



ACE Royal Tech Inc.
(주) 에이스 로얄테크

Tyntek

Company Profile

Product Marketing & Sales Center /Sales Division 1 / William Ma

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Outline



ACE Royal Tech Inc.
(주) 에이스 로얄테크

- General Information
- Main Product
- Product Relevant Sales Region
- Compound Semiconductor
- Silicon Devices
- Competitive Advantages

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General Information



ACE Royal Tech Inc.
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- Company Name : TYNTEK CORPORATION
- Date of Incorporation : 4th April, 1987
- Head Office Address : Chunan Science Park, Chunan, Miaoli County, Taiwan
- Total Number of Employees at Factory : 978
- Registered Capital (USD) : 98.5 million
- Key Markets Product : Compound Semiconductor 、 Silicon Devices
- Annual Turnover (USD) : 103.705 million in 2021
- Sales quantities in 2021(chip) :
 - Compound Semiconductor : 12,608 million
 - Silicon Devices : 16,353 million

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Main Product



ACE Royal Tech Inc.
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Main Product	Product Categories	Application	2021 Ratio
Compound Semiconductor	Visible LED	Digital Display, Dot Matrix, BLU backlight, Vehicle dashboard, Indicator(Laptop, Home appliance, Fax machine, Traffic signal)	37%
	Infrared LED	Remote Control, ETC, IrDA, Coupler & High speed coupler, Vehicle application	
	Optical Fiber Communications	Data Center, Telecom PONs, Proximity Sensor & SWIR	
Silicon Devices	Photo Transistors	Photo Coupler, Interrupter; Proximity sensor, Infrared monitoring.	56%
	Photo Diode	Receiver(Home appliance, communication, Laptop, touch panel ,Vehicle, consumer product); Smoke detector, Encoder, Medical sensor °	
	Zener Diode	ESD protection (LED Package and module)	
	TVS	ESD protection (Mobile phone, Laptop)	
	Resistors	Resistance regulation (LED Package and module)	
Others	LED Module Design	-	7%

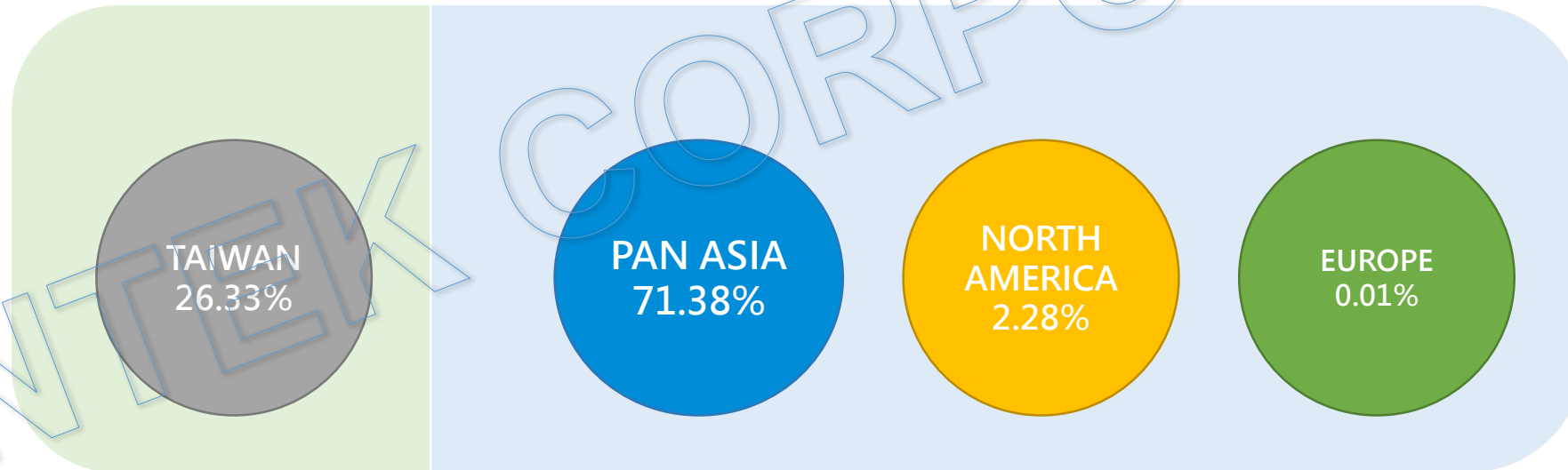


ACE Royal Tech Inc.

(주)에이스 로얄테크

Product Relevant Sales Region

- Based on the analysis of consolidated revenue in 2021, including of Taiwan, the distribution of main product sales regions was dominated by the Asian region. Taiwan accounting for 26.33% 、 Pan Asia accounting for 71.38% 、 Americas accounting for 2.28% and 0.01% in Europe.



Compound Semiconductor



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- Visible LED

High Brightness

AlGaInP(WB)

General Brightness

AlGaInP

Low Brightness

GaP

GaAsP

AlGaAs

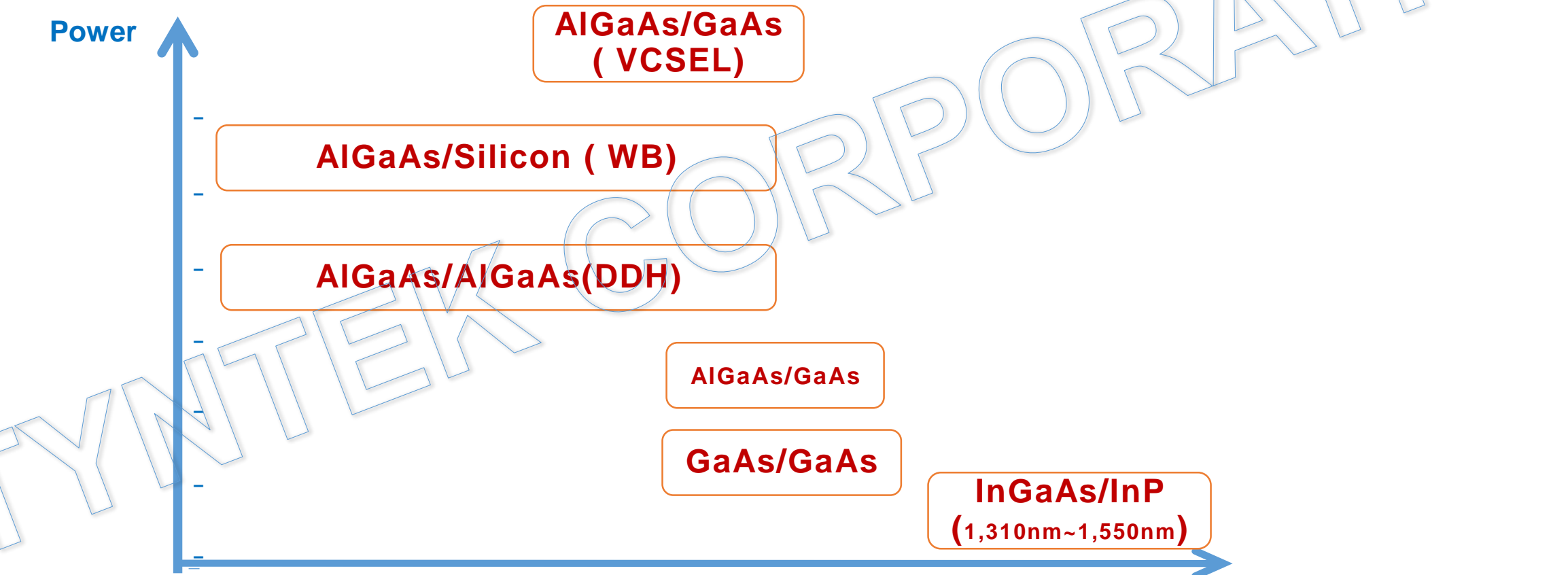


Compound Semiconductor



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- Infrared LED



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Compound Semiconductor



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- Optical Fiber Communications
 - InGaAs MPD(Monitor Photo Diode)
 - Aperture from 180 μ m to 3,000 μ m (Customize is available)
 - Spectral response from 1050nm to 1650nm
 - Responsivity > 0.85A/W @ 0.2mW
 - Edge MPD (Edge Illuminated By Laser)
 - Customized SWIR Sensor
 - InGaAs PIN Photo Diode
 - Bandwidth 1.25/2.5/10/25/100 GHz
 - InGaAs APD
 - Bandwidth 10 ~25GHz
 - GaAs PIN Photo Diode
 - Bandwidth 5/10/25/40/100 GHz
 - Spectral response from 800nm to 900nm

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Compound Semiconductor



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- Optical Fiber Communications

Data Center

Wavelength : 850 nm

GaAs PD

- Single/Array Diode

VCSEL

- Single /Array chip

Wavelength : 1260~1600nm

InGaAs PD

- 25G/100G PD
- Edge Monitor PD

PONs

Wavelength:1260~1600nm

InGaAs PIN PD

- Coplanar type
- Monitor PD
(Aperture 200~500um)

InGaAs APD

- Bandwidth 10GHz

Customized

Wavelength:850~1600nm

InGaAs PIN PD

- Large active area PD
(Aperture 1,000um~3,000um)
- Proximity Sensor

Silicon Devices



ACE Royal Tech Inc.
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- Photo Diode /Photo Transistor

Photo Diode structure	Specification
P-I-N (Vertical and Lateral type)	Standard:14mil ~120mil. Customize is available.
N-I-P (Vertical and Lateral type)	Standard:14mil ~80mil. Customize is available.
Customized Design	Encoder, Enhance PD, Low Pass/High Pass/Band Pass Coating

Photo Transistor structure	Specification
N-P-N (Vertical type)	Standard:16mil ~24mil. HFE 200~3,000 Customize is available.
Customized Design	Low Pass/High Pass/Band Pass Coating

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Silicon Devices



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- Photo Diode /Photo Transistor

Products	Application
Size 14~21mil PD	ToF (Time of flight) face sensor on Mobile phone.
Size 14~21mil PD	
Size 40mil~90mil PD	Normal IR sensor
Size 60~130mil PD	UV enhance sensor
Size 40~60mil PD	IR sensor on electronic whiteboard
Size 60~120mil PD	Low pass/High pass/Band pass Sensor
Customized PD	Wearable pulse sensor
Size 30~40mil PD	1.25Ghz on PoF (Plastic optical fiber)
Customized PD	Encoder , muti-cell PD
Size 16mil ~24mil PT	Photo-coupler , interrupter
Size 11mil~32mil CPN	Silicon Capacitor (Optical fiber application)220~1,000pF

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Silicon Devices



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- Zener Diode

Zener Diode structure	Specification
P-N (Top Anode Vertical type and Lateral type)	1 directional Zener, Standard:6mil ~18mil. Break down Voltage :5V~130V, Customize is available.
N-P (Top Anode Vertical type)	1 directional Zener, Standard:6mil ~18mil. Break down Voltage :5V~20V, Customize is available.
NPN (Top Anode Vertical type)	Bi-directional Zener , Standard:6mil~ 9mil Break down Voltage :5V~20V, Customize is available.
PNP (Flip type)	1 & Bi-directional Flip Zener, Standard: 18~25mil Break down Voltage :5V~57V, Customize is available.

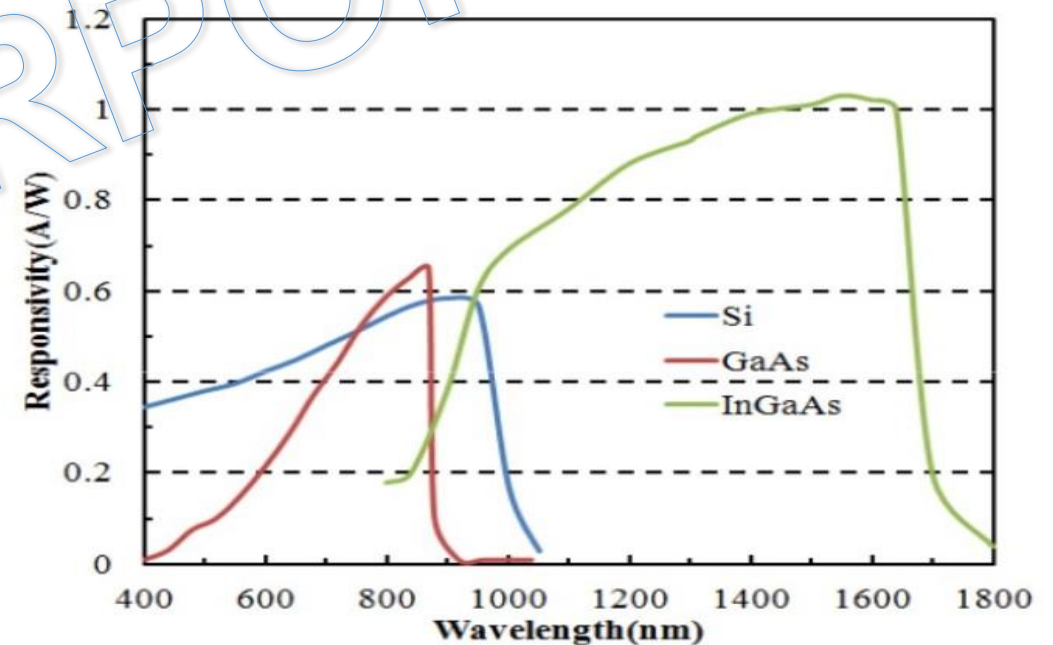
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Competitive Advantages



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- Experienced Chips Manufacturer
 - Design and chips manufacturer for more than 30 years
 - High volume production capacity over 4,000 million pcs/ Month
- Wide Range Solution
 - Compound LED from 550nm to 1,310nm.
 - Receiver sensor from 200nm to 1,650nm



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Tyntek Thank You

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