 million chips per month ★ LED: 1,800 million chips ★ Silicon device: 2,000 million







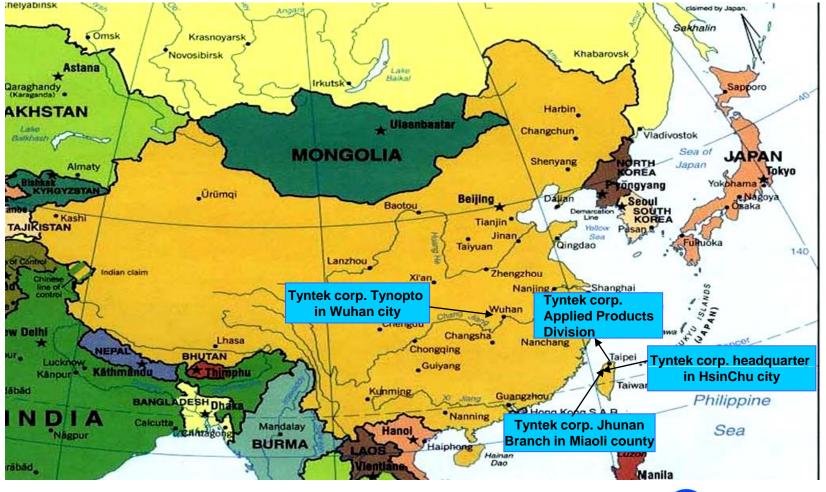
Founded in SBIP, Hsinchu, Taiwan.

- Technology transferred from Industrial Technology Research Institute . 1989/06/17
- Mass Production (Silicon device). 1997/08/28
- **ISO 9001 Certificated.** 1998/11/25
- Jhunan factory operation. 1999/04/25
- Became GTSM Listed Companies Taiwan. 2000/09/11
- **QS 9000 Certificated.** 2003/11/01
- ISO 14001 & OHSAS18001 Certificated. 2005/01/15
- **TS16949** Certificated. 2006/11/15
- 2007/06/25 Wuhan factory operation.
 - Team up Applied Product Division to design LED lighting products 2008
- Acquire the silicon line in SBIP 2009/11/1 **Mass Production LED lighting products.**
 - Achieving CE, E-Mark, UL, CUL certificate for LED lighting products. 2010





Factory Site Map

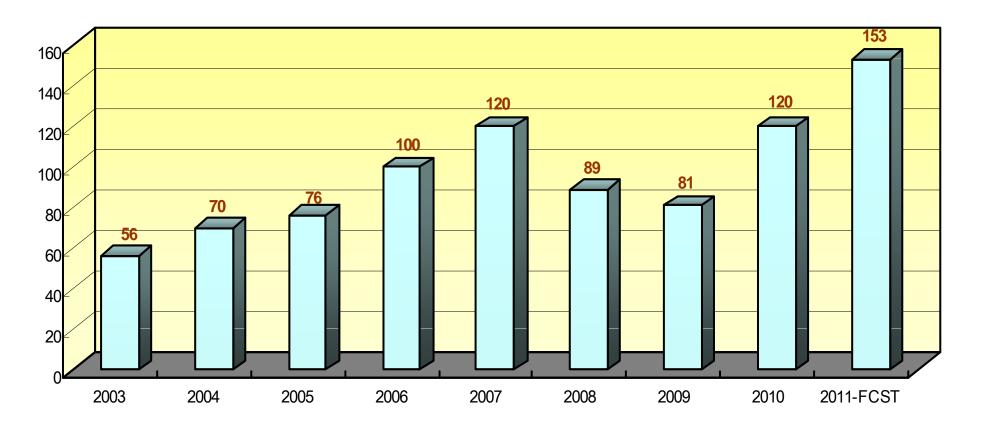




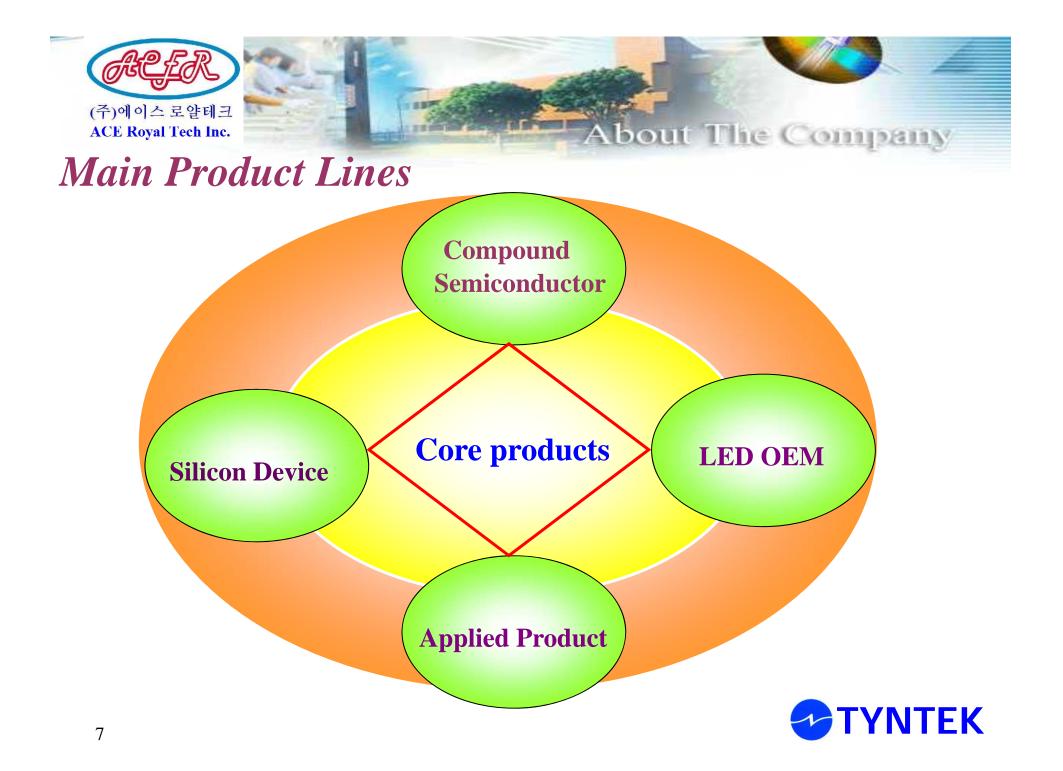


Financials-Annual Sales

Sales Revenue -USD (Million)









Compound Semiconductor

VISIBLE

- * GaP Red, Green LED
- * GaAsP Yellow, Orange, Red LED
- * AlGaAs SH, DH, DDH high brightness Red LED
- * AlGaInP Yellow Green, Yellow, Orange, Red, high brightness LED
- * AlGaInP As-Type, Wafer Bonding Red , Yellow LED
- * InGaN Blue, Green LED

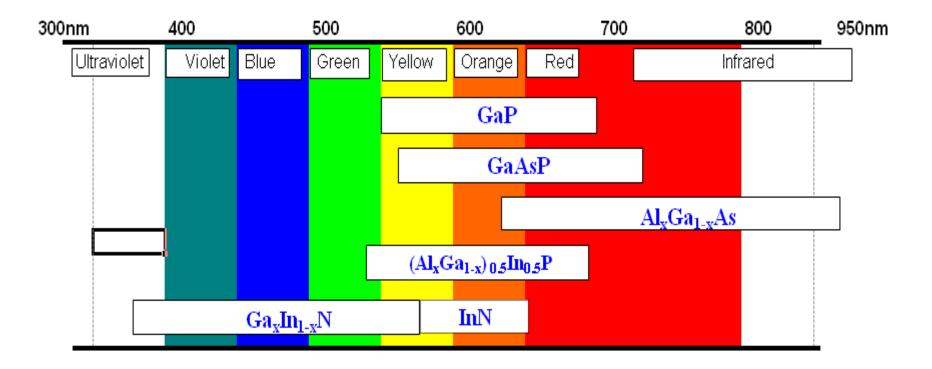
□ INFRARED

- * GaAs/GaAs 940nm IRED LED
- * AlGaAs/GaAs 940nm IRED LED
- * AlGaAs/AlGaAs 730, 780, 830, 850, 870, 880(nm) , high power /speed IRED LED





Spectrum of Compound Semiconductor







Visible Leds for GaP & GaAsP

NO	Material	Color	Туре	Wd(nm)	Chip size(mil)	Main Application
		Pure green	PG	556~564	10~11	Lamp,Display,SMD
		Standard green	SG	564~569	10~11	
		Medium green	MG	567~571	8~12	
1	GaP/GaP	Yellow green (P-up)	YGU	568~575	7~14	Lamp,Display,SMD
						Back light
		Yellow green (N-up)	YG	568~575	10~11	Bi-color lamp
		Red	RD	610-630	8~11	Lamp, Display
		Yellow	HY	580~595	7~12,14	Lamp,Display
2	GaAsP/	Soft orang	so	600~615	8~12	"
	GaP	Orange	но	614~626	8~12	"
		Red orange	HOD	622~633	7~12	Lamp,Display,Matrix







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Visible Leds for AlGaAs red & AlGaInP

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NO	Material	Color	Туре	Wd(nm)	Chip size(mil)	Main Application
		Red	SR	635~648	8~11	Lamp,Display,Matrix
		Deep red	NR	640~660	8~11	Lamp.display
3	AlGaAs	Red	DR (N-up)	635~648	10~12	Lamp,Display,Matrix
3	AIGaAS	Red	DR (P-up)	635~648	10,11	Lamp,Display
		Red	UR	635~648	12,14	Lamp
		Red	URL	635~648	12,24,40	Lamp
		Yellow green (P-up)	YG	568~574	8~12	Lamp,Display,SMD
		Yellow	UY	585~593	8~12	
4	AlGaInP/	Amber	so	600~610	8~12	
1	GaAs	Red orange	UOL	620~626	8~12	
		Red	SR	628~635	8~12	
		Deep red	DR	635~645	8~12	Display, Photo link
		Yellow (N-up)	UYH	585~595	9 · 12 · 15 · 20 · 30 · 40 · 60	Lamp,Display,SMD
5 AlGa	AlGalnP/Si	Amber	SOH	600~610	12	
		Red orange	υон	620~627	9 • 12 • 15 • 20 • 30 • 40 • 60	
		Deep red	DRH	655~665(Wp)	12 ~ 40	Display, Photo link





InfraRed Chips

NO	Material	Color	Туре	Wd(nm)	Chip size(mil)	Main Application
		GaAs/GaAs AlGaAs/GaAs	IRG IRA	940 940	9~12 9~12,14,24,40	Photo-coupler Remote control.
6	IR	AlGaAs/AlGaAs	IRP	850	10~14,16,24,40	Lamp
		AlGaAs/AlGaAs	IRS	870	12,14,16,	IrDA
		AlGaAs/AlGaAs	IRP (N-up)	880	11,13	Lamp





Silicon Device

Photo-Transistor (PT)

Photo-coupler Photo-interrupter

Photo-Diode (PD)

Standard Type for Remote controller High Speed / Sensitivity Type for IrDA

Zener-Diode (ZD)

ESD Protection







Products of Silicon Device

IC	Amplifier	Amplifier (External R)		P. Logic (N/C & N/O)
		Z.C. Triac (600V)	Z.C. Triac (800V)	
Thyristor	Triac (600V)	Triac (800V)		Triac (1000V)
	Low Volt.(3V)	High Volt. (50V)		
	Low Cj (2pf)	Low Cj (1pf)	Extra Low Cj (0.5pf)	
ZD	Power (5W)	Ultra Thin ZD	ZD Submount	Flip ZD Submount
	Ambient (620nm)	Ambient (550nm)	IR Only PT	
	Small Size (18mil)	Small Size (16mil)	Small Size (14mil)	
PT/DLT	High Volt. (140V)	H.T. PT (105C)	H.S. PT (10M)	H.S. DLT (1M)
	H.S. PD (1M)	H.S. PD (4M)	H.S. PD (10M)	H.S. PD (16M)
	Ambient (620nm)	Ambient (550nm)	Band Pass PD	Low Cross Talk PD
PD	RGB PD	Sunlight PD	RGB Ratio PD	340 UV PD





Applications of Silicon Device

IC	Linear Amplifier	Photo Interrupter	Photo Coupler	
Thyristor	AC Photo Coupler	AC Photo Interrupter		
ZD	ESD Protection	Leakage Detection	Voltage Regulation	Surge Protection
	Optical encoder	RGB controller	Ambient Detection	
PT/DLT	Photo Interrupter	Photo Switch	Photo Coupler	Touch Panel
	RGB controller	UV Detection	Position Detection	Optical Encoder
PD	IR Remote Controller	Smoke Detection	IrDA	LD Monitor





Capacity of Silicon Device

- □ Front End Equipment Capacity :
 - 45 kpcs/m(4"/5"wafer)
- □ Back End Equipment Capacity :
 - 60kpcs/m (4"/5"/6" wafer)
- □ Testing Equipment Capacity :
 - 2,000kk/m (Chip)





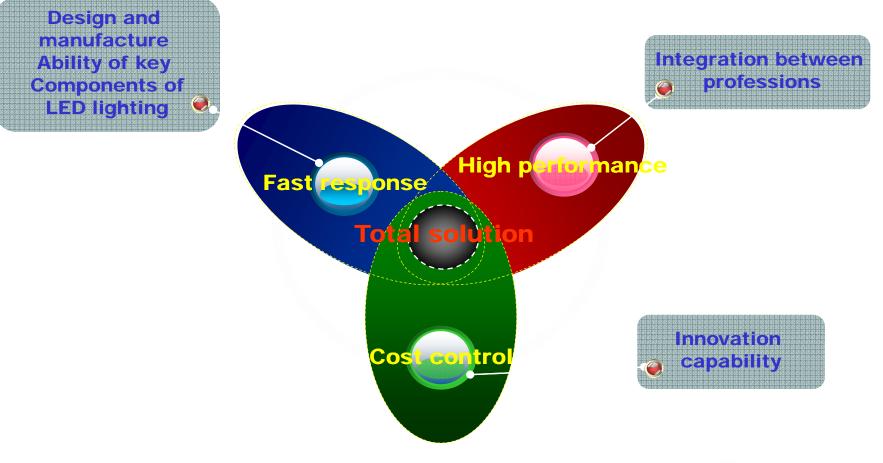
LED OEM Operation Center

	Process Station & Capacity		Capability
1	Grinding (15000 pcs/M)	Wafer Size	2" Wafers
		Thickness	90 um (minimum)
2	Laser Dicing (15000 pcs/M)	Cutting Depth	18 ~ 30 um
		Die Size	7 mil~ 40 mil(big)
3	Mapping (400 KK/M)	Testing Condition	Vf;IV;Po;WLD;WLP;IR;Vz
		Max Current	1000 mA
4	Sorting (600 KK/M)	Wafer Size	4" (after expansion)
		Ring Diameter	6" (outer diameter)
		Die Size	8 mil ~ 40 mil (probably 200um ~ 1000um)
5	Visual Inspection(400KK/M)		By Customer's Specification





Applied Product -- TYNTEK Advantage







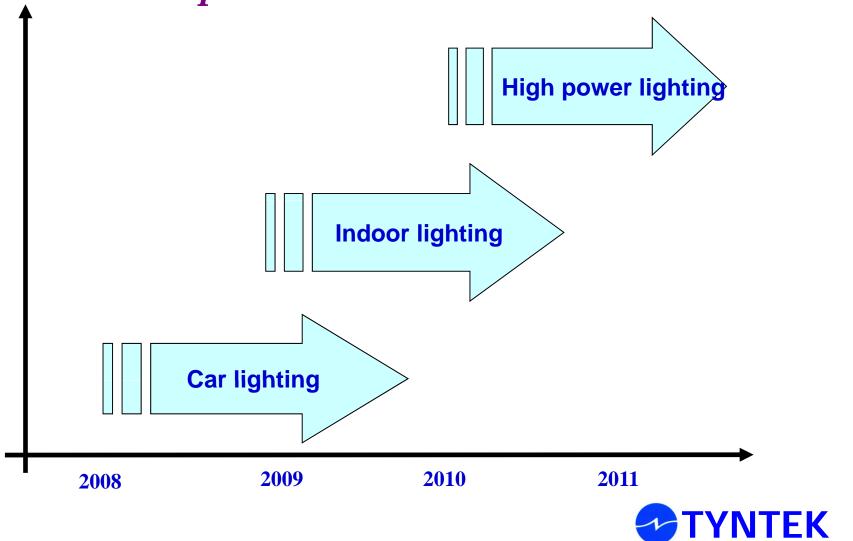
Technology for Lighting Design

- * Design utilizing optical reflection to meet the related photometric requirement.
- * Mechanical structure is simple with cost-effective and the convex is unnecessary.
- Sing high efficiency LED with low power consumption to accomplish the photometric requirement.





Product Roadmap





LED Car Lighting







LED Car Lighting



Fog Lamp



Bicycle Head Light



Daytime Running Lamp





LED Lighting Product



MR16



Jewelry Lamp



T8 tube



Light Bulb







LED Lighting Product



AR111



Down light



AR111





LED Lighting Product



High Bay

Modular Streetlight





Flood Light



Low Bay

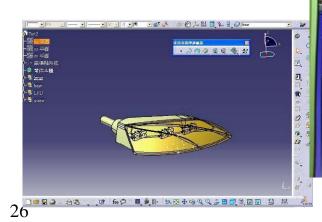


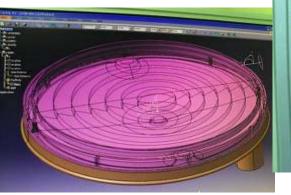


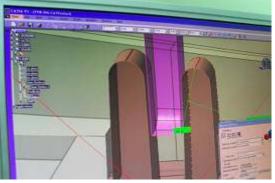
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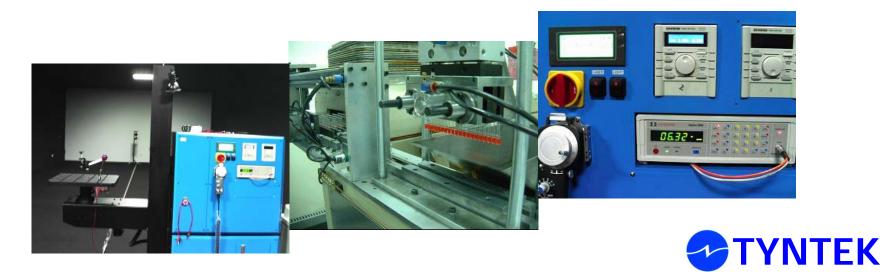


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Facilities _ Hardware









Turning signal_Europe



AR111_Europe



Light Bulb_Europe



Turning Signal_USA







Certificate

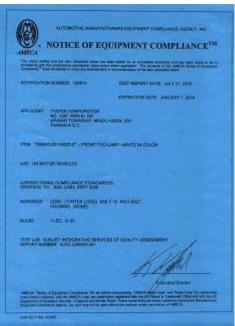
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If opplicable, name and address of the manufacturer's representative	-
Submitted for approval on	1 February 2009
Technical service responsible for conducting approval tests	KEMA Quality B.V.
Date of report issued by that service	23 March 2000
Number of report issued by that service	2122868-QUA/PHO 09-004-64
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Date of report issued by that service	: 12 August 2009	BX08 1122.12.1
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Strength of Tyntek

Wide Range Opto-Electronic Products

- * LEDs & Si Devices
- Total product solution

☐ High Volume Production Capability

- * 3800 million pcs chips/month
- * Flexibility in manufacturing
- **Good Quality**
 - * ISO 9001 & QS9000 & ISO 14001 and TS-16949 Approved system
 - * Products with conformable quality





Strength of Tyntek

Resources Integration

* Ensure customers always get what they need

Strong Developing & Engineering Capacity

- ***** Well educated & experienced engineers
- * Cooperate with R&D institutes & universities
- ***** Customized products





Thank You for Your Time !



ACE Royal Tech Inc.

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