

ETERNAL MATERIALS





55th  **Anniversary**

The Overview of UV Curable Industry

Nick Pan, Director of Specialty Material Division

- 1 Introduction
- 2 UV Curable Technology

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Introduction

- Company Profile
- History
- Core Technology
- Main Product
- Global Sites
- Global Revenue
- Financial Feature
- International Certificate

Introduction - Company Profile

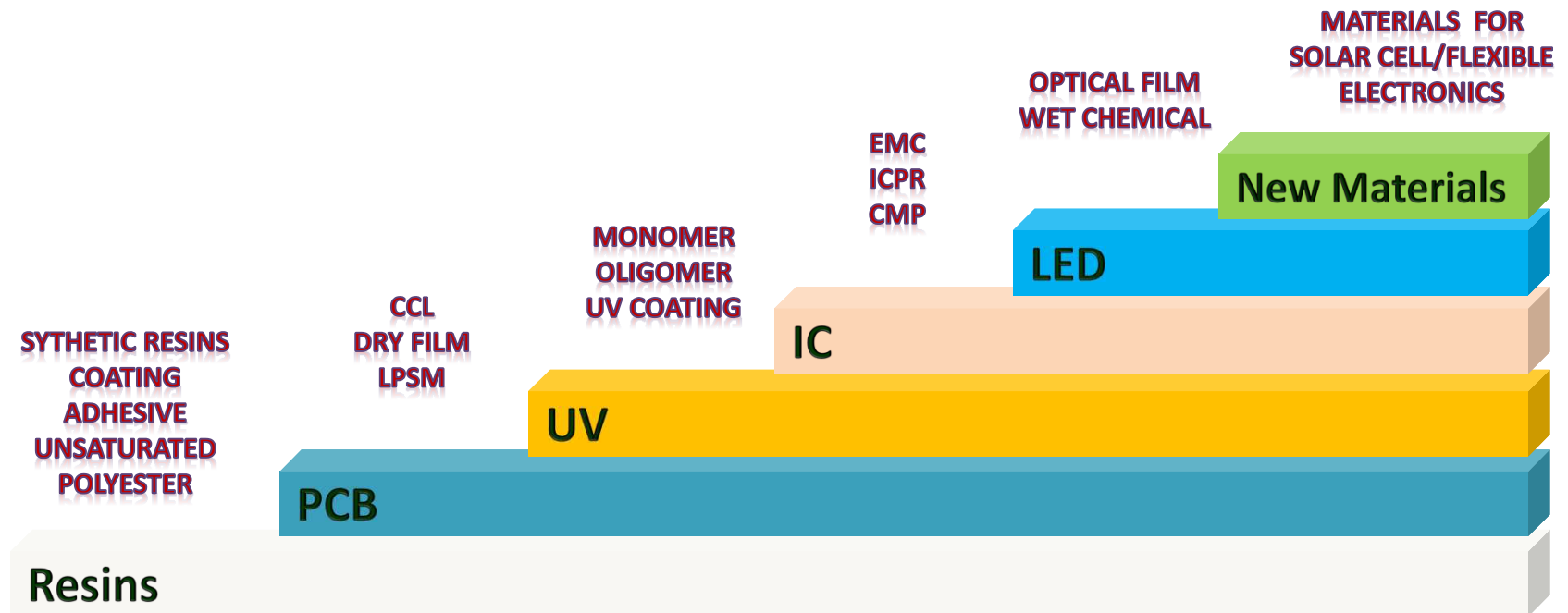
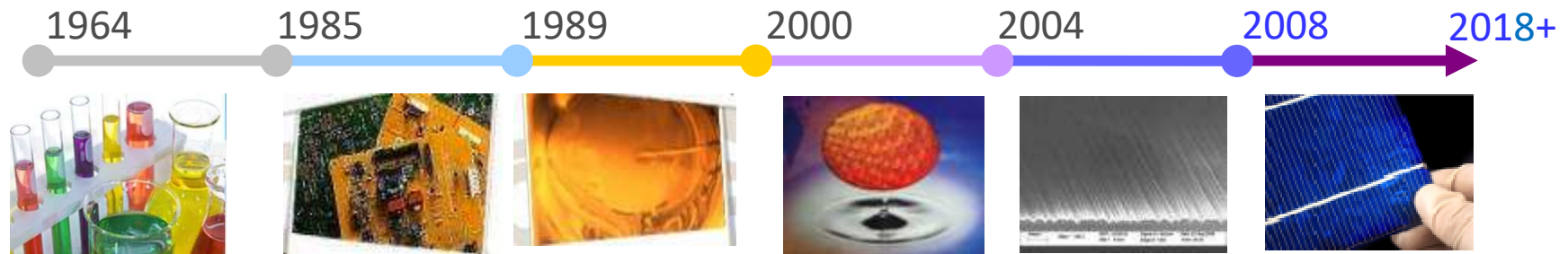


- **Core Business** : Electronic and Chemical materials manufacturing, processing and sales
- **Founding** : in 1964 , Headquarters in Kaohsiung, Taiwan
- **Number of Production Sites** : 24
- **Number of Employees** : 4,772
- **Overall Sales Revenue in 2018** : NTD 43,300 million
- **Headcounts of Researchers** : 557 (R&D expenditures accounted for 3% of sales revenue)

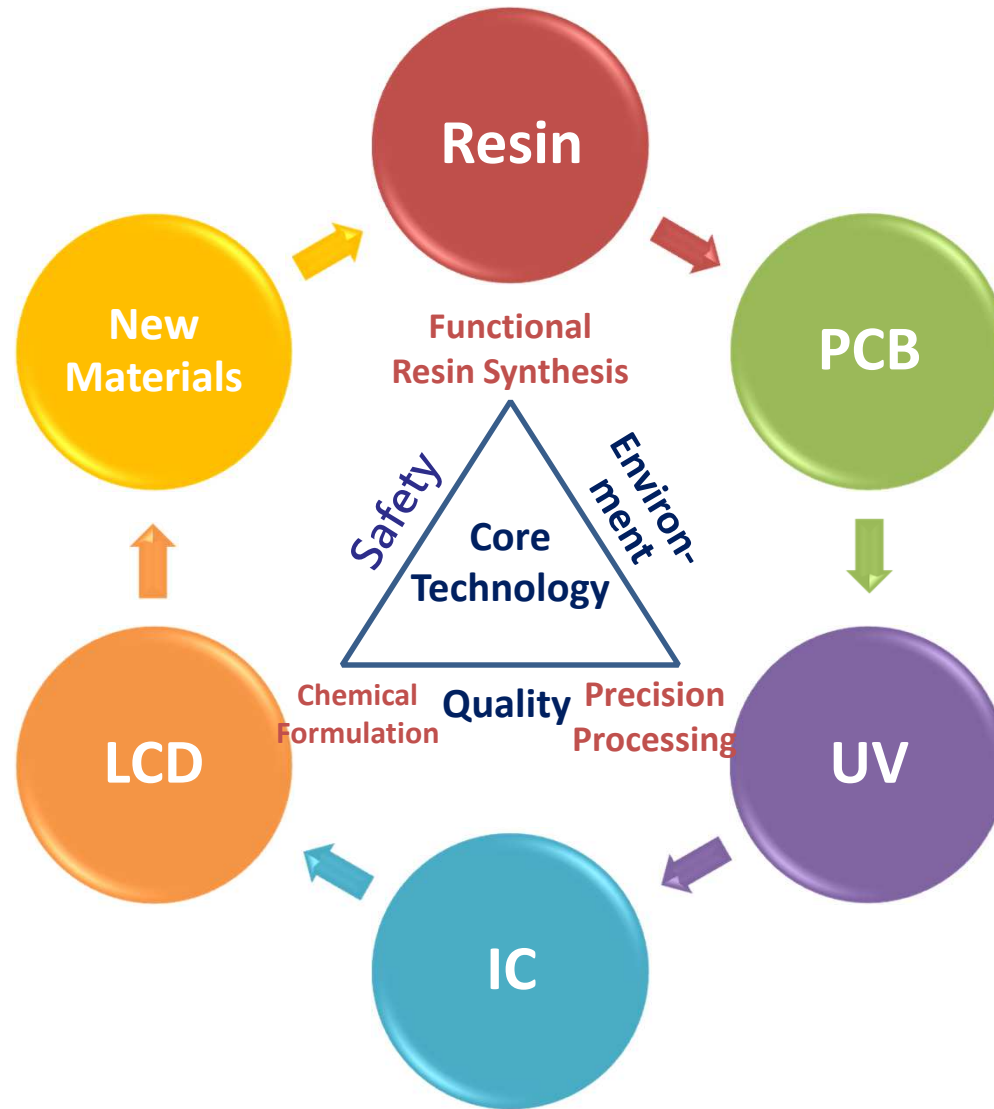
Eternal is:

- One of the leading suppliers of Dry film photoresist in the world.
- One of three largest UV curable Monomers & Oligomers material suppliers.
- One of the leading suppliers of synthetic resin in Asian.

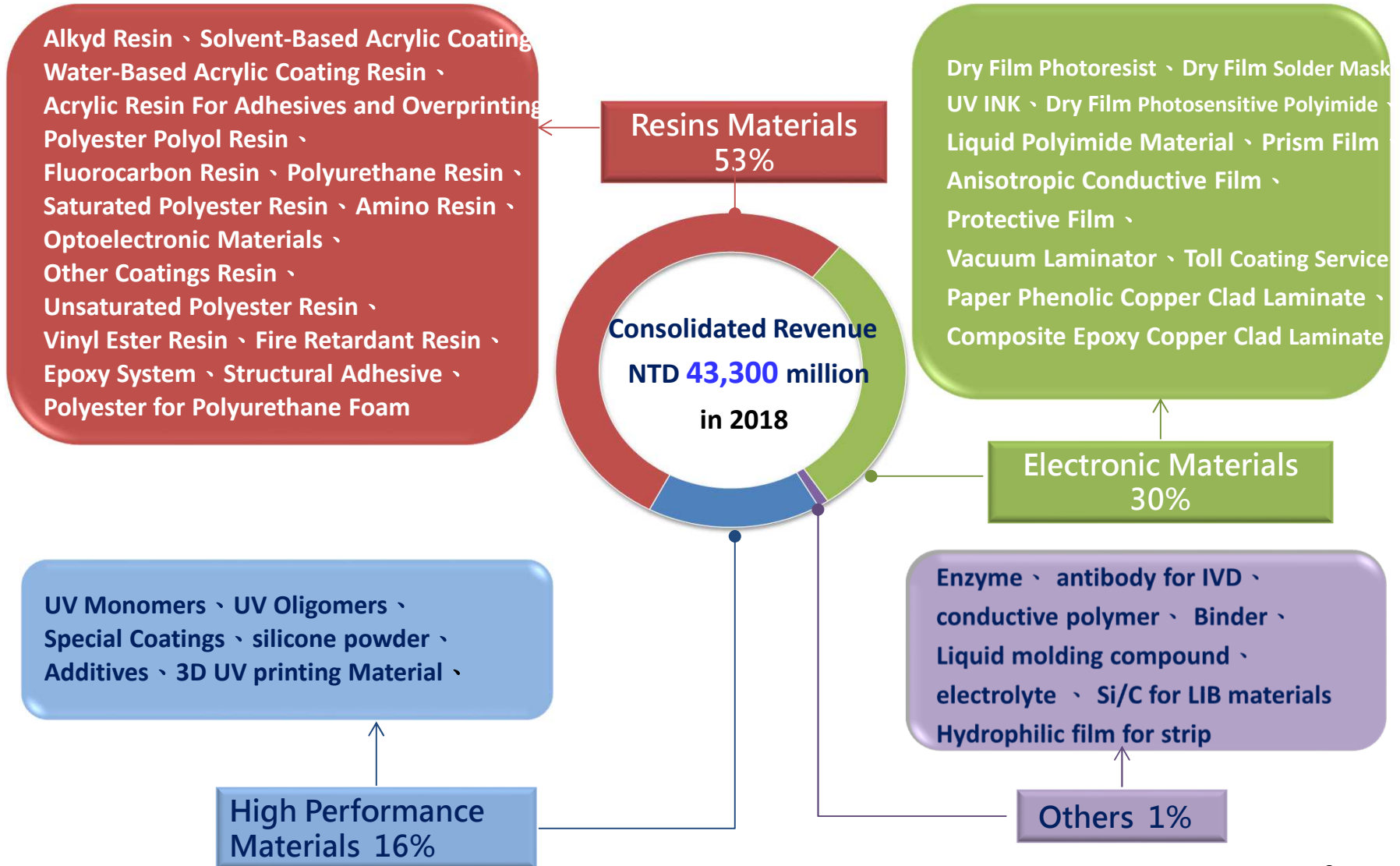
Introduction - History



Introduction - Core Technology



Introduction - Main Product

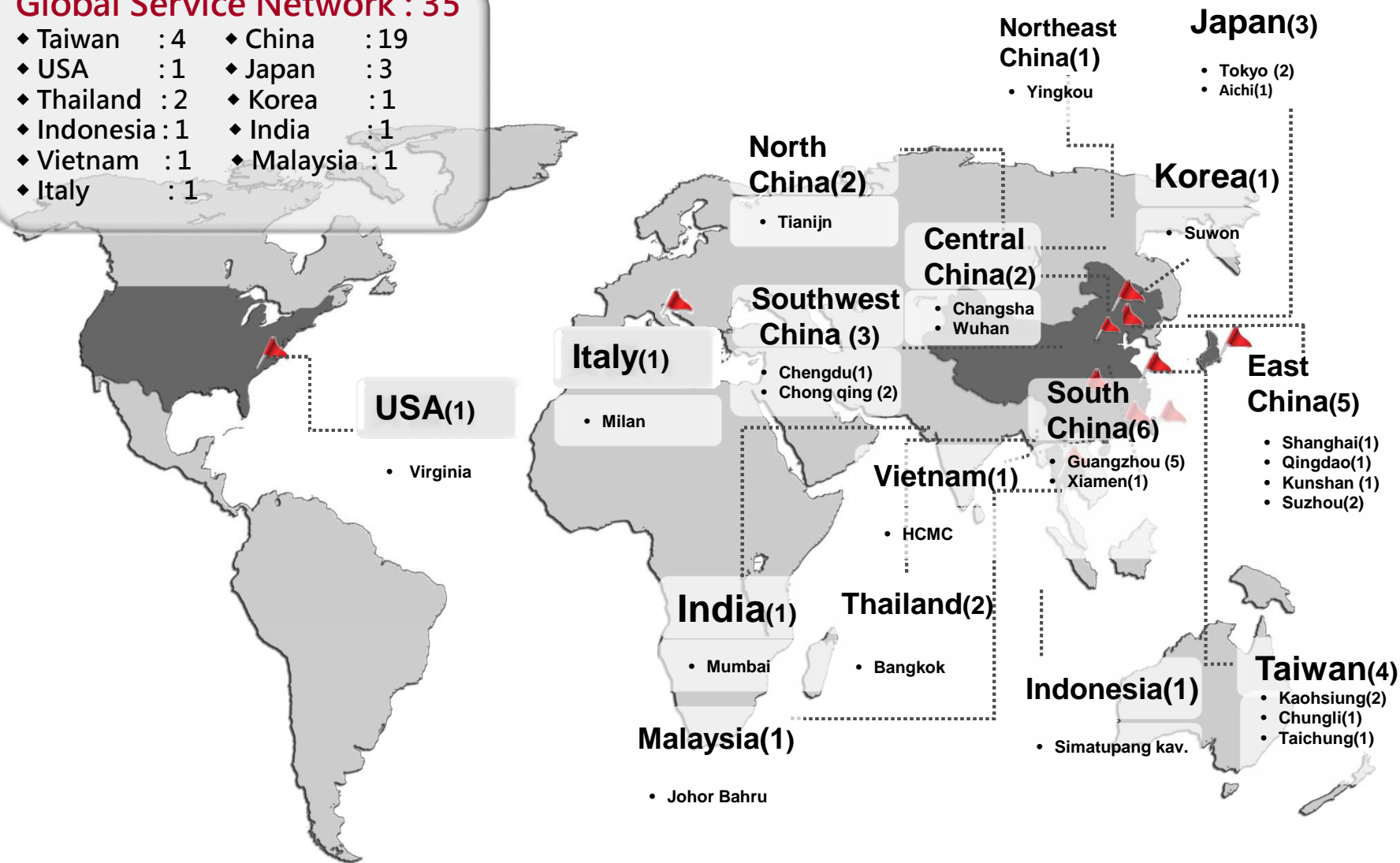


Introduction - Global Service Network



Global Service Network : 35

- ◆ Taiwan : 4
- ◆ USA : 1
- ◆ Thailand : 2
- ◆ Indonesia : 1
- ◆ Vietnam : 1
- ◆ Italy : 1
- ◆ China : 19
- ◆ Japan : 3
- ◆ Korea : 1
- ◆ India : 1
- ◆ Malaysia : 1

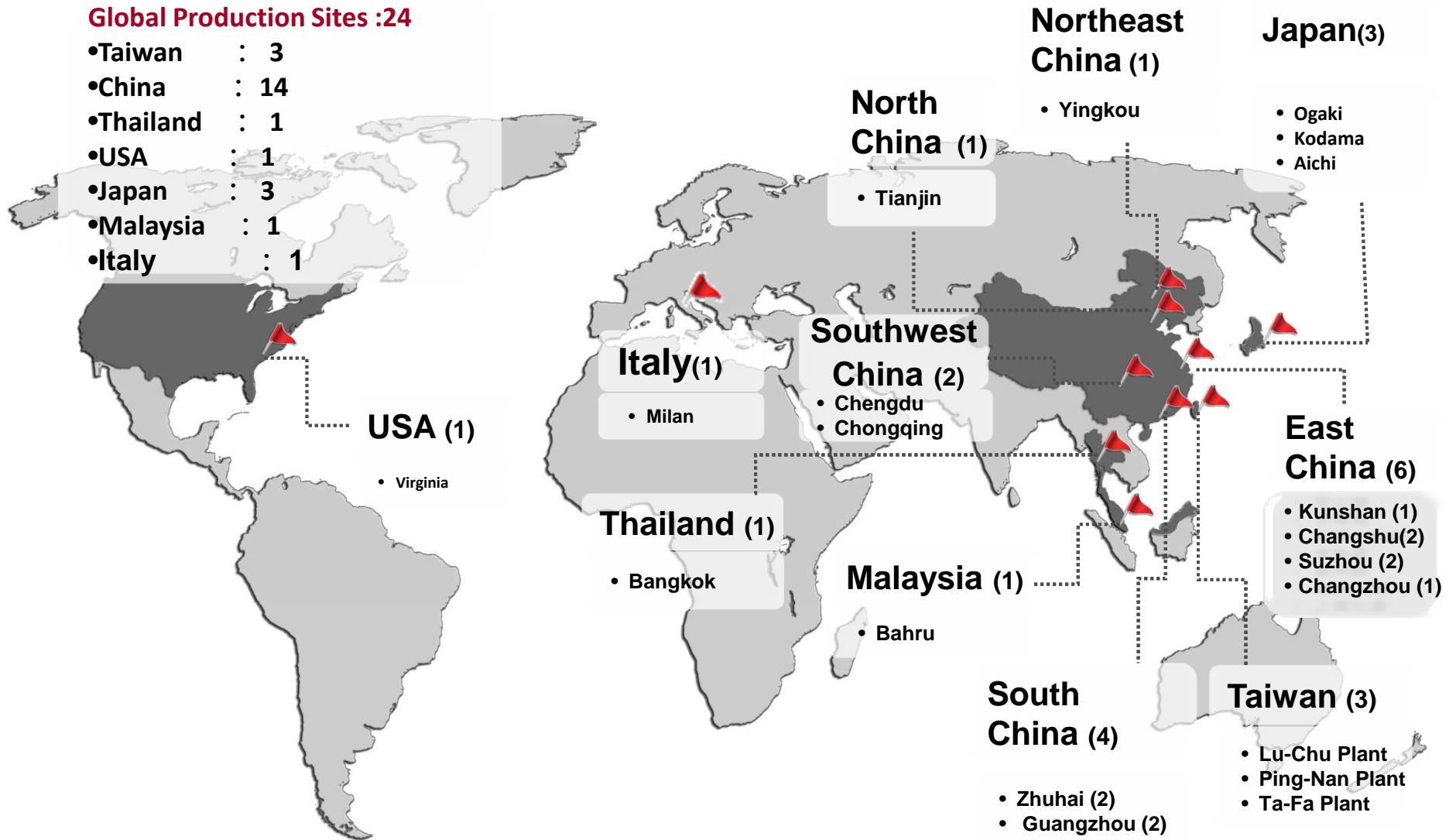


Introduction - Global Production Sites



Global Production Sites :24

- Taiwan : 3
- China : 14
- Thailand : 1
- USA : 1
- Japan : 3
- Malaysia : 1
- Italy : 1



P.S. "Changzhou plant" under construction

Introduction - R&D Sites



- 1. Taiwan – Research & Development Center
- 2. China – Mainland China R&D Center
- 3. China – Beijing laboratory
- 4. The laboratory of plant (*8)



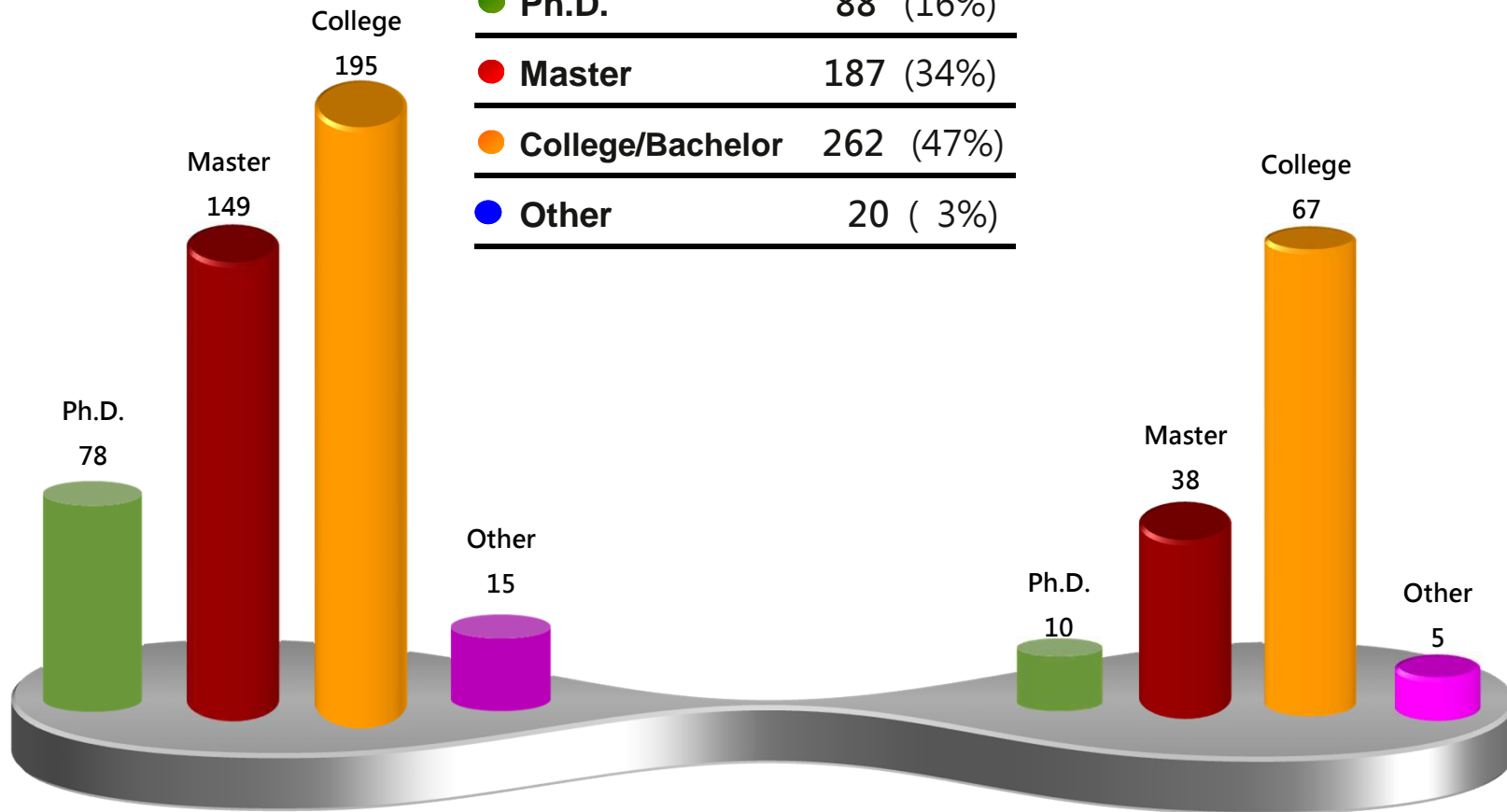
Introduction - R&D Human Resources Statistics



Global R&D Manpower 557

Accounted for 11% of global manpower

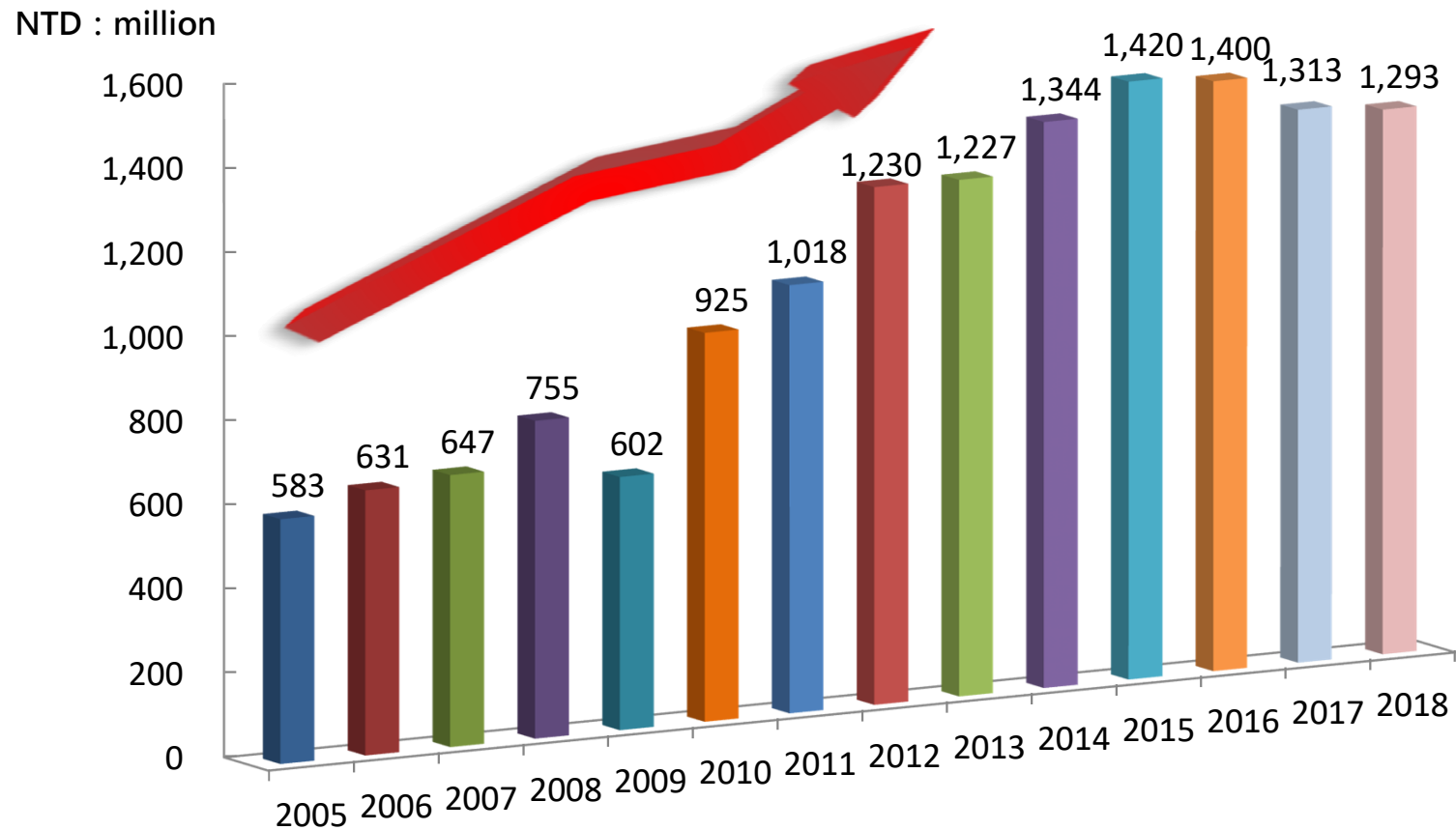
● Ph.D.	88	(16%)
● Master	187	(34%)
● College/Bachelor	262	(47%)
● Other	20	(3%)



R&D Manpower of Taiwan Area (437)

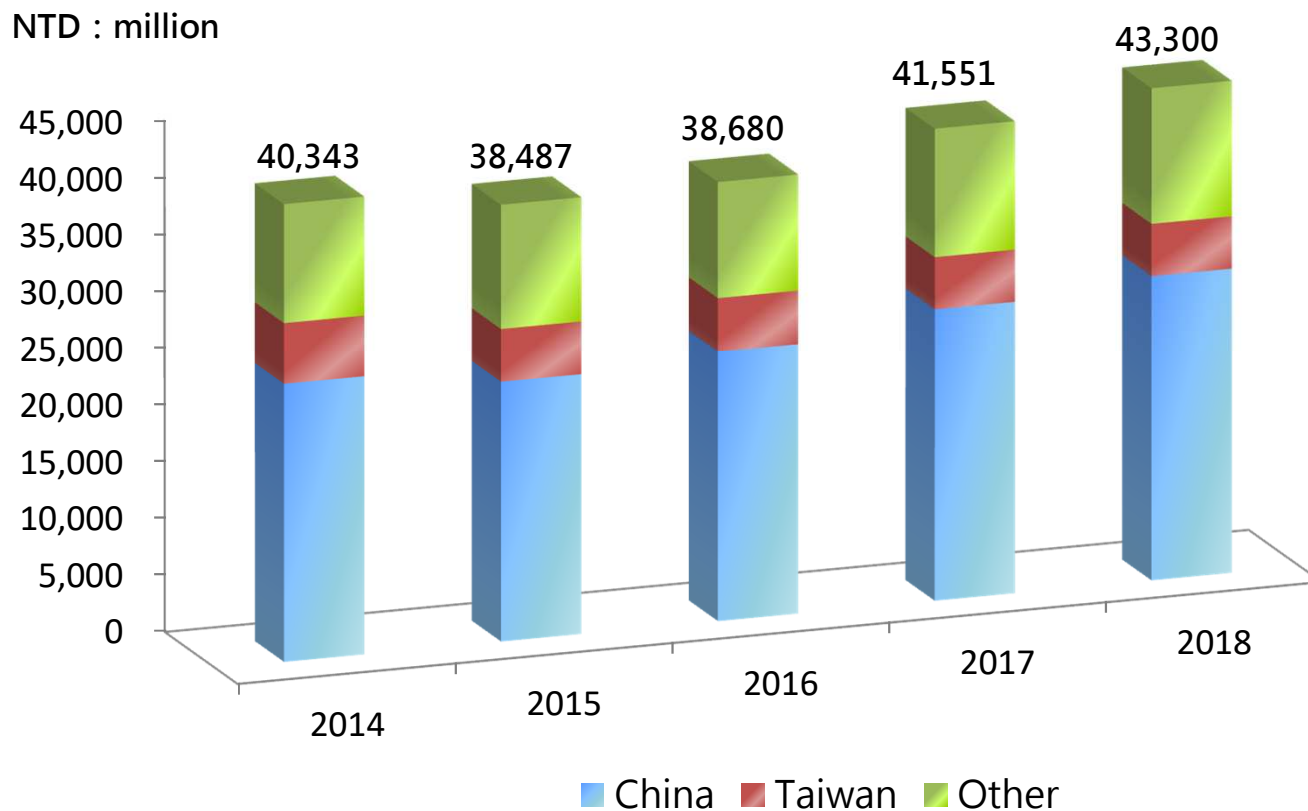
R&D Manpower of China Area & Other (120)

Introduction - R&D Expenditure



P.S. 2018 research and development funds account for 3% of turnover

Introduction - Global Revenue



Introduction - Financial Feature



NTD : million

YEAR	2015	2016	2017	2018
Operating Revenue	38,487	38,680	41,551	43,300
Net Operating Margin	8,747	8,582	7,438	7,280
Operating Expense	5,349	5,453	5,577	5,467
Operating Profit	3,397	3,130	1,862	1,813
Net Profit	2,873	2,606	1,864	1,492
Earnings Per Share	2.60	2.27	1.54	1.25

Introduction - International Certificate

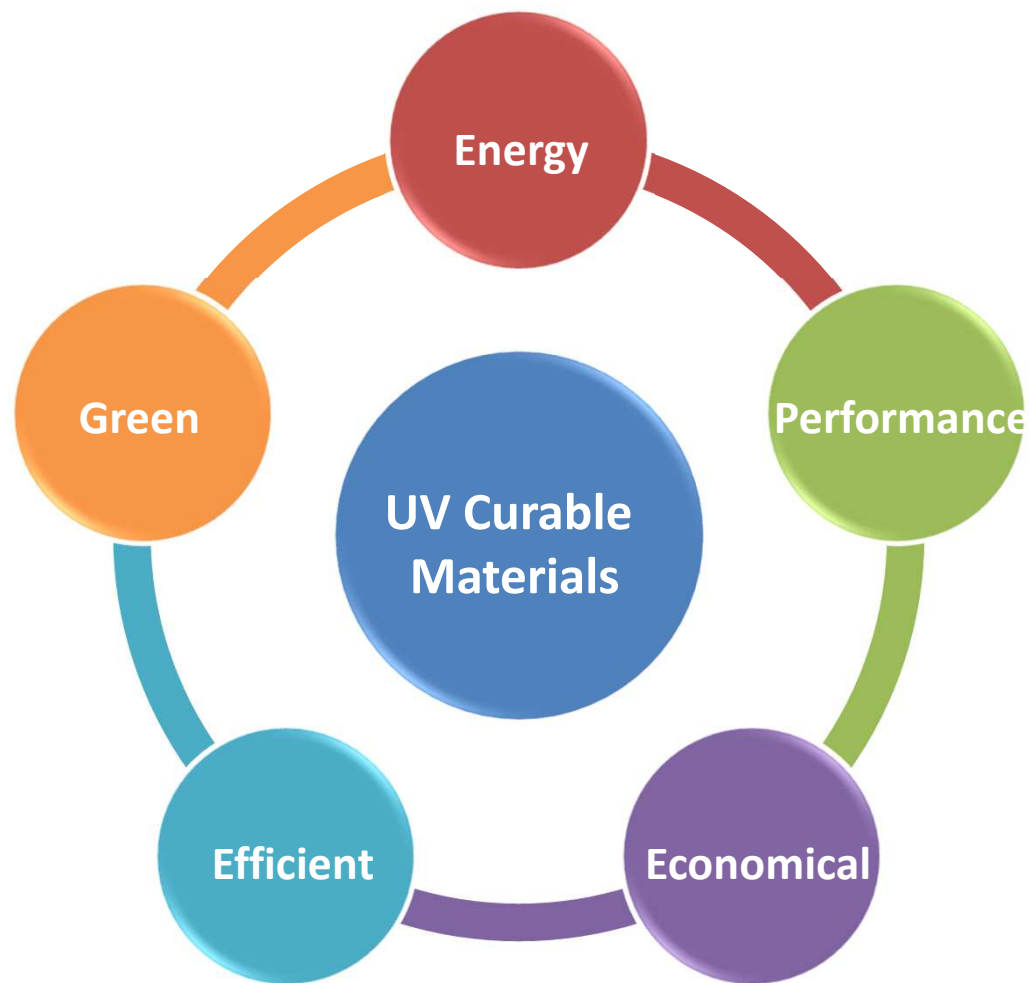


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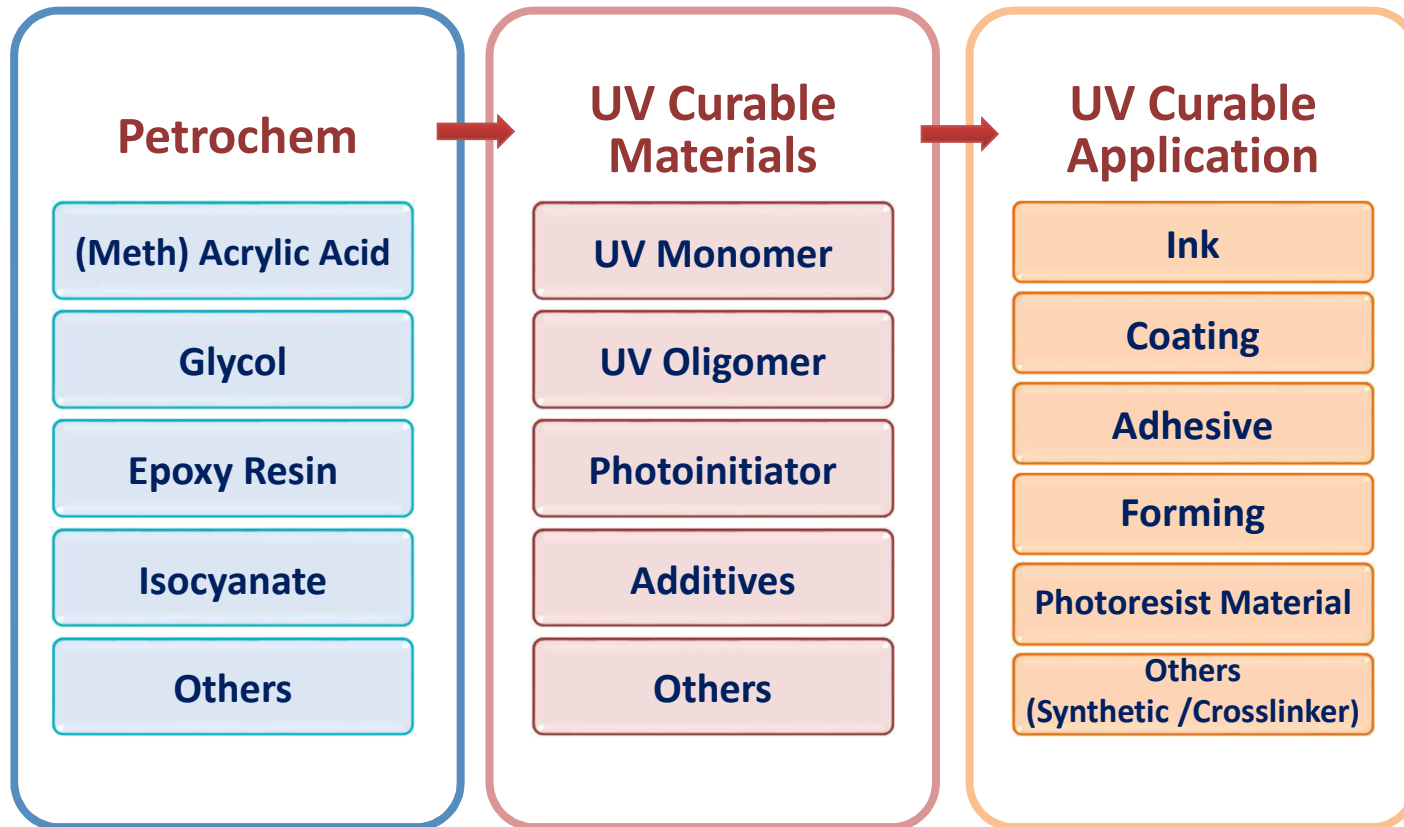
UV Curable Technology

- Feature
- Applications
- Related Industries
- Eternal Capacity
- Product Categories
- Future Development

UV Curable Technology - Feature



UV Curable Technology - Related Industries



UV Curable Technology - Product Categories



Ink	<ul style="list-style-type: none">• Offset, flexo, gravure, screen, inkjet
Plastic coating	<ul style="list-style-type: none">• 3C, 5G, VM, PVC, nail polish
Wood coating	<ul style="list-style-type: none">• Solvent-free spray, matting, non-BPA, weather resistance
Adhesive	<ul style="list-style-type: none">• UV PSA, UVHM PSA, electronic, optoelectronic
UV water borne Oligomer	<ul style="list-style-type: none">• Wood, plastic, monocoat
Synthetic monomer & crosslinker	<ul style="list-style-type: none">• Acrylic resin, emulsion, textile, water treatment, SAP
High purity monomer	<ul style="list-style-type: none">• Low migration, synthetic resin, adhesive
Bulk	<ul style="list-style-type: none">• 3D, Lens
High RI	<ul style="list-style-type: none">• BEF, Lens
Dual cure	<ul style="list-style-type: none">• Automotive decoration

UV Curable Technology - Ink



Printing / Packaging



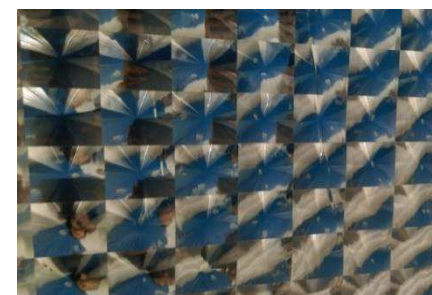
Digital printing



UV Curable Technology – Printing



PET Hologram



UV Curable Technology - Coating



Cosmetic /
Appliance



Flooring /
Furniture



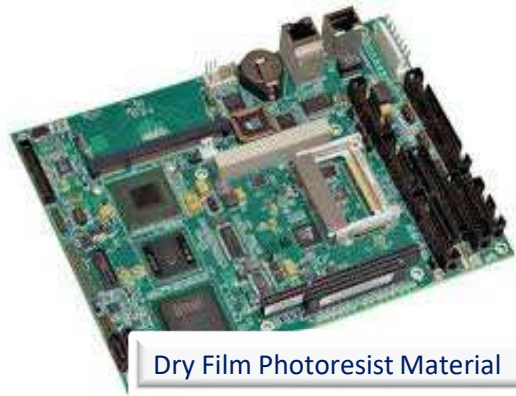
Automotive



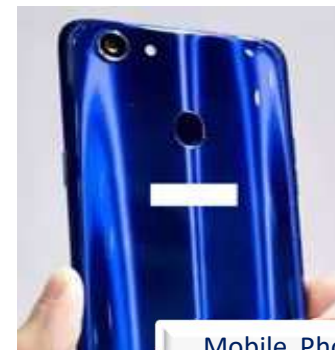
UV Curable Technology - Electronics



PCB / LCD



Touch Panel / Mobile



UV Curable Technology - Adhesive

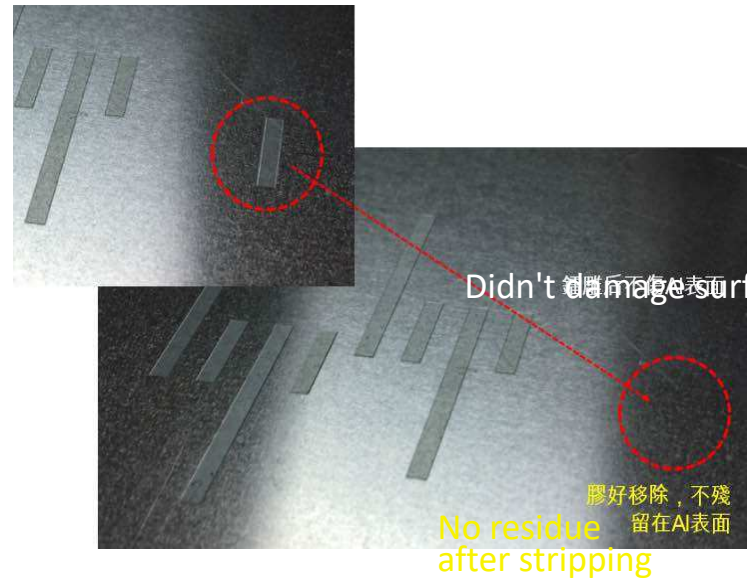


PEELABLE MASK

Protection for anodizing metal



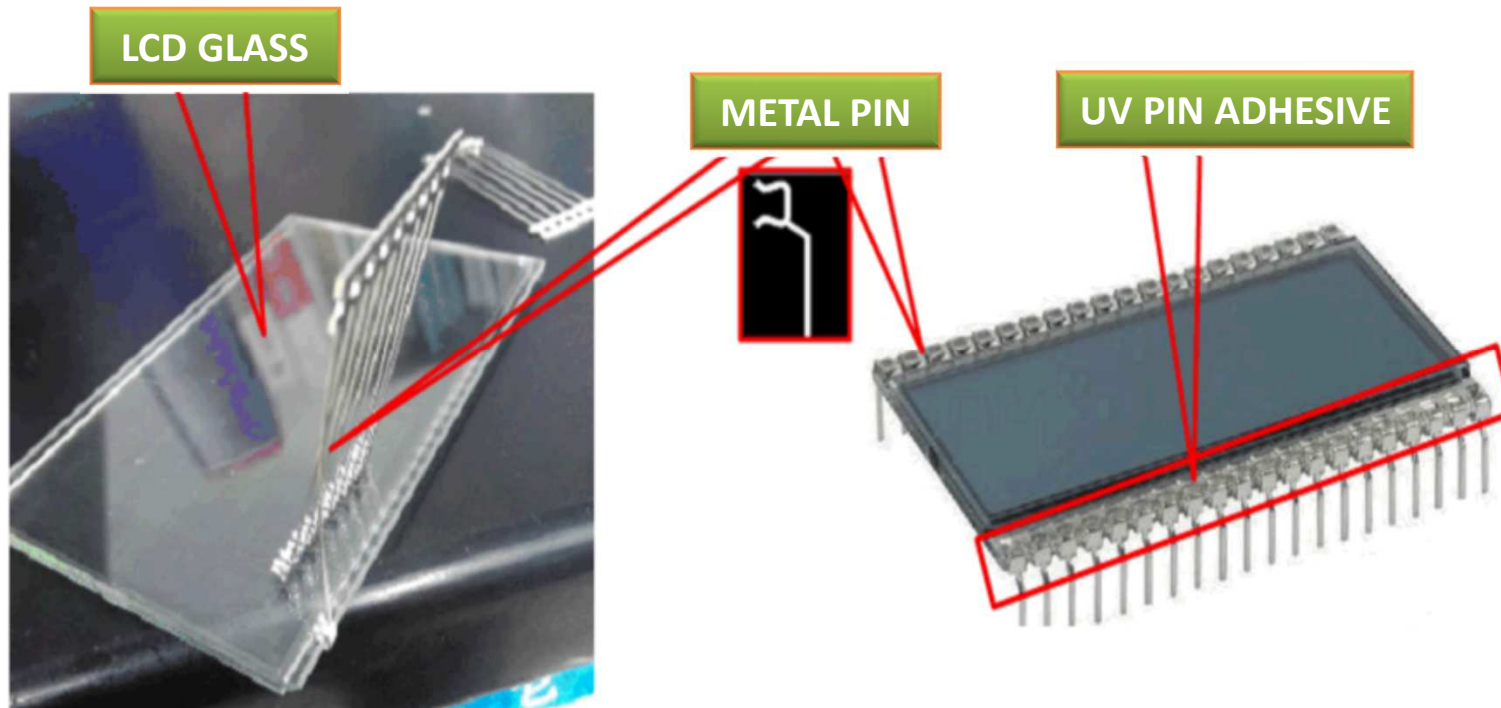
Protection for laser marking



UV Curable Technology - Adhesive



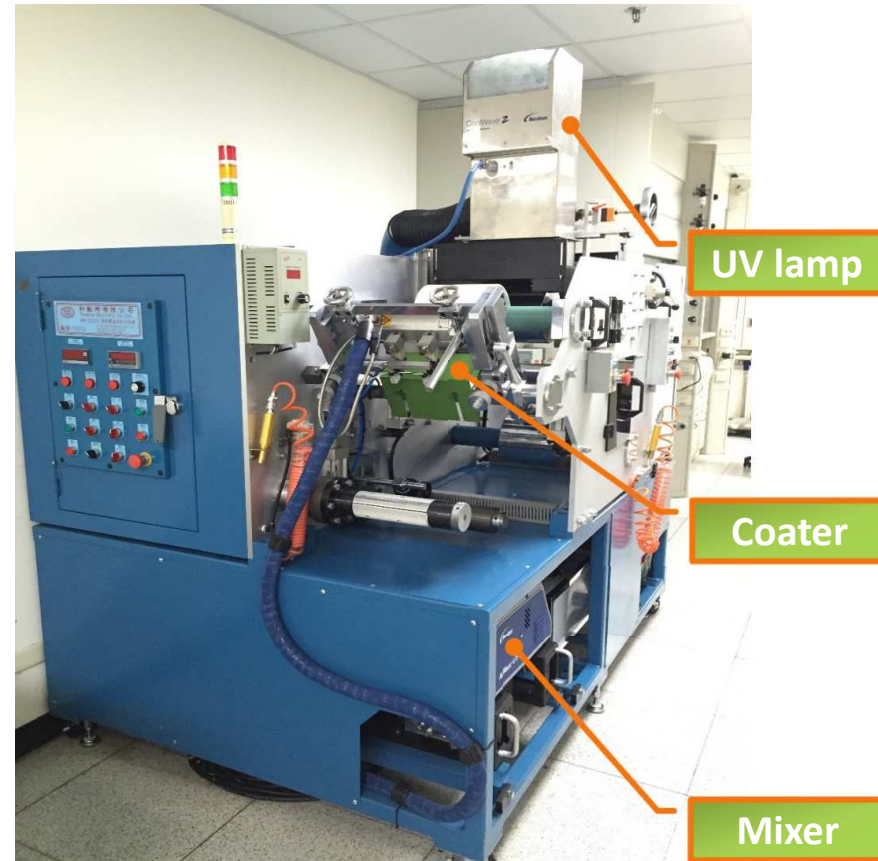
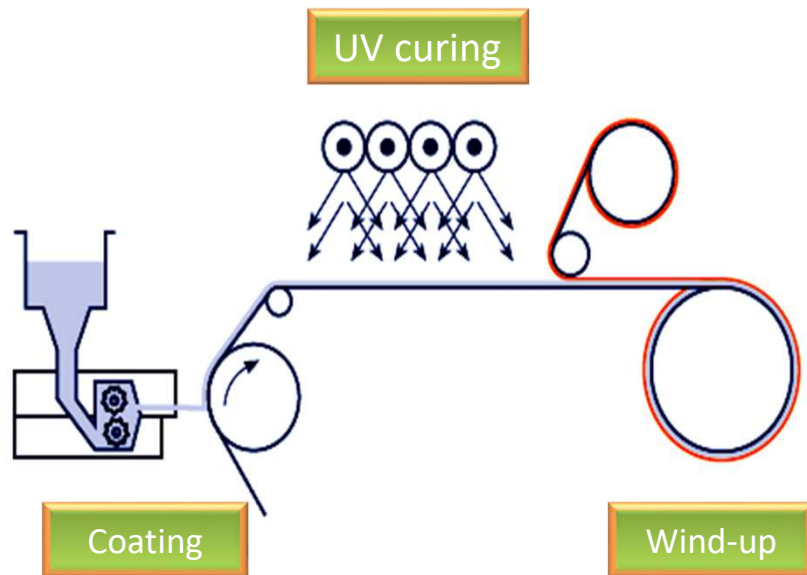
Adhesive for Different Substrate



UV Curable Technology - Adhesive



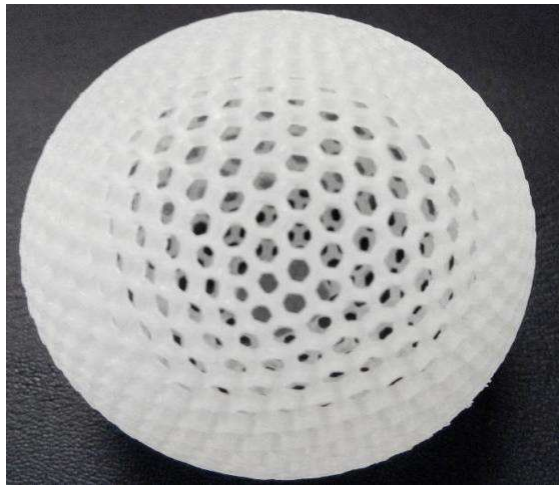
UV Hotmelt PSA/ UV PSA



UV Curable Technology - Others



3D Printing / Lens



3D Printing



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UV Curable Technology - Capacity of Eternal



Year 2018

UV Materials (Capacity: **80,000** Mt/year)

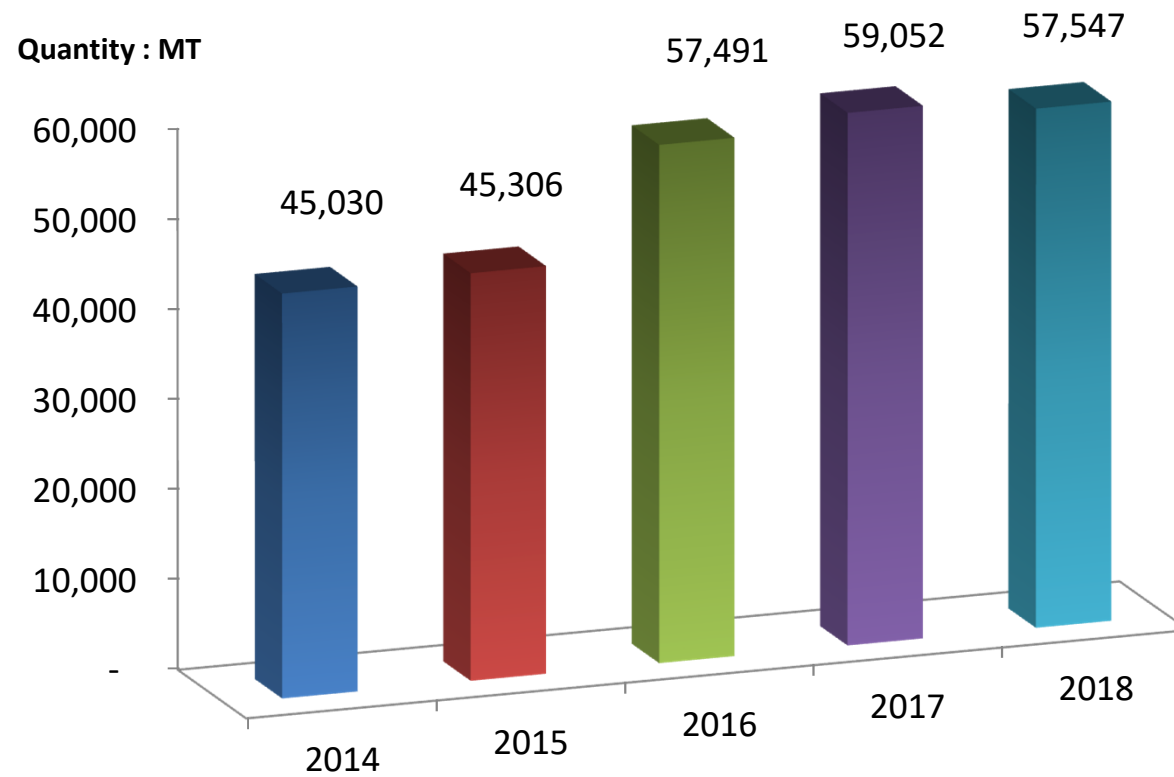
UV Coating (Capacity: **7,000** Mt/year)



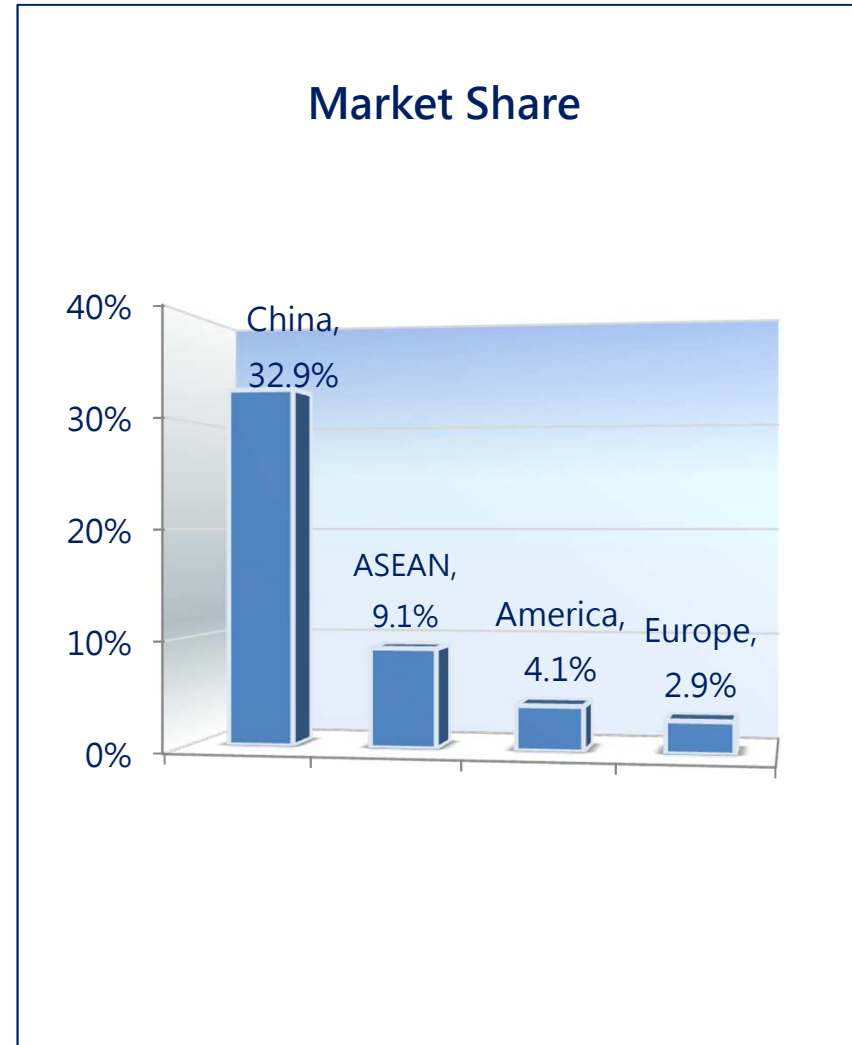
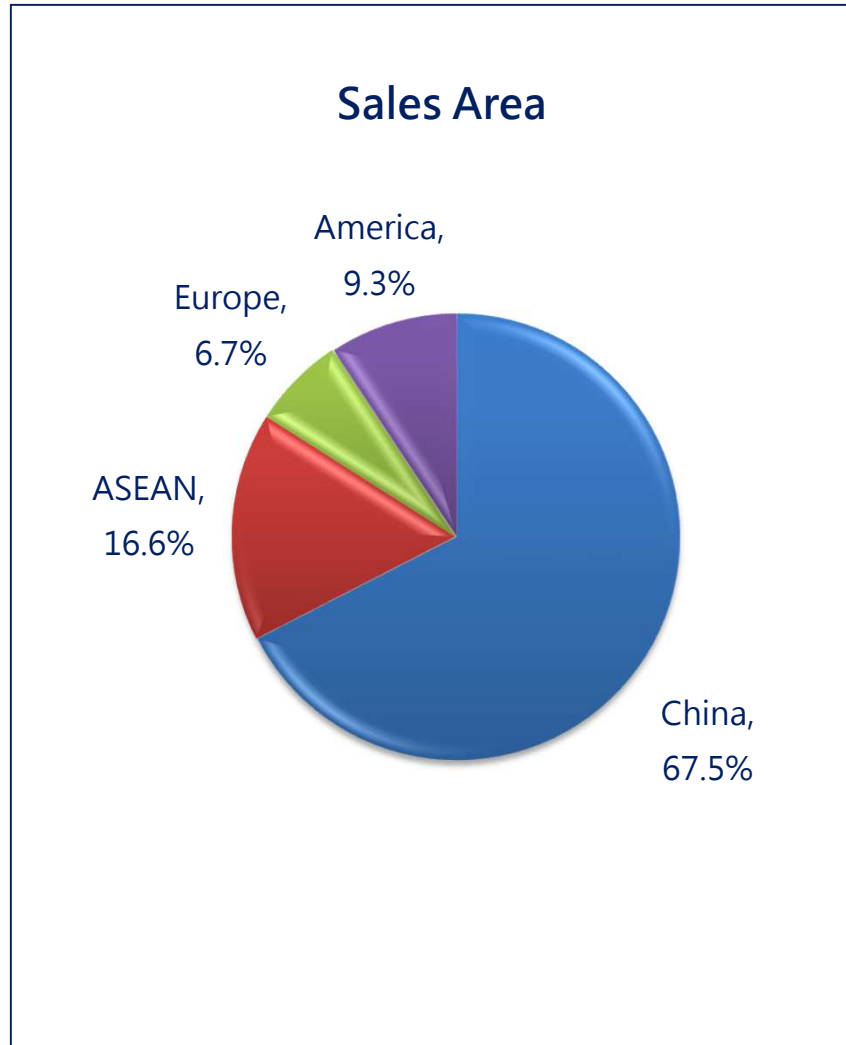
UV Curable Technology - Eternal Sales



Eternal Sales



UV Curable Technology - Eternal Market Share



P.S. Year 2018

UV Curable Technology - Future Development



Improving & Optimizing

- To increase 8,000Mt capacity in Q4 2019
- New capacity in Malaysia
-

Novel Market & Application Development

- LED Curable, EB Curable
- 3D Printing, UV Inject
- Coating for back shell of 5G mobile
Automotive Interior Decoration

Expanding the Export Sales

- North America, South Asia
- India, Middle East
- Latin America

Green, High Value Product

- Waterborne UV Materials,
UV Hotmelt PSA
- Adhesive for Electronics,
Solvent-free spray
- High Solid Content Coating
UV PSA

Q & A



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Thank you !