

CORPORATE INTRODUCTION

G&G Group
Global & Green Group


GP&E Co., Ltd.


entree
Entree L&H Co., Ltd.


Green WaterDrops Co., Ltd.

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Green WaterDrops Co., Ltd.

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Overview of G&G Group



I. Overview

Company Name

GP&E (Global Project & Engineering) Co., Ltd.



President

Henry CHO, Ph. D.

Establishment Date

January 2002

Headquarter Staffs

20

Address

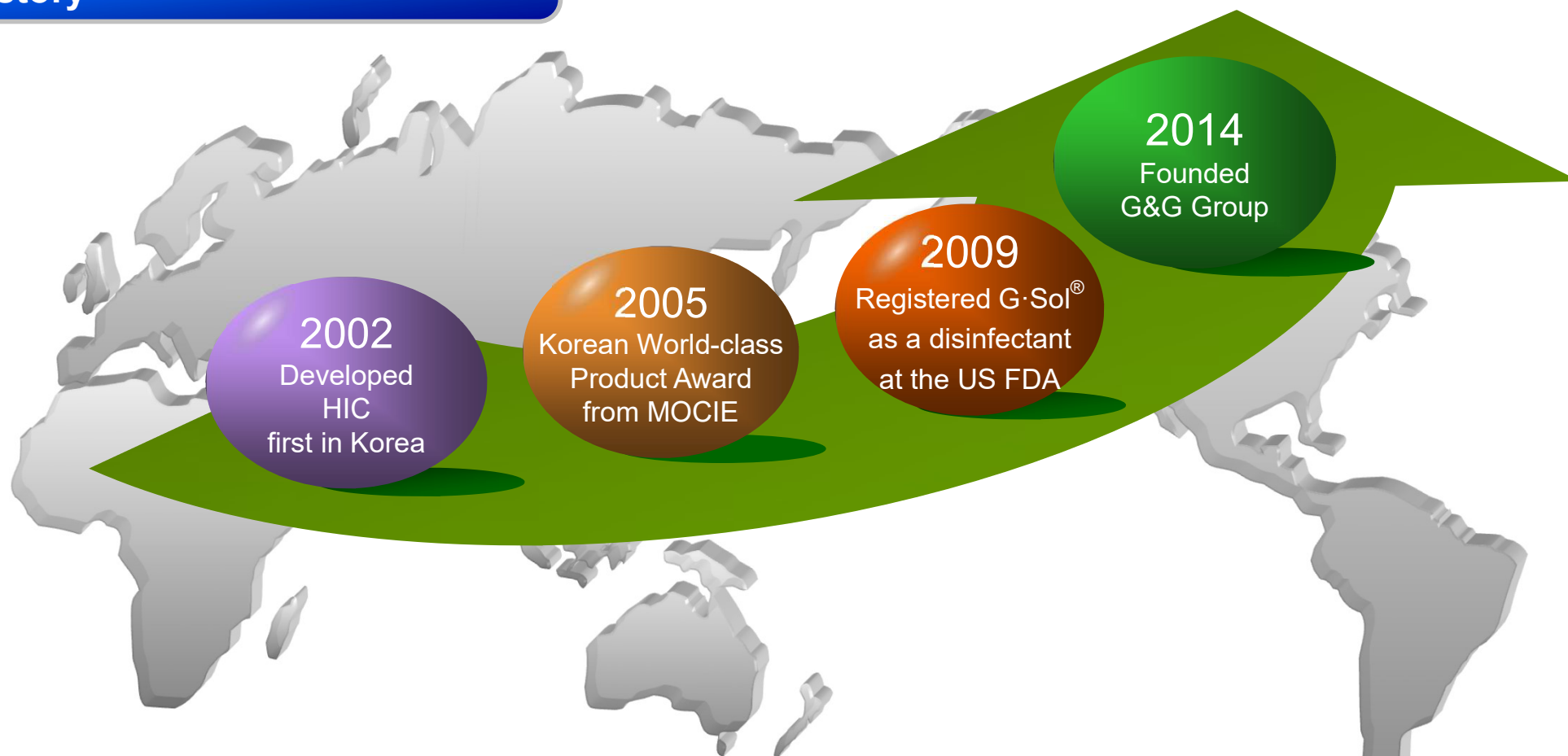
10, Techno-3-ro, Yuseong, Daejeon, Korea / <http://www.gpne.co.kr>
Tel : 042-864-2055, Fax : 042-863-2055

Business

Produces equipment and goods in the semiconductor(HICs, ESD), antiviral/antibacterial products of G·SOL[®] and smart sensors for harmful gas



II. History

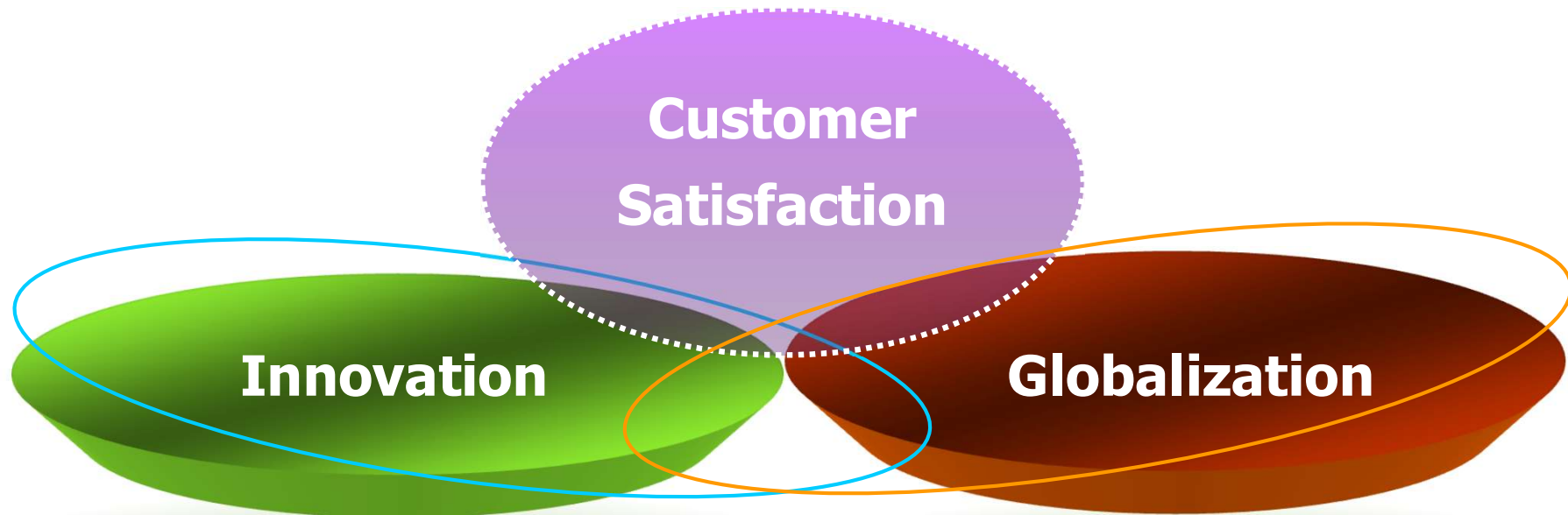


- 2002 GP&E Co., Ltd. is incorporated
- 2002 Developed Humidity Indicator Card (HIC), first in Korea
- 2003 12th DASAN Technical Award by The Korea Economic Daily
- 2004 Developed G·Sol[®] disinfectants
- 2005 Honorably Won Korean World-Class Product Award from MOCIE
- 2006 Acquired ISO 9001 & 14001 Certificate by KIC
- 2006 Acquired INNO-BIZ Certificate from SMBA

- 2008 Relocated Headquarter to Daedeok Techno-Valley (DTV)
- 2009 Developed 4 eco-friendly Humidity Indicator Cards
- 2009 Registered G·Sol[®] as a disinfectant at the US FDA
- 2010 Started Korea-Israel Industrial R&D Fund (KORIL-RDF) Program
- 2011 Registered Export Promising Small & Medium Enterprise by SMBA
- 2013 Developed Super-Hydrophilic Inorganic Coating Solution
- 2014 Founded G&G Group: GP&E, EnTree L&H, & GWD

III. Vision Statement

Under the slogan of “Creative Conception” and “Trustworthy Enterprise,” we will seek customer satisfaction based on the faith that top quality and best service are the pathway to success



In order to be reborn as the world-best company from now on, we will keep securing the top quality competitiveness via a steady innovation in the whole process of R&D, product merchandising planning, manufacturing and marketing

We all executives and staff will make every effort in order to grow th a global excellent enterprise which leads an environment-friendly industry field and health-cares field specified to the future, humanbeings and their real lives as well as a world-famous company which provides customers a best life

IV. Organization

MANAGEMENT TEAM

CEO/PRESIDENT

I. H. CHO, GP&E (Ph.D., Univ. of Missouri)

ADVISOR

S. S. CHO, Korea Univ. (Ph.D., Univ. of Michigan)

AUDITOR

D. L. CHO, CNU* (Ph.D., Univ. of Missouri)

DIRECTOR

D. G. LEE, GP&E(Ph.D., KAIST***)

TECHNICAL ADVISORY GROUP

T. R. MARRRERO, Univ. of Missouri (Ph.D., Univ. of Maryland)

K. W. KIM, KAERI** (Ph.D., KAIST***)

H. S. Lee, KRIBB**** (Ph.D., Seoul National Univ.)

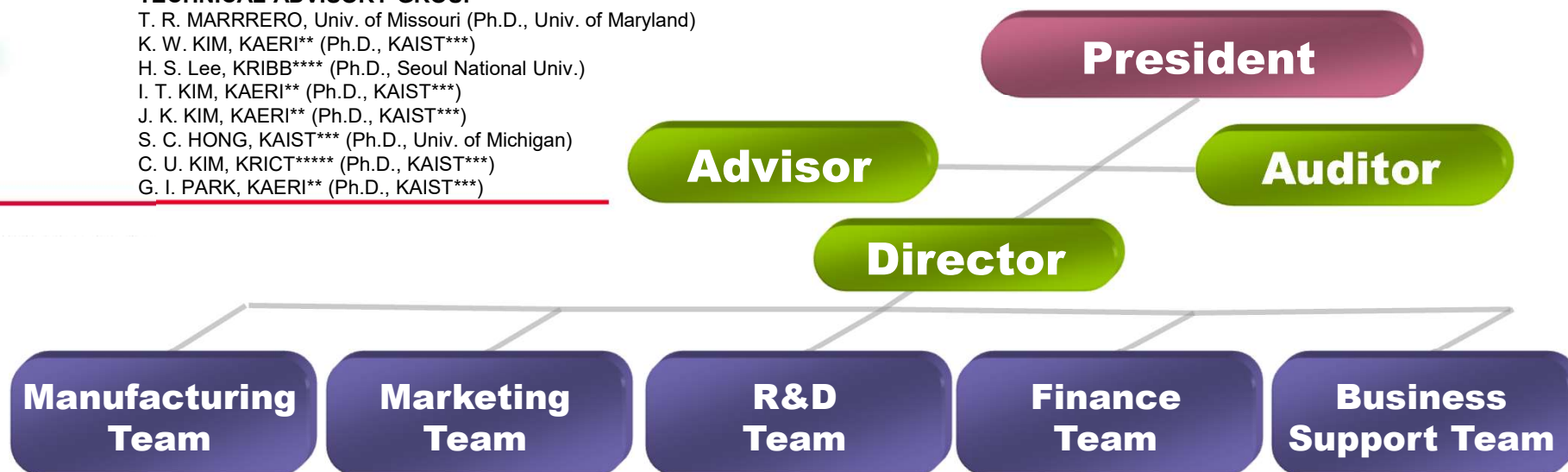
I. T. KIM, KAERI** (Ph.D., KAIST***)

J. K. KIM, KAERI** (Ph.D., KAIST***)

S. C. HONG, KAIST*** (Ph.D., Univ. of Michigan)

C. U. KIM, KRICT***** (Ph.D., KAIST***)

G. I. PARK, KAERI** (Ph.D., KAIST***)



CNU* : Chonnam National University

KAERI** : Korea Atomic Energy Research Institute

KAIST*** : Korea Advanced Institute of Science & Technology

KRIBB**** : Korea Research Institute of Bioscience & Biotechnology

KRICT***** : Korea Research Institute of Chemical Technology

V. Core Technologies and Products

1. Humidity Indicating Technology

Outline

- As a necessary item to pack some products which are sensitive to humidity, this Indicating technology is using color change according to the relative humidity
- To take advantage of inorganic material to change color when it contacts and reacts to moisture
- Eco-friendly organic material solution without any heavy metals
- First localization of humidity indicator cards with GP&E Technology
- NeT(New technology) certificates and world-class goods certificates in Korea

Applications

- Semiconductor(Memory): Packing of D-RAM, NAND Flash and others.
- PCB: Packing of PCB, F-PCB, F/C, BGA
- Display: Packing of PDP, TFT-LCD, LED
- Defense Industry: Packing of Control of Missile, Propelling charging, ammunition
- Silver Industry Living goods: Smart diaper

HICs (Humidity Indicator Cards)

Outline

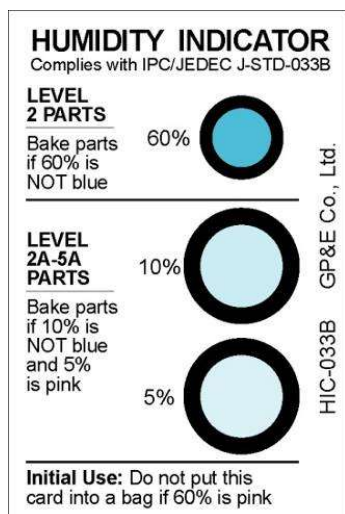
- Humidity indicator cards allow fast visual inspection of the relative humidity within sealed packaging and containers.

Distinction & Strength

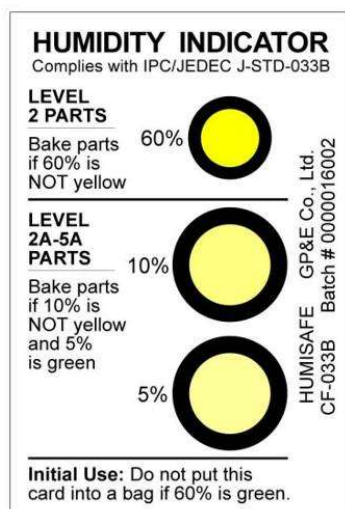
- First localized company in Korea
- Released worldwide first Cobalt-Free Product (HumiSafe)
- JEDEC (Joint electron Device Engineering Council), MIL (Military specification and standard)
- NeT (New Excellent Technology) certified and world class Product Award certified: CF-HIC

Application Field

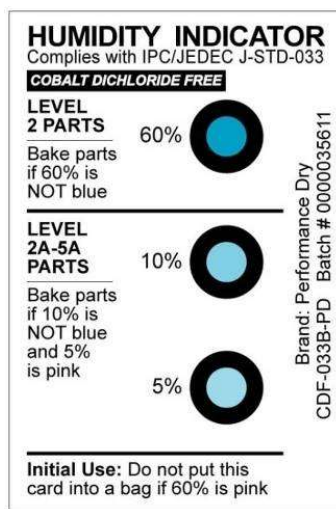
- Semiconductor (Memory): Packing for D-RAM, NAND Flash, etc.
- Printed circuit board (PCB): Packing for Flexible PCB, Flip Chip, Ball Grid Array, etc.
- Display: Packing for PDP, TFT-LCD, LED, O-LED, AMOLED, etc.
- Other Products for sensitive humidity



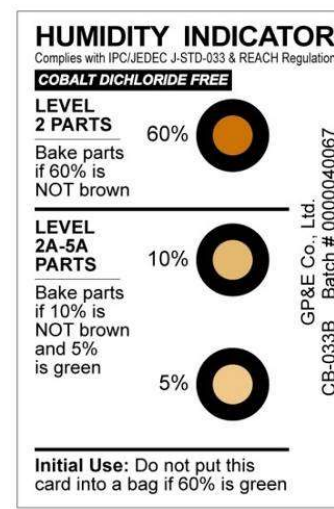
Conventional-HIC
HIC-033B



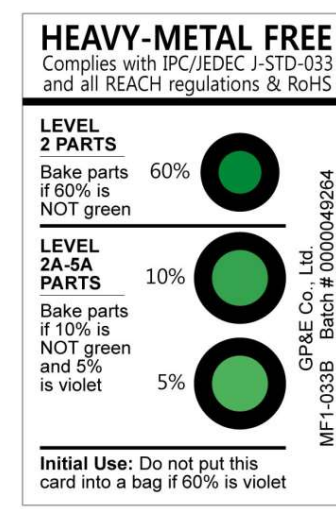
CF-series HIC
CF-033B



CDF-series HIC
CDF-033B



CB-series HIC
CB-033B



MF1-series HIC
MF1-033B

2. Moisture Preventing Technology

Outline

- Key technology to protect module, board, chip from outside humidity in semiconductor, electric and electrical industry
- AL based composition material [Al + PET+ LLDPE] technology which can be complied with a variety of specifications
- Protection of Moisture permeability (water vapor permeability: less than 0.005 g/m²-day) & prevention of static electricity generating
- Prove technology by proving solutions to many semiconductor companies

Applications

- Packing of surface mounting assemblies of Semiconductor[Memory]Chip, Wafer
- Packing of surface mounting assembly tape, reel, flat type
- Display: Packing of PDP, TFT-LCD, LED
- Packing of some products which are sensitive to moisture

Moisture Barrier Bag

Outline

- Various type & size of bags to protect module, board, chip from outside humidity in semiconductor, electric and electrical industry

Distinction & Strength

- Certified based on outstanding result of business from semiconductor company
- Prevent moisture and electro-static
- High quality and technical support [Maintenance repair and operating]

Application Field

- Packing of memory chip, module, board
- Packing display panel : TFT, LCD, LED
- Field of physiology/medical science/pharmacology
- Other applications for sensitive product/static

Product List



(AL+PET(Double)+ LLDPE



(AL+PE/NY+PE+LLDPE)



(NY+LLDP)



(NY(PE)+AL+LLDPE)

3. Smart Sensing (CO₂ Indicating) Technology

Outline

- By developing dye (pigment) to have benefits both of dye and pigment possible to distinguish CO₂ density with color change easily

Features

- Accurate indicating & Air quality control
- Easy distinguishing of CO₂ dangerous level
- Replacement of high-cost CO₂ indicating sensor
- Meet to eco-friendly regulation standard (RoHS, REACH-SVHC)
- High color, High heat resistance, High solubility)

Product List



Applications

- Public places: Park, Government complex, Terminal
- Closed working spaces: Chemical reactor, Manhole, tank, coal mine
- Camping: Tent & using flammable material
- Medical & analysis: water property, Industrial park

CO₂ Indicating analysis

- 1) Low concentration (<50ppm): Transparent sealing bottle + Preserved agent
→ maintain blue color
- 2) High concentration(>500ppm): In CO₂ reactor
→ color changed to red

I. Introduction

- enTree L&H(enTree Life & Health) Co., Ltd. is a specified environment friendly technology oriented company which specifically produces anti-bacterial/anti-virus goods (G·SOL®).
- As shown in the slogan of “From now to Forever for Baby’s Life & Health,” we will seek customer satisfaction based on the faith that top quality and best service are the pathway to success.



II. Core Technology

Inorganic Material for Antiviral/Antibacterial/Deodorizing (G · SOL®)

Outline

- As a natural mineral solution which is 100% safe to human being and protects from virus and bacteria and it has a deodorizing efficacy (registered in FDA)
- Sol-gel synthesized technology of mineral material which has antibacterial/ decomposed power (Maximization of Antibacterial/ Decomposed power)
- Dispersion technology of mineral material in solvent (water) (available for spray type)
- Stable chemically and applicable as hydrophilic (various applications)
- Antibacterial durability is very good due to excellent adhesive power of particle

Applications

- Water purifying equipment and assemblies such as Antibacterial membrane [decreasing of Bio-Fouling]
- Air cleaner filter
- Antibacterial fabric, clothes and raw materials
- Antibacterial carpet and rug
- Antibacterial ceramic ball

Products of G· SOL®

Outline

- Complete Preventing Products from infection of Virus and bacteria.
- Natural mineral materials that harmless for human body

Distinction & Strength

- No-Alcohol, No-chlorine and non-toxic materials
- Excellent Adhesion: Well Sustainability of Virucidal Efficacies

Application Field

- Disinfection of public area : Department Store Public organization, Discount Store
- Disinfection of living goods : Keyboard, handle, Cart, door knob etc....
- Disinfection of Kids goods

Product List



G·Sol® Virucidal Spray



Eco·Sol Laundry



Eco·Breesol



Eco·Sol Hand-Wash



BeBeSol® Spray



PetSol® Spray



G·Sol® Liquid



Eco·Sol® Wet Wipes

I. Introduction

Inorganic Coating

- Ultra Hydrophilic & Corrosion Resistance
- Sanitizing Power

Water Purification & Treatment

- Anti-biofouling Membrane
- Good Water Maker



II. Core Technology

1. Inorganic Coating material with ultra hydrophilic and corrosion resistance

Outline

- Coating technology development Completion of eco-friendly mineral coating solution to have ultra hydrophilic and corrosion resistance power (Sani-Coat® I) & upgrade coating material development to have natural antibacterial efficacy (Sani-Coat® II)
- Formulation technology with natural mineral antibacterial solution(G · SOL)
- Within contact angle of 10° & Hydrophilic property of surface (self-cleaning)
- Excellent corrosion resistance in hard corroded conditions such as salt water, strong acid, strong base
- High hardness of coating surface (>9H Hardness of pencil) & High adhesive property (>5B)

Applications

- Water pipe, Cooling water line, Cooling tower
- Heat exchanger (evaporator), Boiler, Furnace
- Tank inside wall coating (water purifier, APT, Building)
- Oil pipe line, Natural gas pipe line
- Solar energy panel
- Air conditioner, Washing machine, Air purifier and etc.]
- Sanitary pottery (Sink, Basin, Bathtub, Toilet and etc.)

Coating Solution (Sani-Coat)[®]

Outline

- Eco-friendly ultra-hydrophilic inorganic coating solution with sanitizing power
- Compounding alkali silicate and siloxane binder

Distinction & Strength

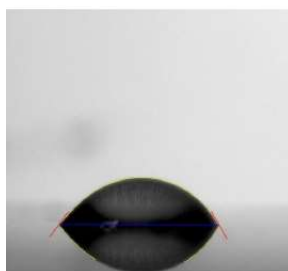
- Ultra hydrophilic: anti-fouling, anti-algae
- Excellent corrosion resistance: anti-corrosion
- Powerful sanitizing : anti-biofouling
- Eco-friendliness of Materials

Application Field

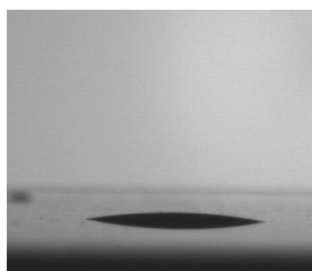
- Water pipe, Cooling water line, Cooling tower
- Heat exchanger (evaporator), Boiler, Furnace
- Oil pipe line, Natural gas pipe line
- Solar energy panel

- Tank inside wall coating (water purifier, APT, Building)
- Air conditioner, Washing machine, Air purifier and etc.
- Sanitary pottery (Sink, Basin, Bathtub, Toilet and etc.)

Product List



Non-coated SUS
Contact Angle: 52.3°
(Hydrophobic)



Coated SUS
Contact Angle: 10.3°
(Ultra Hydrophilic)

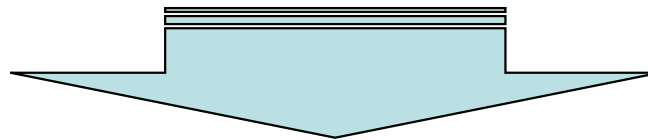
Ultra Hydrophilic



Corrosion Resistance

2. SaniFilter®: New Bio-Sanitizing Filter for Drinking Water

- Coated inorganic sanitizing material (G•SOL®) on the filter surface
 - ▶ G•SOL®: Inorganic sanitizing material registered as a disinfectant in US FDA
 - 99.9% of sanitizing power against various bacteria as well as virus (E-coli, Salmonella, human influenza, bird flu (AI) and etc.)
- Preventing Bio-fouling
 - ▶ Prevent the plugging of filter by killing bacteria on the filter surface
 - ▶ Increasing life time of filter
- Application: appropriate to raw water containing bacteria/virus
 - ▶ Applicable to all filter such as MF, UF and activated carbon filter



Essential Filter to Purify Surface/Underground Water!

Company Certifications : 5

- Components and Materials Enterprise Certificate
- Korean World-class Company Award 2005 from MOCIE
- ISO 9001/ 14001 Certificate
- INNO-BIZ Certificate
- Export Promising Small & Medium Enterprise from SMBA

Product Certifications : 4

- New Technology (NT) Certificate from ATS, MOCIE
- Korean World-class Product Award 2005 from MOCIE
- New Excellent Technology (NeT) Certificate from MOST
- Registered G·SOL[®] as a disinfectant at the US FDA



New Technology (NT)

- June 30, 2003
- ATS, MOCIE, Korea



ISO 9001 & 14001

- January 19, 2006
- KIC, Korea



Specialized Components

- July 9, 2004
- MOCIE, Korea



New Excellent Technology (NeT)

- March 10, 2006
- MOST, Korea



Korean World-Class Product Award

- June 30, 2005
- MOCIE Korea



INNO-BIZ (Grade: A)

- June 23, 2006
- SMBA, Korea

Domestic IPs : 19

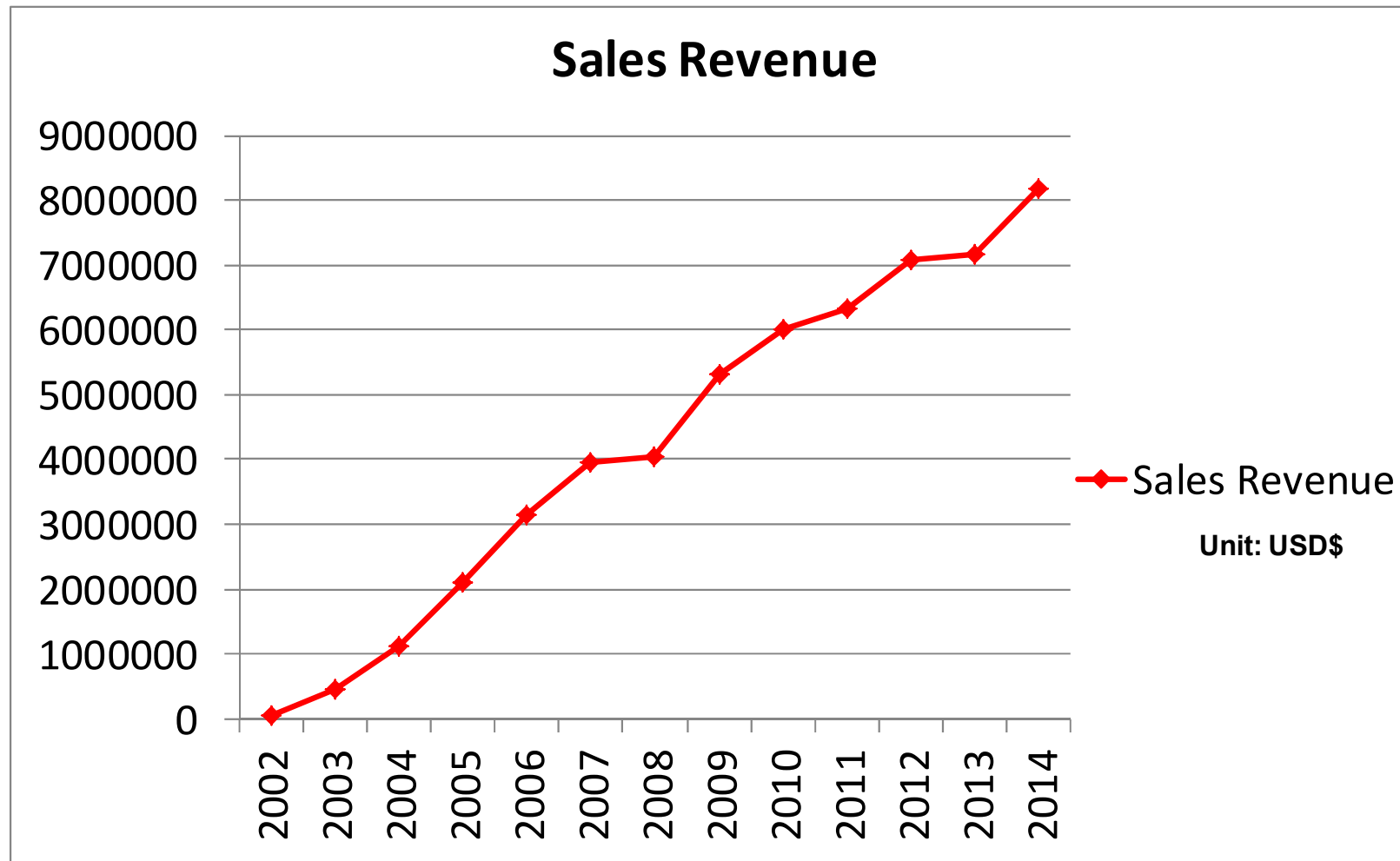
- Patent : 7
- Utility model : 3
- Registered trademark : 9

- Patent 10-0804673: Humidity & Temp. Indicator
- Patent 10-0805378: Waste Treatment
- Patent 10-1083609: Antiviral/Antibacterial Solution
- Patent 10-1270475: MF1-series HIC
- Patent 10-1344949: MF2-series HIC
- Patent 10-1425347: Antibiosis Fabric
- Patent 10-1465449: Humidity Indicating Cap
- Utility 20-0365130: Humidity Additive for Automobile
- Utility 20-0394670: Freshness Preservative
- Utility 20-0404381: Dehumidifier with Humidity Sticker
- Trademark 40-0549164: GP&E
- Trademark 40-0627907: Yes!S
- Trademark 40-0671357: G·SOL
- Trademark 40-0058012: PetSol
- Trademark 40-0059644: BeBeSol
- Trademark 40-0796450: G·SOL Filter House
- Trademark 40-0858212: G·SOL Protect
- Trademark 40-1073201: Sani-Safe
- Trademark 45-0052189: Sani-Coat

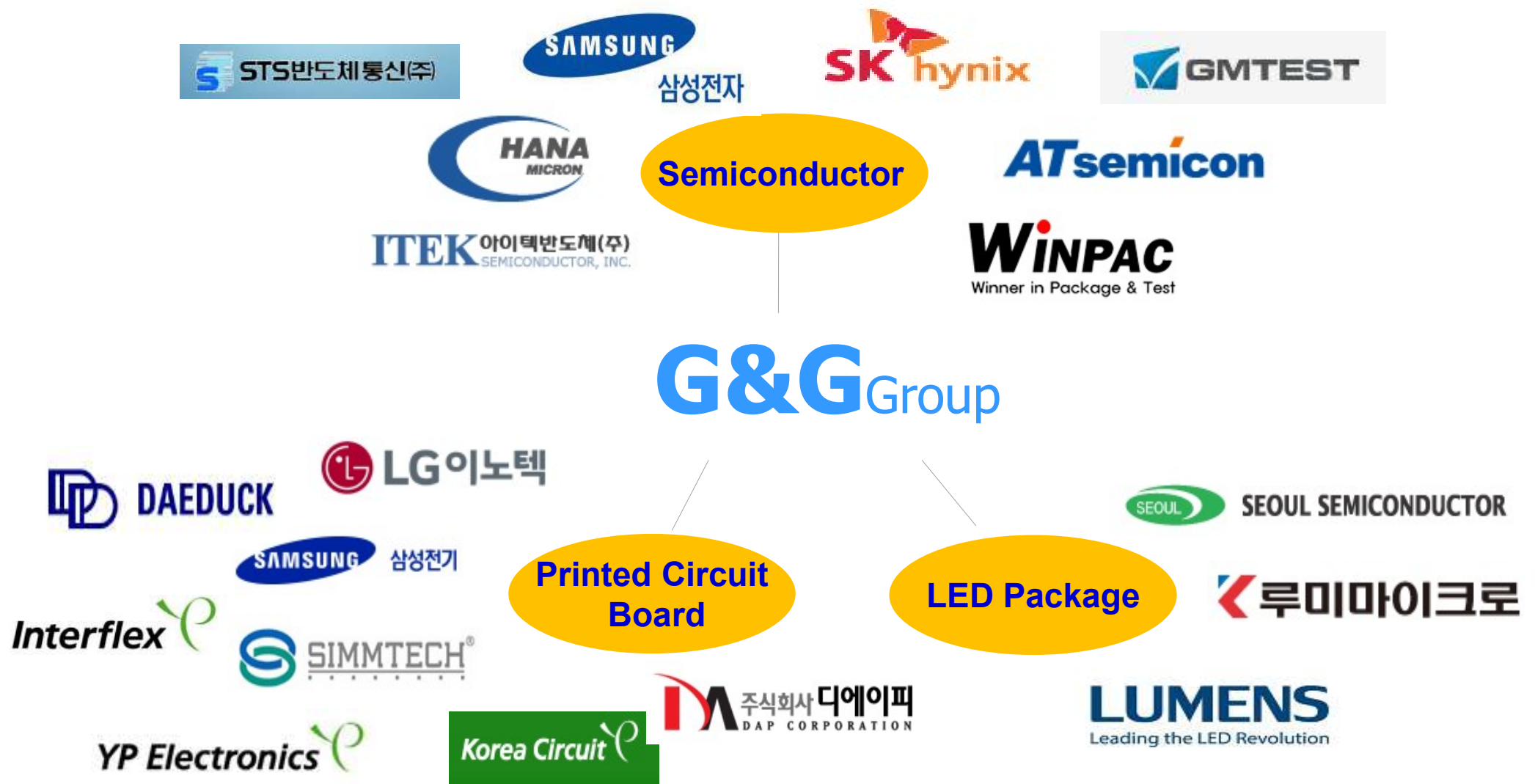
Global IPs : 5

- US Patent : 2
- EU Patent : 1
- PCT : 2

- US Patent 10/906204: CF-series HIC
- US Patent 8673331: Antiviral/Antibacterial Solution
- EU Patent EP1705484(A1): CF-series HIC
- PCT/KR2009/004779: Antiviral/Antibacterial Solution
- PCT/KR2013/004049: MF1-series HIC



G&G has accomplished dramatic increasing of sales revenue annually!



World Wide Overseas Sales Channels

