

Seoul Semiconductor – LED Supplier



12 June 2023. 15:00 - 17:00 CEST

EPIC Online Technology Meeting
on Agriculture



Seoul Semiconductor Highlights

VISION



World Top **LED**
1

With **15% Market Share by 2023**

1992



Creation of
Seoul Semiconductor

#3



Global market ranking
No.2 when captive market excluded

11%



EBITA 11% in 2021

1.3B\$



2022 Sales Revenue

\$90M
R&D/Y



Investment of 9% of
annual turnover

14,000
PATENT



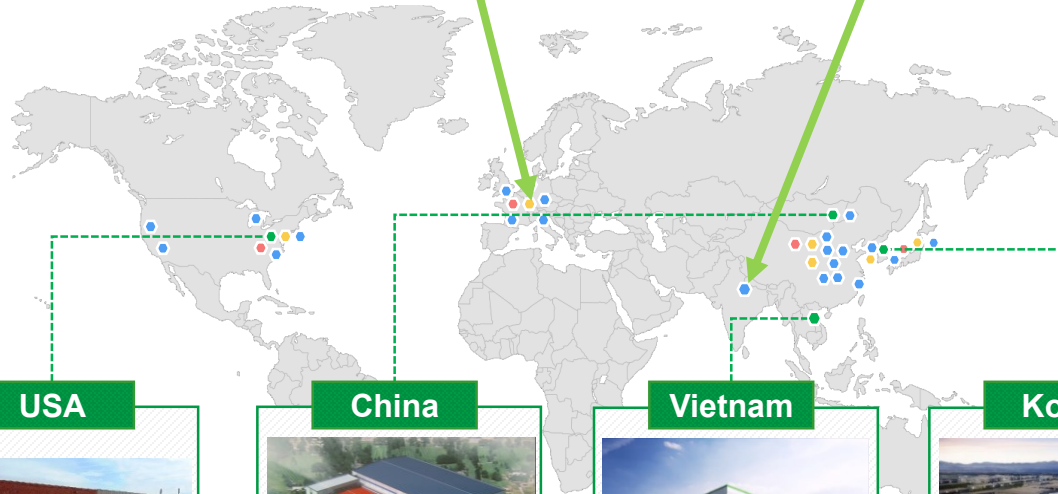
No.1 IP Power by IEEE

TOP World Player

- 4 Subsidiaries
- 4 Production Plants
- 6 R&D Labs
- 50 Local Offices

**New Innovation Center
Frankfurt (Europe)
Opening in July 2023**

**New Factory in India
Being Planned**



USA



- 2005, South Carolina
- UV LED Chip & Packaging
- Land Area : 23,000 m²
- Floor Area : 3,700 m²

China



- 2001, Tianjin
- Packaging
- Land Area : 15,000 m²
- Floor Area : 12,000 m²

Vietnam



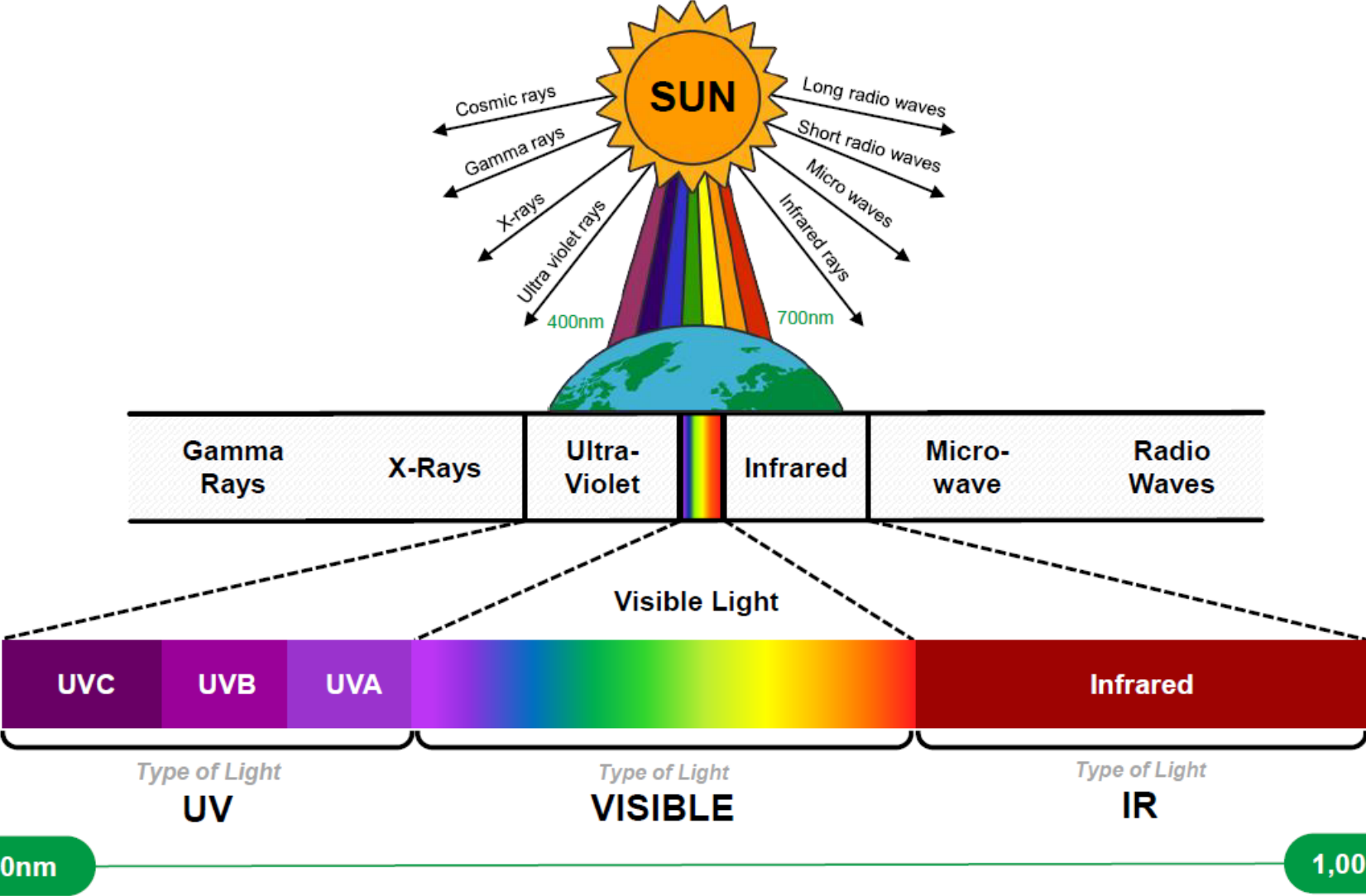
- Opening March 2017
- Chip & Packaging
- Land Area : 130,000 m²
- Floor Area : 58,000 m²

Korea



- 1997, Ansan
- Chip & Packaging
- Land Area : 22,000 m²
- Floor Area : 72,000 m²

The only company supplying from UV to IR



200nm

1,000nm

Key Supplier in Technological Markets

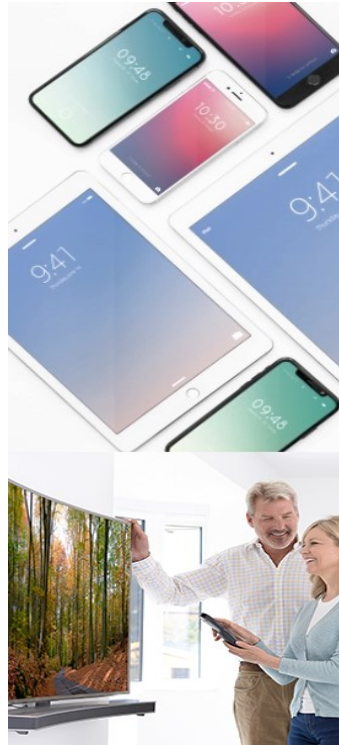
Lighting



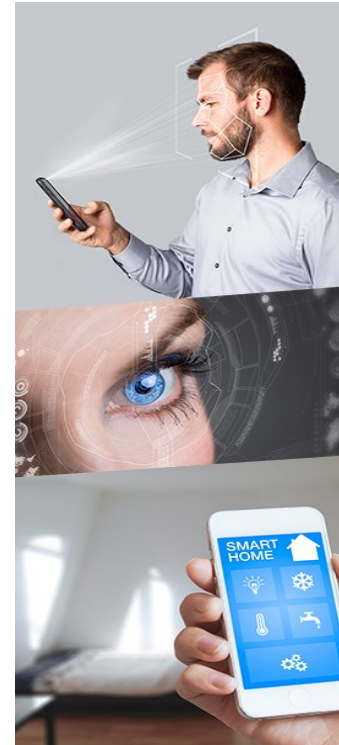
Automotive



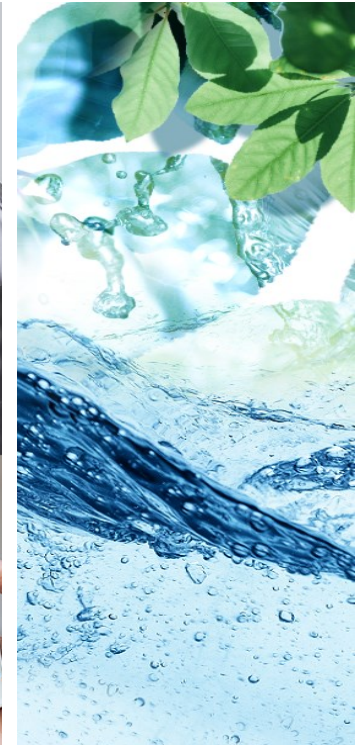
Display & Mobile



IR / VCSEL



UV



We focus on LED products



Top efficiency products



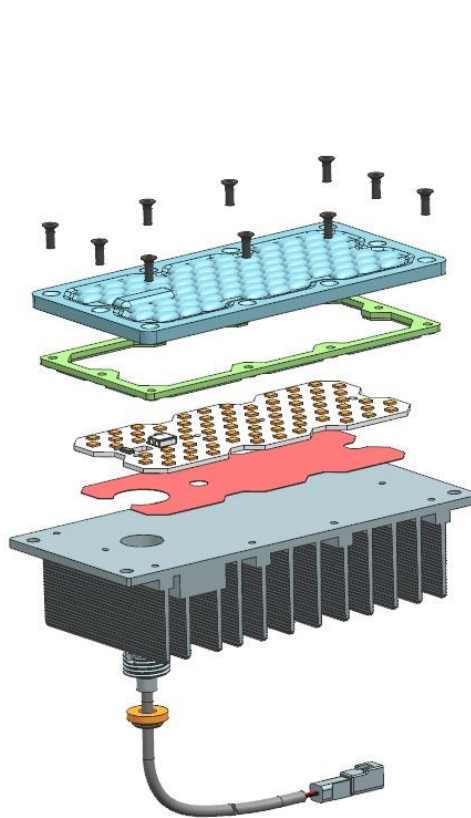
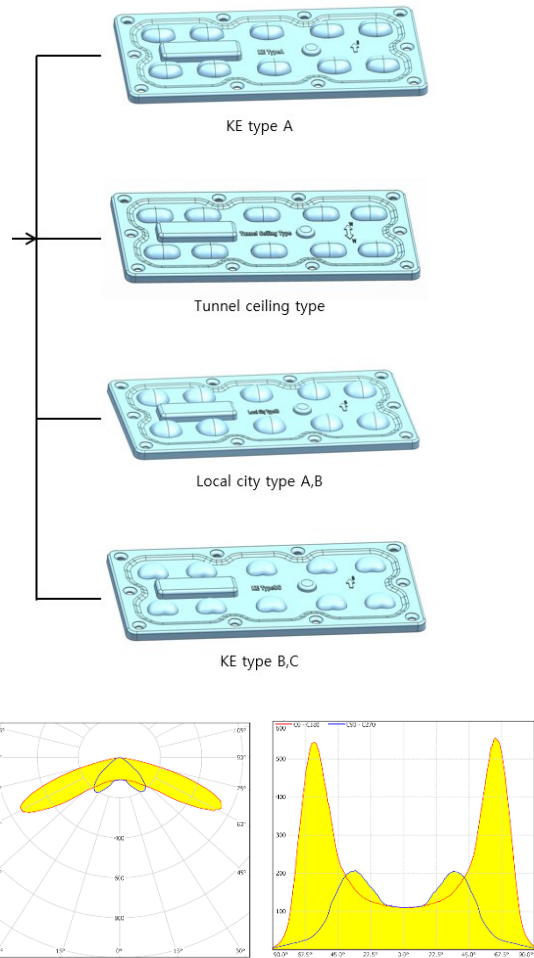
Best reliability and lifetime



Cost effective proposals for mass market

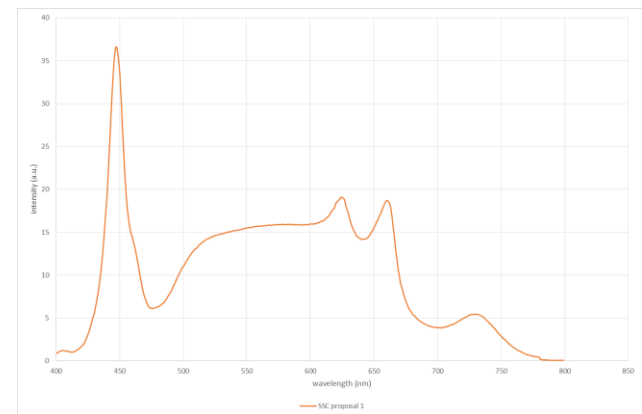
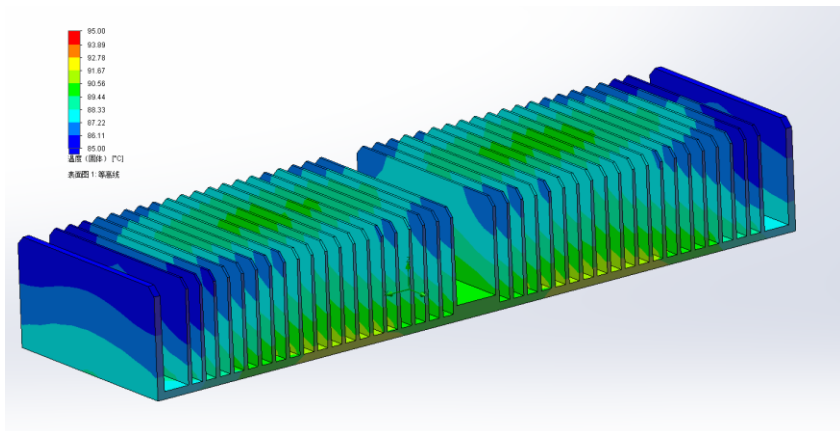
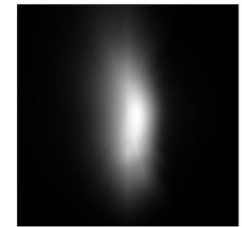
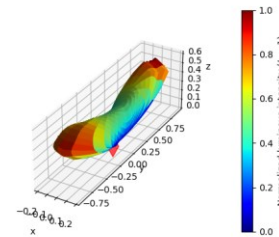
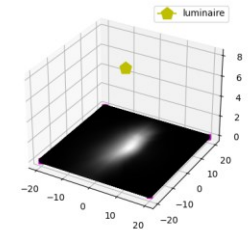
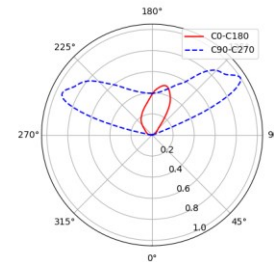
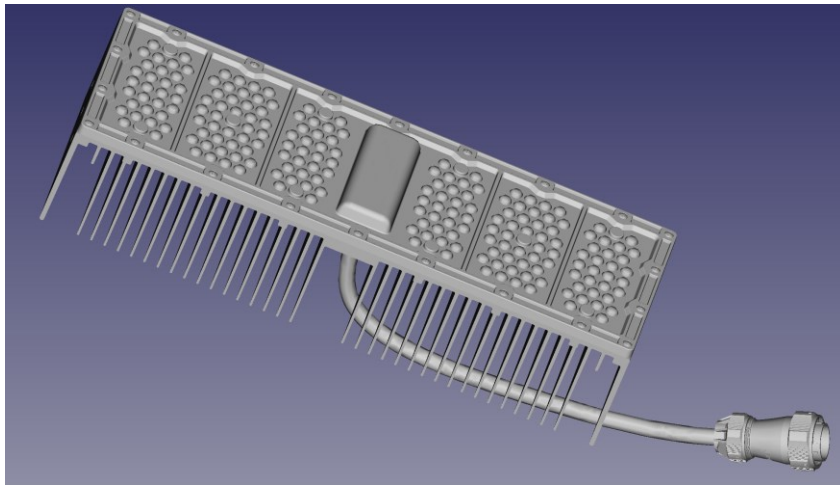
More than LEDs

We can support the development of any horticulture challenge



More than LEDs

We can support the development of any horticulture challenge

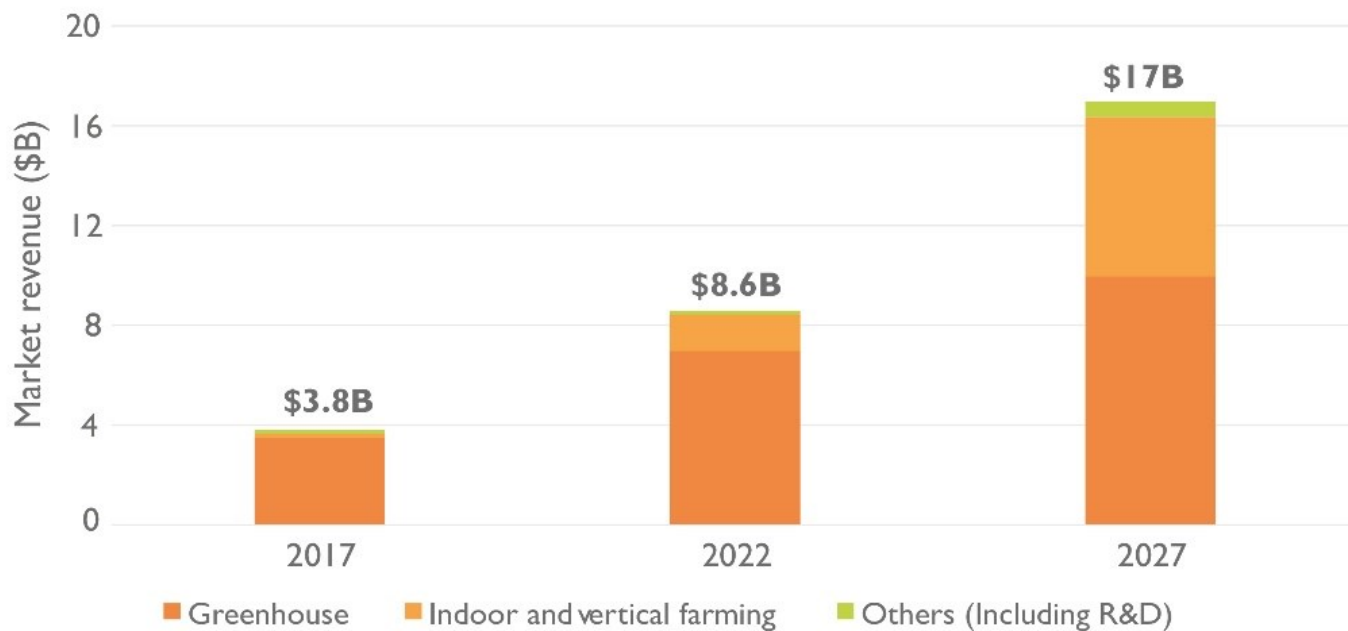


Horticulture LED market projection



Horticultural lighting market revenue (\$B) 2017 vs. 2022 vs. 2027

(Source: Horticultural LED Lighting: Market, Industry, and Technology Trends report, Yole Développement, November 2017)



PISECO and Yole Développement are part of Yole Group of Companies

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LEDs already taking the horticulture market



LEDs applied in home appliances to keep freshness

Azul

Es hora de despertar y comenzar la fotosíntesis al amanecer



** El sistema de luz de 3 colores de HarvestFresh™ consume un 45% menos de energía que la tecnología de luz azul.

Verde

Es el mediodía, el momento de utilizar la luz solar más fuerte



** El sistema de luz de 3 colores de HarvestFresh™ consume un 45% menos de energía que la tecnología de luz azul.

Rojo

Mantener la fotosíntesis hasta el atardecer, preparándose para la noche



** El sistema de luz de 3 colores de HarvestFresh™ consume un 45% menos de energía que la tecnología de luz azul.

UV LEDs are the future for the horti sector

UV-C



- Firewall on bacteria and mold spreading in water and air
- Secure harvest & earnings
- Increase shelf life

275 nm

UV-B

Formulation of Antioxidants

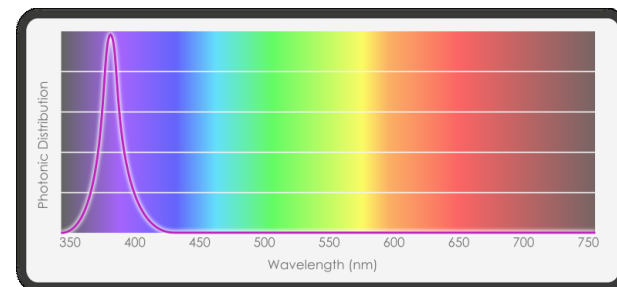


- Increase content of Antioxidants

310 nm

UV-A

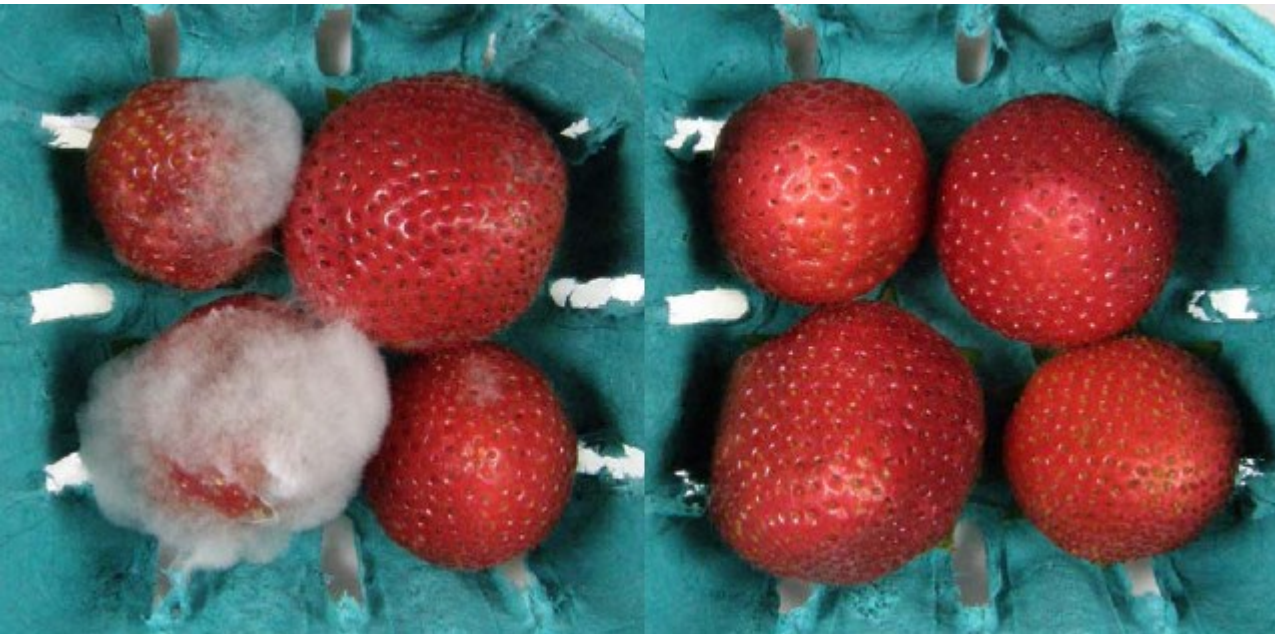
Stimulation of Growth processes



- Natural part of sun spectra
- Triggers several processes in plant grow
- Increase harvest

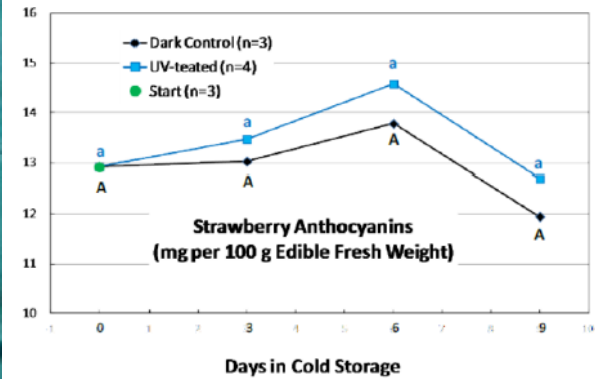
365 – 405 nm

UV LEDs are the future for the horti sector



A

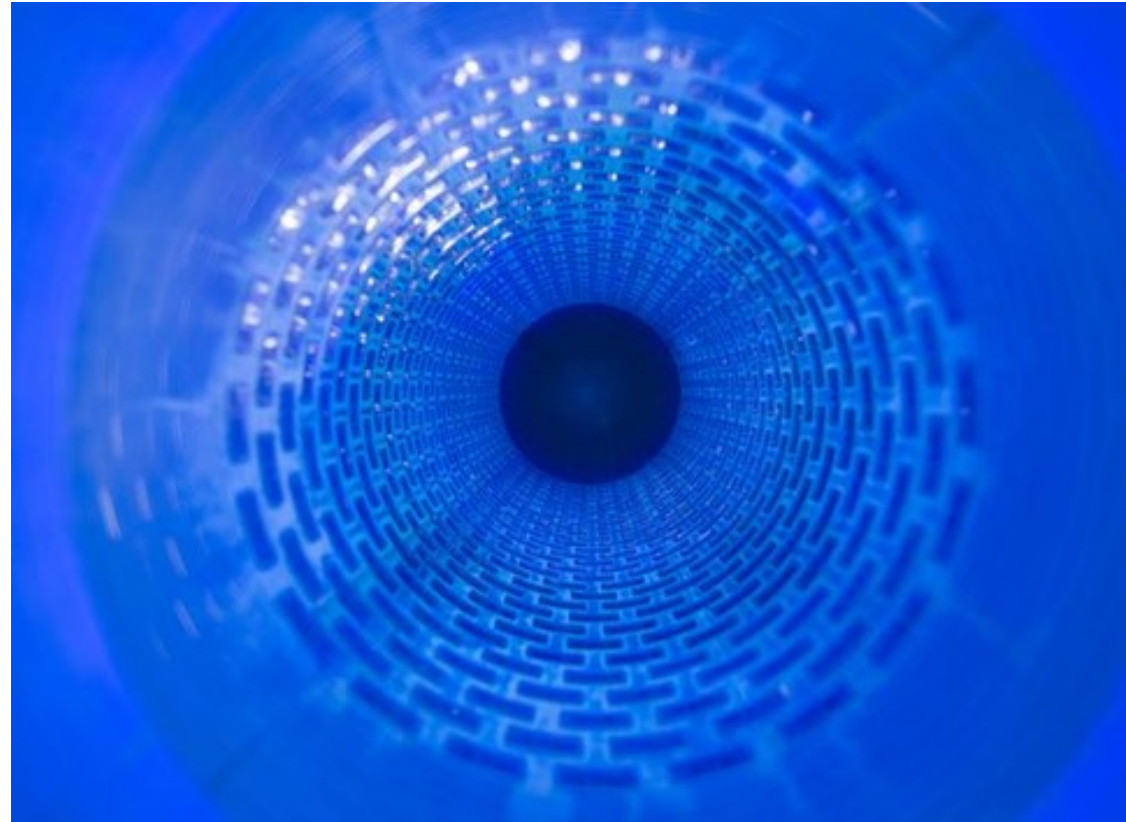
B



Strawberries after 9 days in cold storage (a) dark control (b) illuminated with UV-B lights

We improve the shelf life of the products

UV LEDs are the future for the Water sector



UV-C for water disinfection will change the World

UV LEDs are the future for the horti sector



UV-C applications in disinfection and plague control

We focus on LED products production

- **We look for partners to develop new products**
- **We look for researchers to test our tech**

THANK YOU

www.seoulsemicon.com