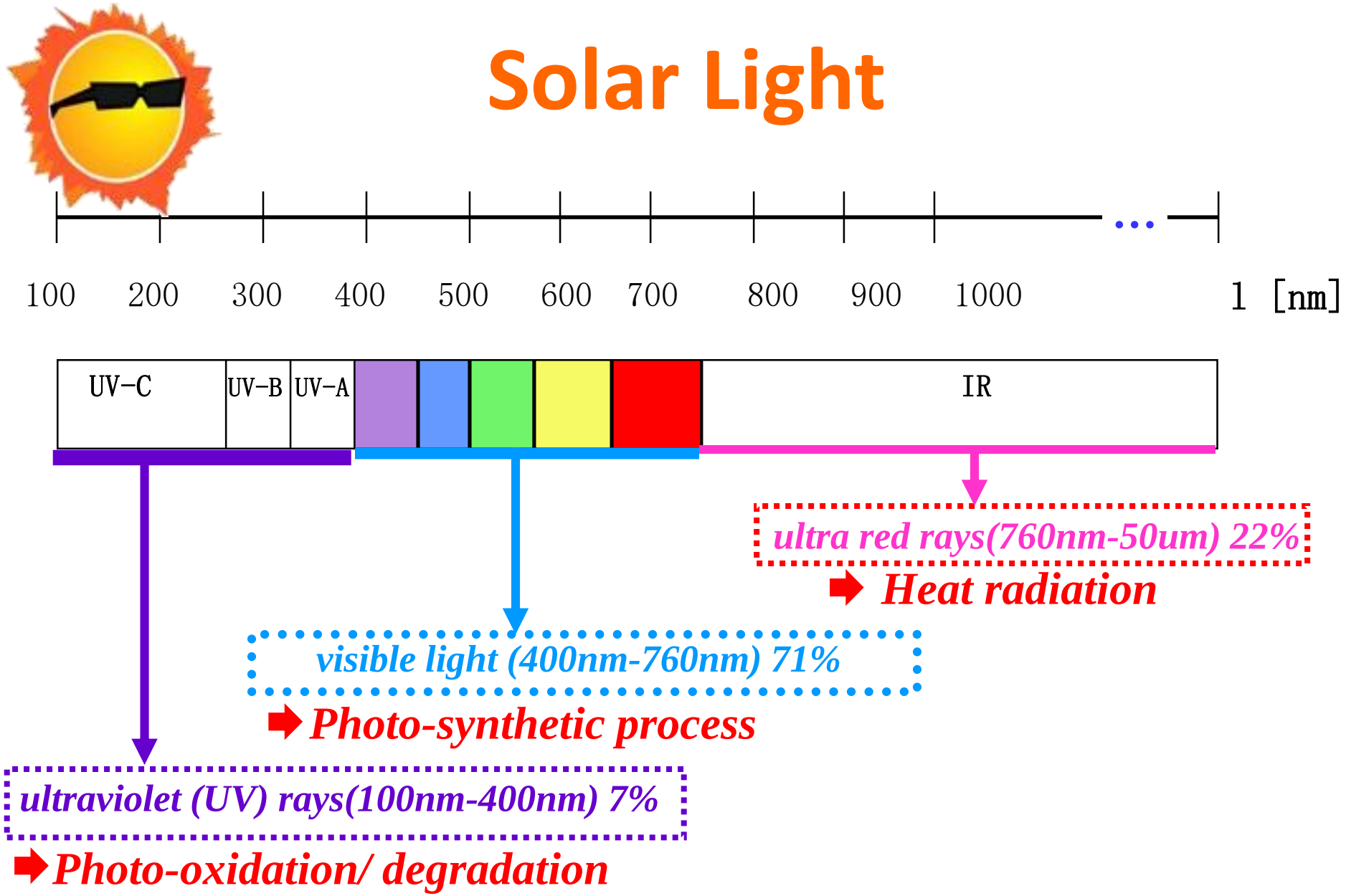
Solar Light



Specialty Chemicals
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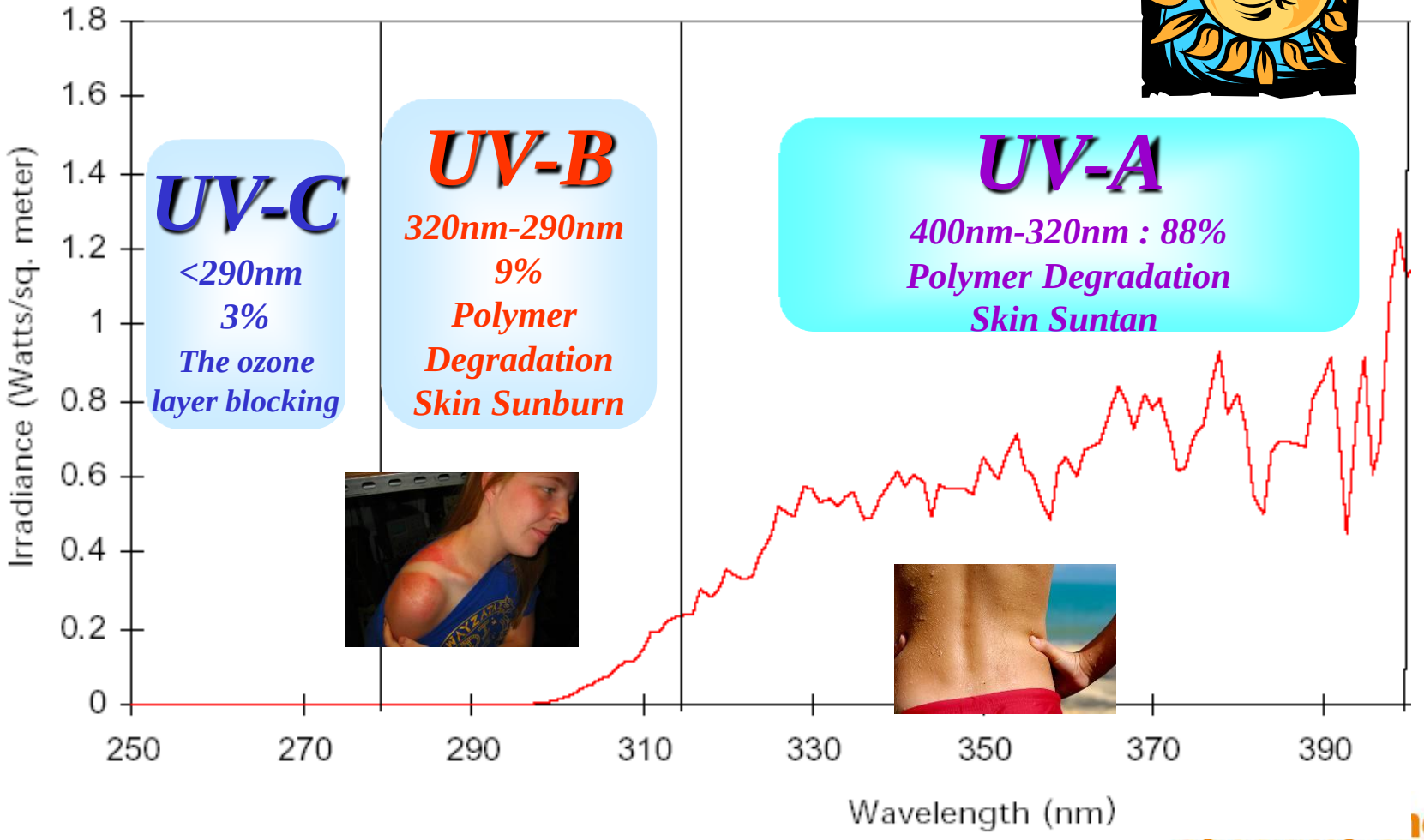
Ultraviolet Light Spectrum



emicals
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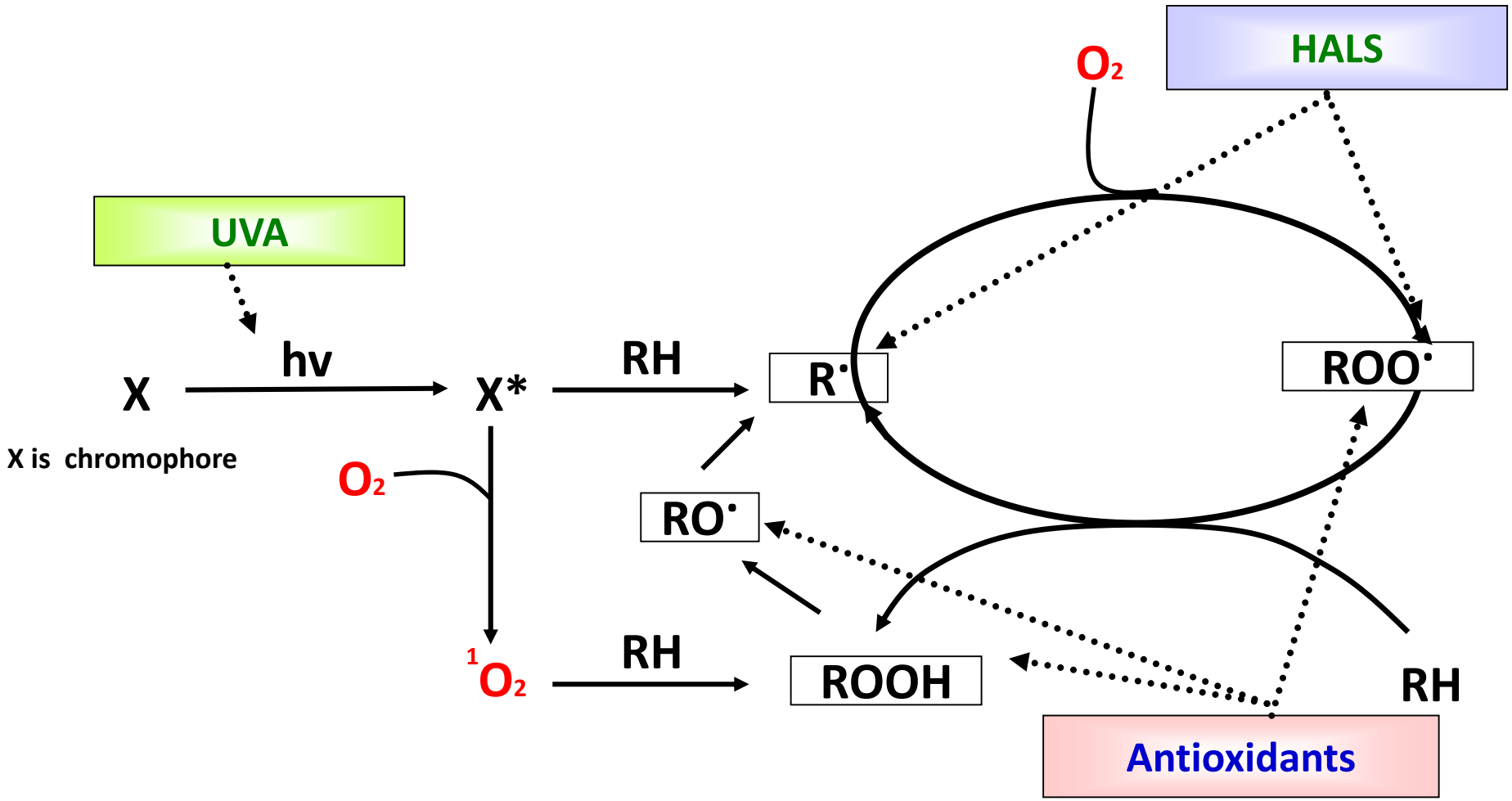
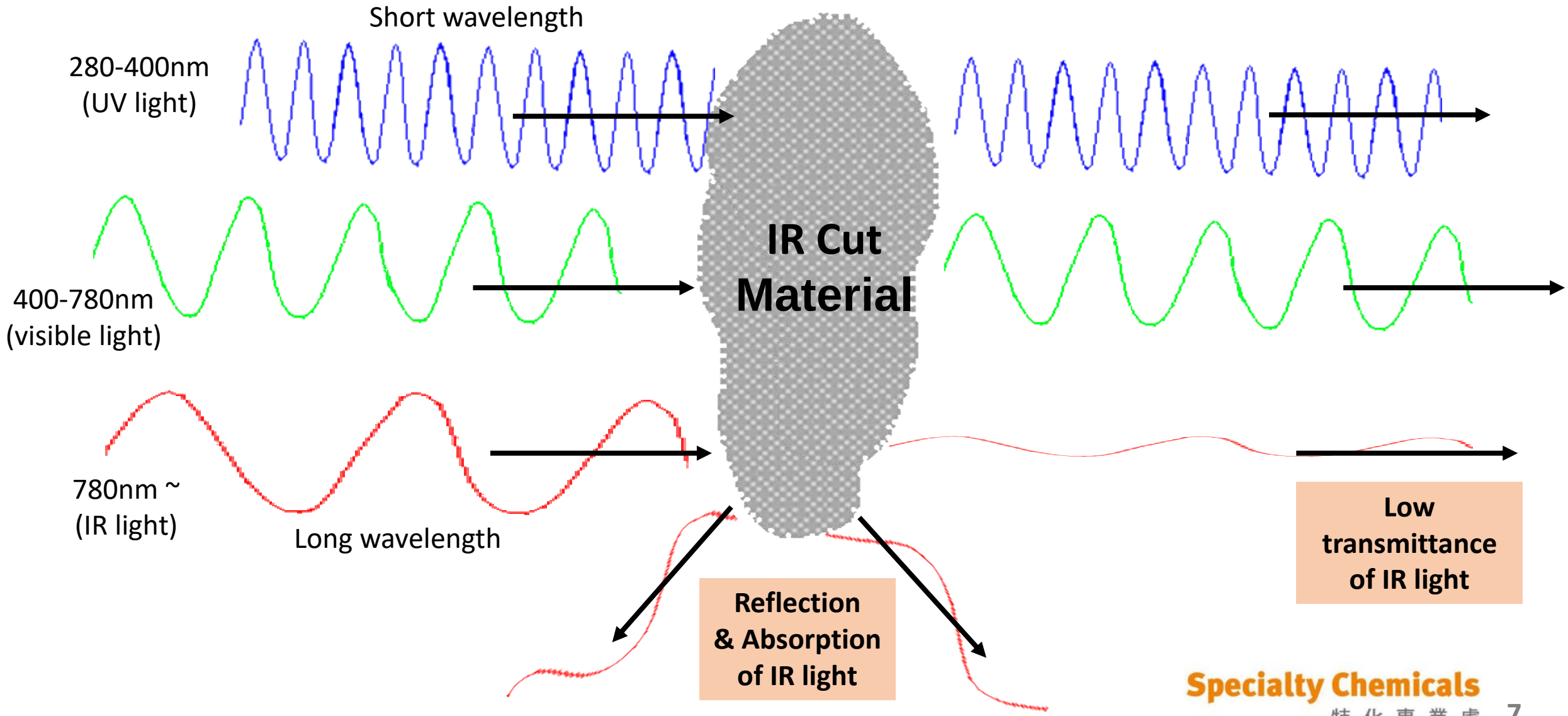
How To Prevent Polymer Degradation



How To Prevent IR Light



Specialty Chemicals
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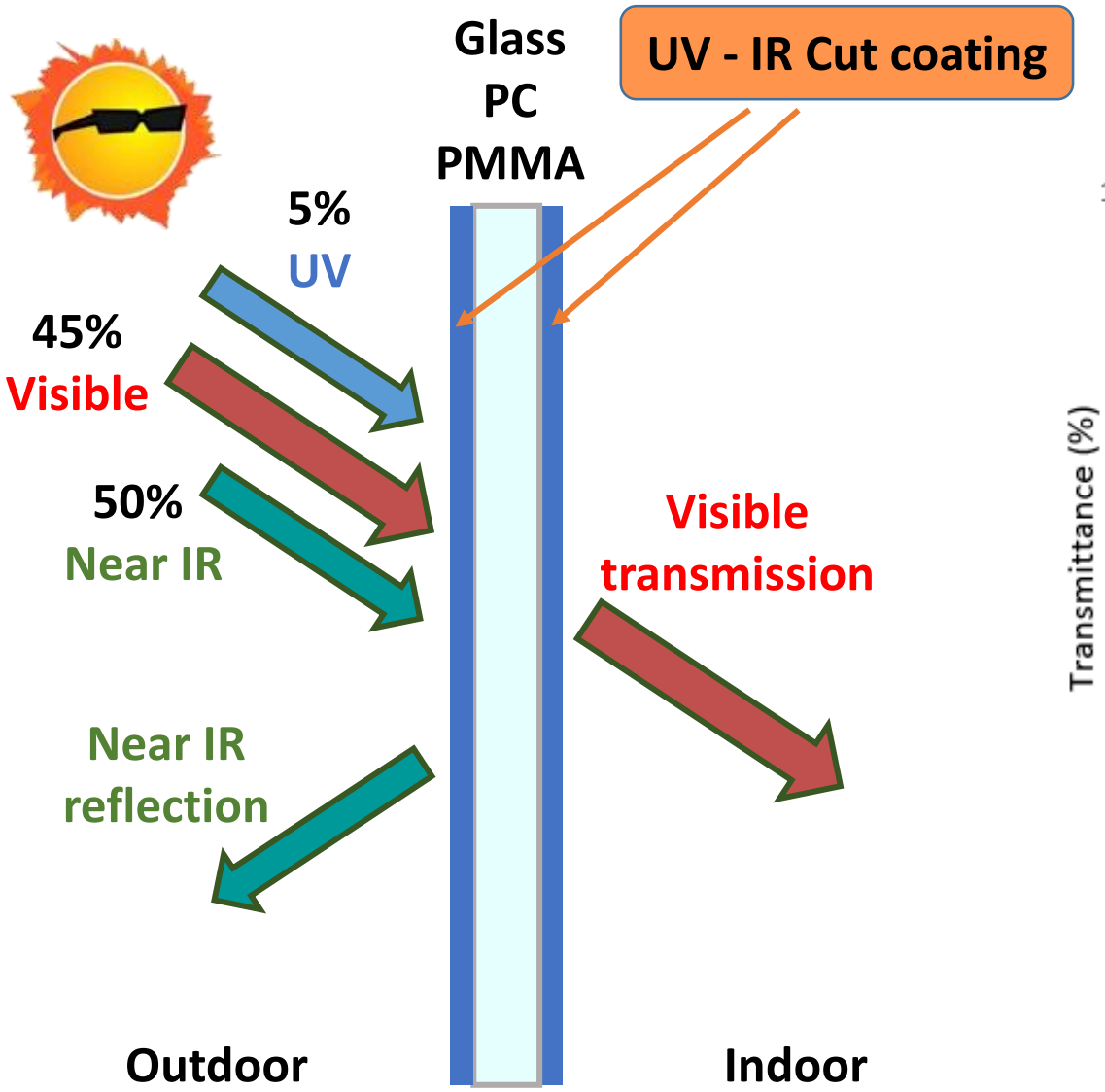
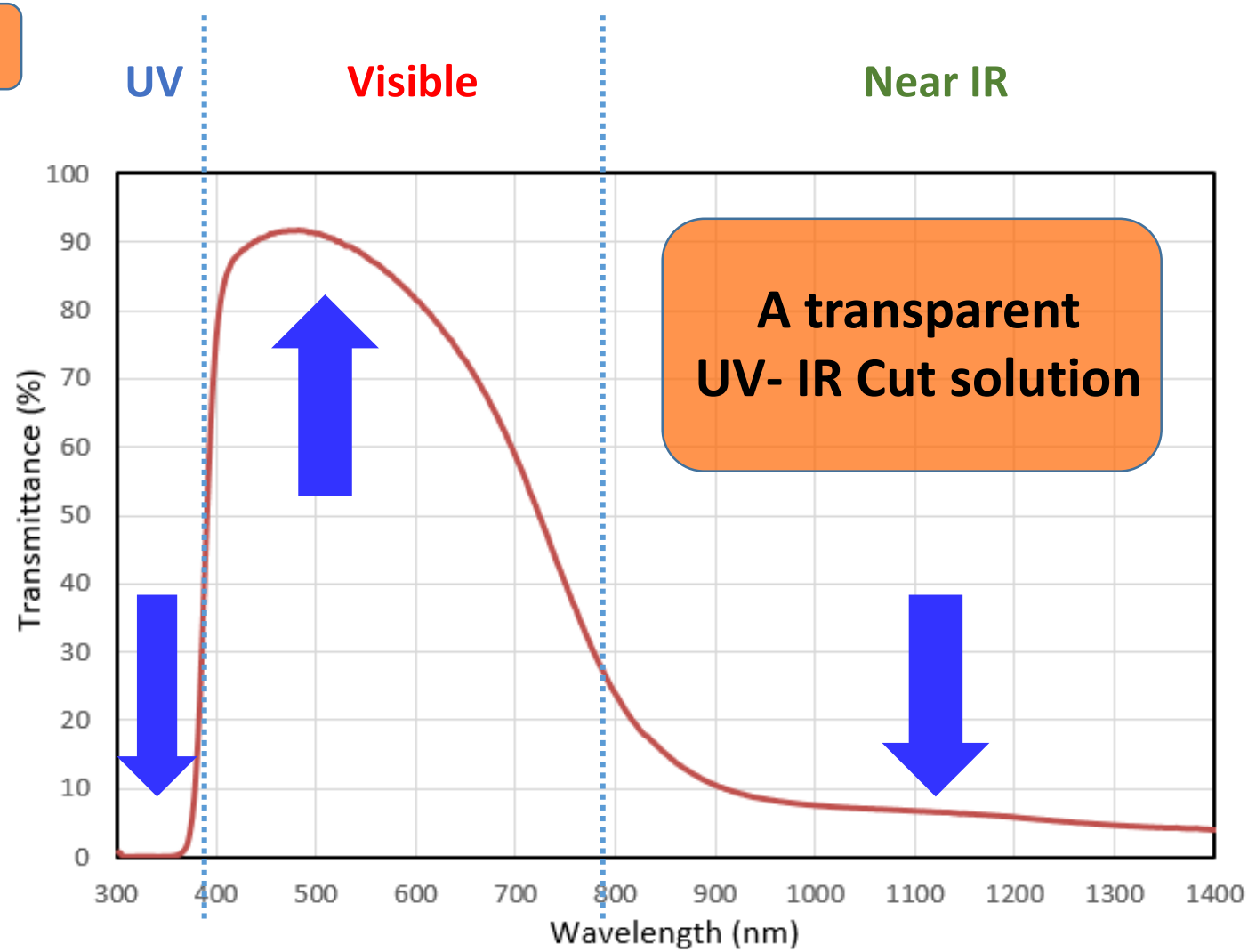
The Function of Novel UV-IR Cut





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Applications of UV-IR Cut

Window

Skylight Panel

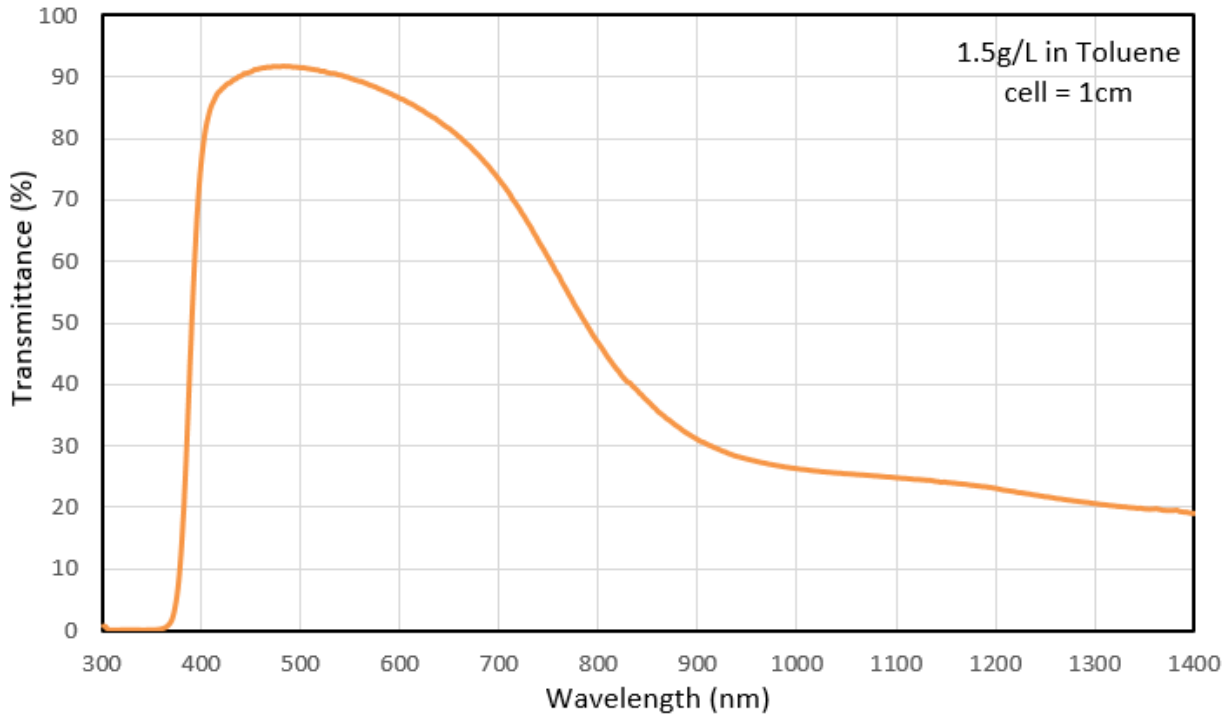
- Casting
- Extrusion
- Coating

Specialty Chemicals
特化事業處

Novel Solvent based UV-IR Cut
-ST20014B

IR Cut Materials — Eversorb® ST20014B

	ST20014B
Active content	**UV-IR Cut (10% solids)**
Feature	**PMMA carrier** for solvent-borne thermal type **acrylic system**
	1. Flashpoint > 100°C , non-flammable liquid 2. Great IR cut-off with light color



Specialty Chemicals
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UV-IR Cut Materials — Eversorb® ST20014B

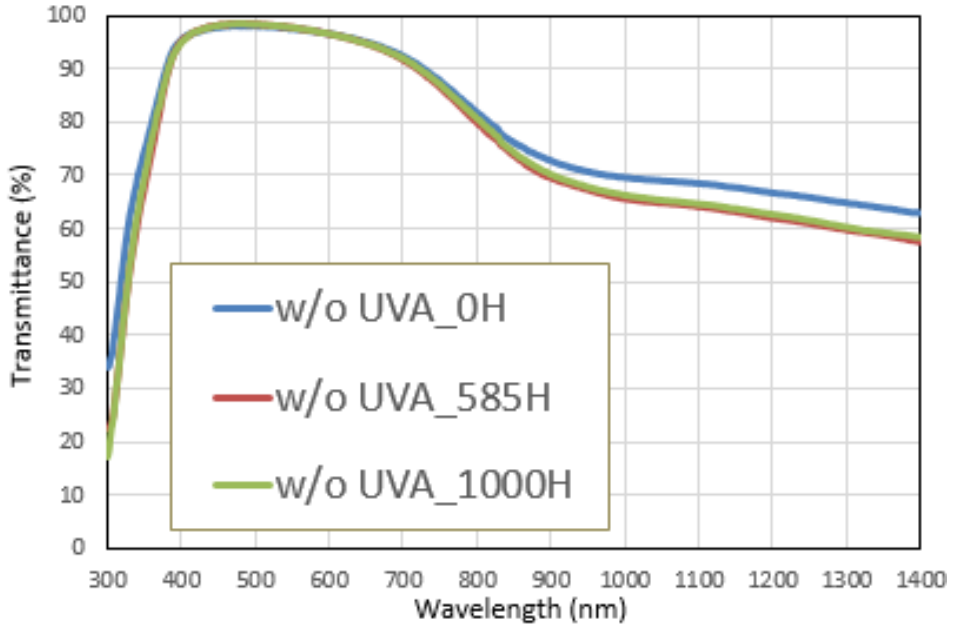
Test Condition

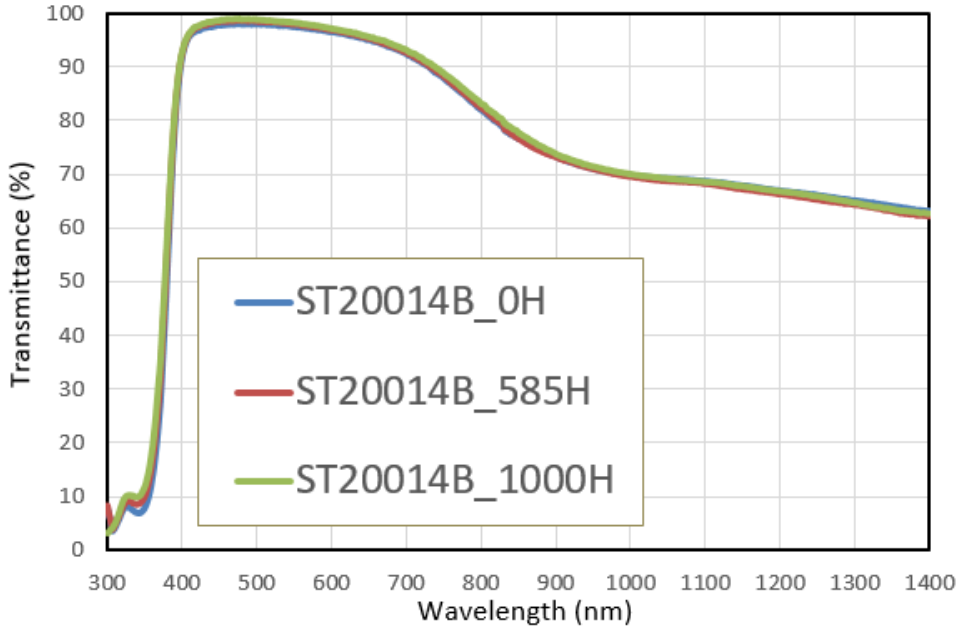
Resin：2K clear PU coating　　**Substrate**：Glass

Test Method：ASTM G155-1 (Xenon)　　**Test Time**：1,000hrs

Thickness：25μm

Dosage：10% Eversorb® B (based on total formulation)



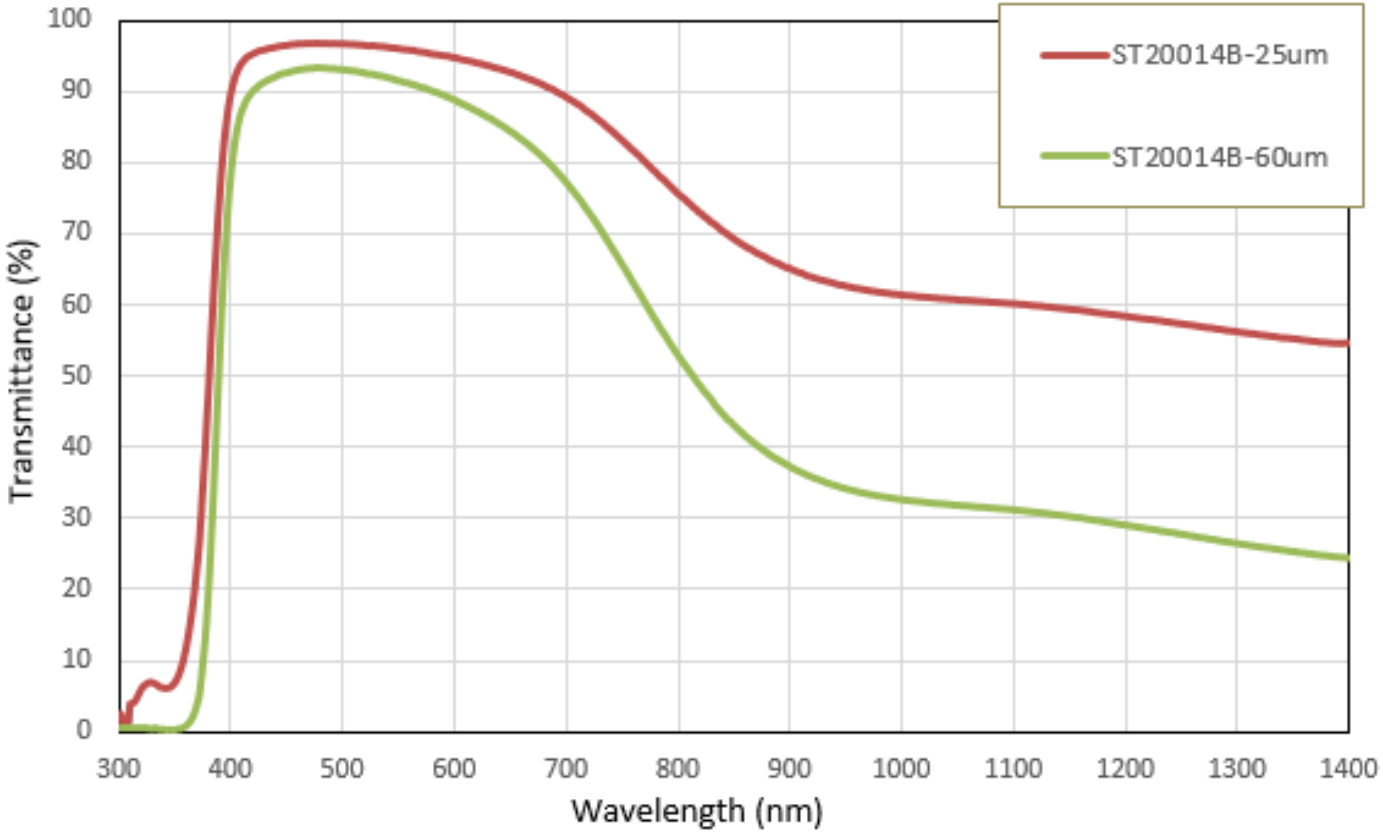


Specialty Chemicals
特化事業處

UV-IR Cut Materials — Eversorb® ST20014B

PU Resin : solvent : ST20014B = 75 : 25 : 20 (16.7% based on total formulation)
Thickness = 25 µm , 60 µm

2K PU (UV-IR Cut)
glass

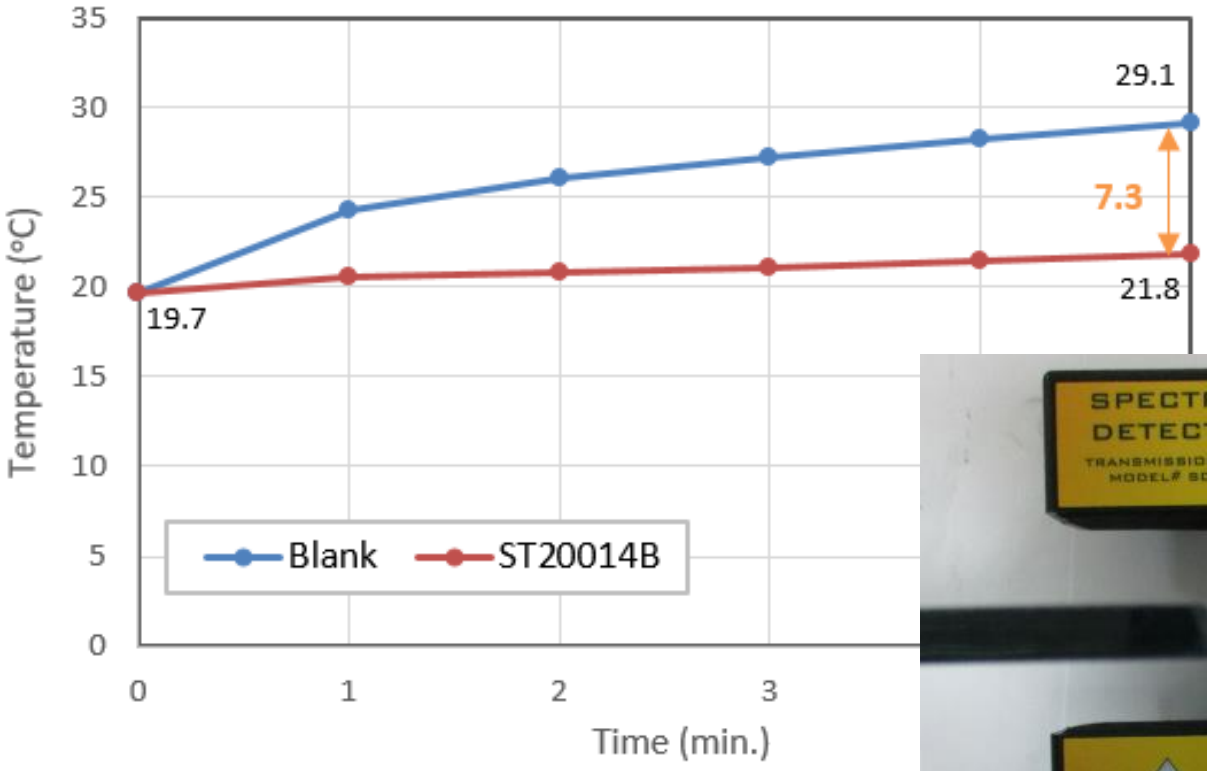


	400-780nm average Tran. (%)	780-1400nm average Cut-off (%)	Sum
B-25µm	92	39	131
B-60µm	84	67	151

UV-IR Cut Materials — Eversorb® ST20014B

PU Resin : solvent : ST20014C = 75 : 25 : 10 (16.7% based on total formulation)
Thickness = 60 µm

2K PU (UV-IR Cut)
glass



Specialty Chemicals
特 化 事 業 處

Novel Waterborne UV-IR Cut
-ST20022

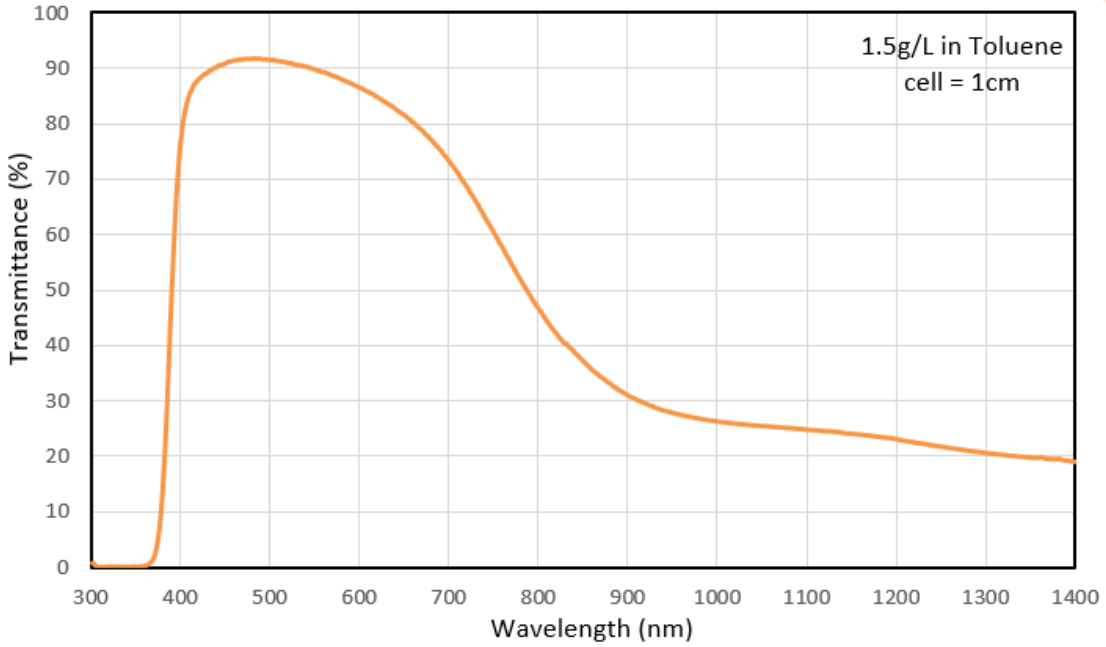
Novel Waterborne UV-IR Cut -ST20022

ST20022(WB)

UV-IR Cut (20% solids)

Water carrier for waterborne thermal type coating

1. Flashpoint > 100°C , non-flammable liquid
2. Great infrared blocked with light color

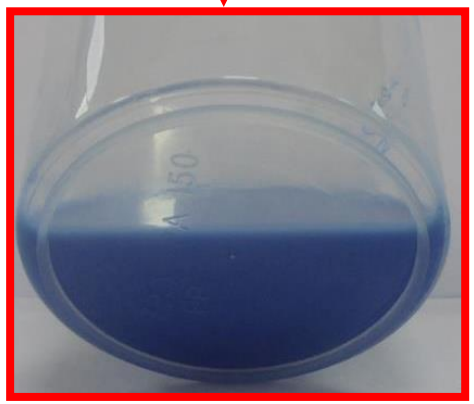


Specialty Chemicals
特化事業處

Waterborne UV-IR Cut ST20022-Dispersed Test in Water System

[5g (*ST20022*)/100g – DI Water]

Stirring



OK

filter

OK

ST20022

Liquid *ST20022* is easy to disperse in water System

Specialty Chemicals
特 化 事 業 處

Waterborne UV-IR Cut ST20022-Dispersed Test in Waterborne Resin System

[5g (*ST20022*)/100g – PU Waterborne Resin]

ST20022

Stirring

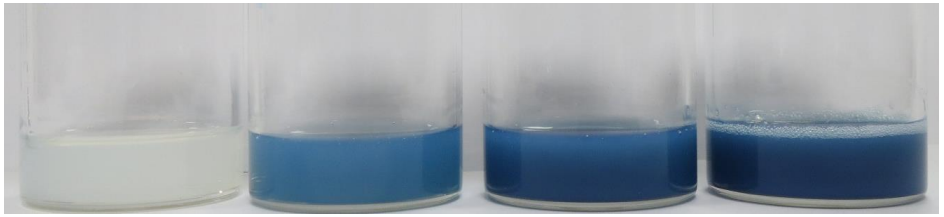
OK

filter

OK

OK

Coated on Glass



Resin + *1%ST* + *3%ST* + *5%ST*

Liquid *ST20022* is easy to disperse in waterborne Resin System

Specialty Chemicals
特化事業處

Enhanced UV-IR Cut Retention of PU Waterborne Clear Coating on Glass

Test Condition

Resin：WB PU coating

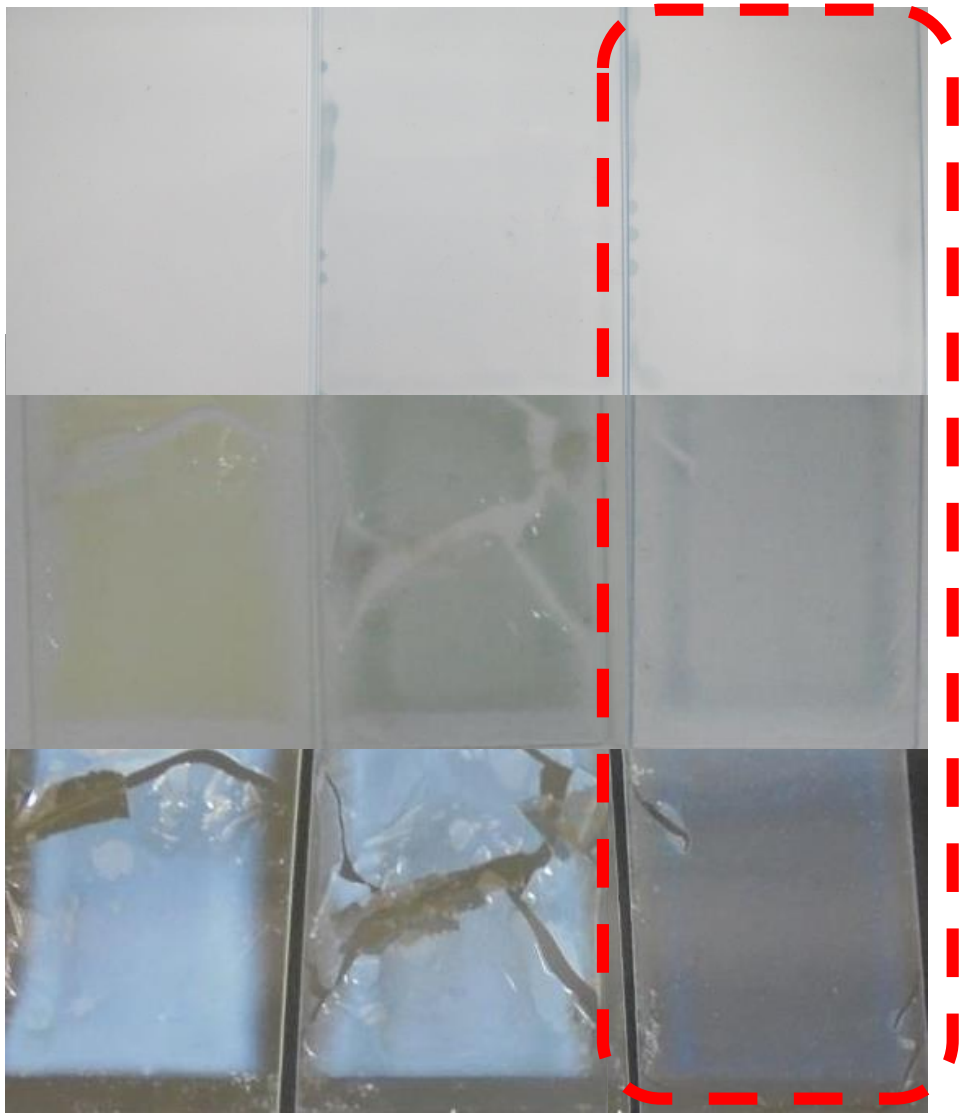
Substrate：Glass

Test Method：ASTM G155-1 (Xenon)

Test Time：1,000hrs

Thickness：15μm

Dosage：5% ST20022



WB PU (UV-IR Cut)

glass

0hrs

1000hrs

1000hrs

Blank

Only IR

5% ST20022

Specialty Chemicals

特化事業處

Enhanced UV-IR Cut Retention of PU Waterborne Clear Coating on Glass

Test Condition

Resin：WB PU coating

Substrate：Glass

Test Method：ASTM G155-1 (Xenon)

Test Time：1,000hrs

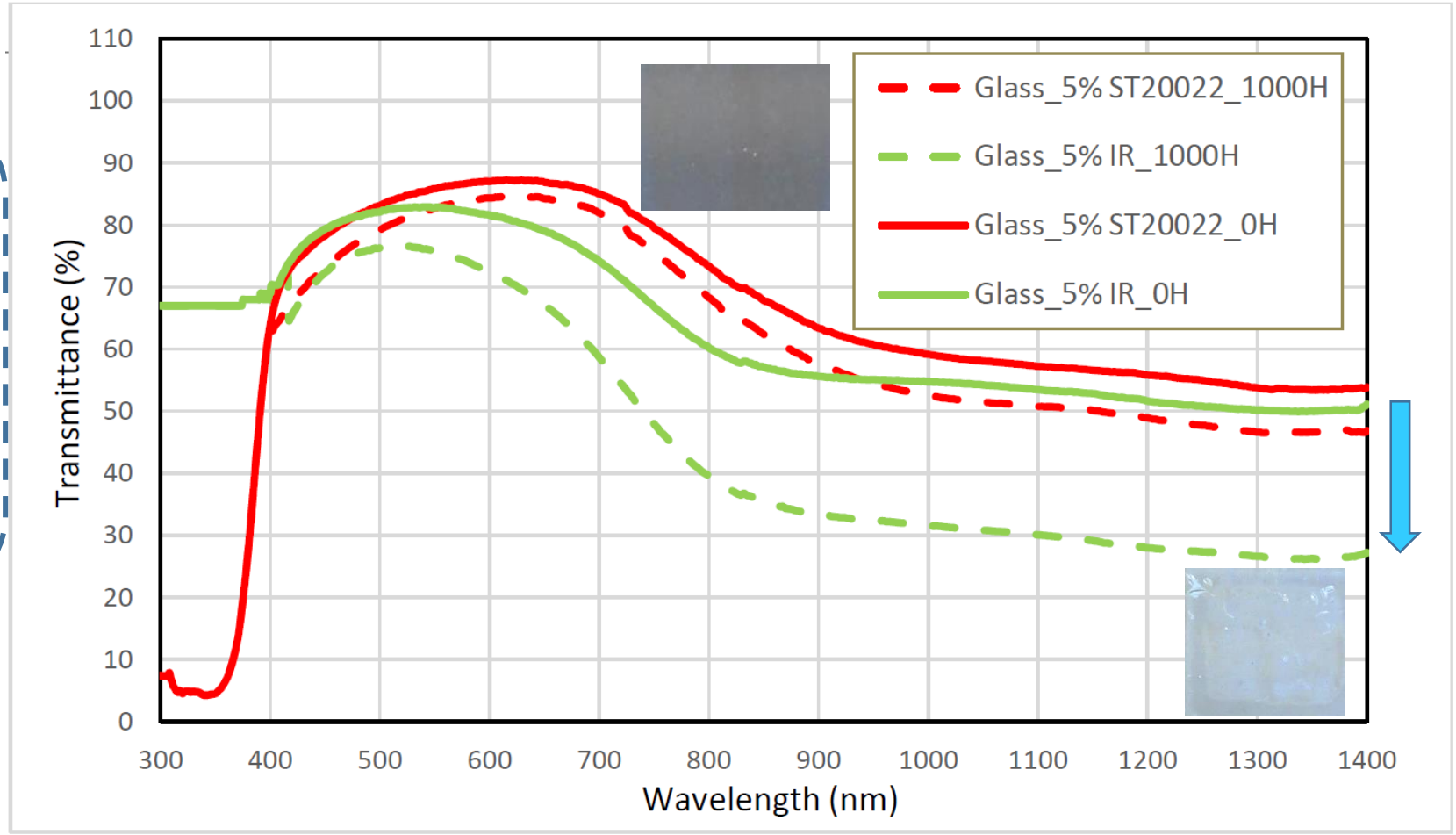
Thickness：15μm

Dosage：5% ST20022

Only IR 0hrs

5% ST20022 0 hrs

Photo of Coated on Glass



Only IR 1000 hrs (color change)

Specialty Chemicals
特化事業處

Enhanced UV-IR Cut Retention of PU Waterborne Clear Coating on PC

Test Condition

Resin：WB PU coating

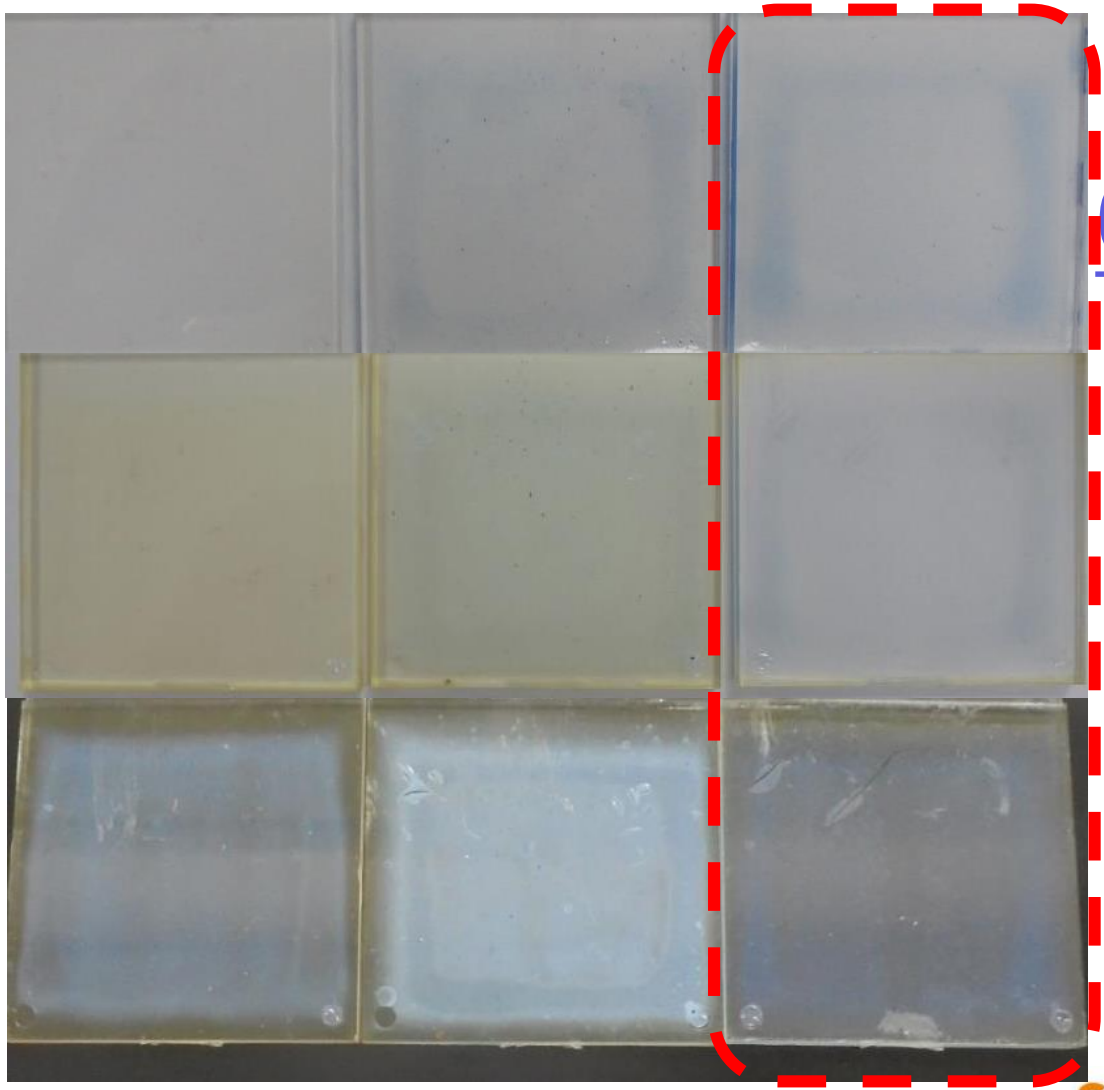
Substrate：PC

Test Method：ASTM G154-1 (340nm)

Test Time：1,000hrs

Thickness：15μm

Dosage：5% ST20022



WB PU (UV-IR Cut)

PC

0hrs

1000hrs

1000hrs

Blank

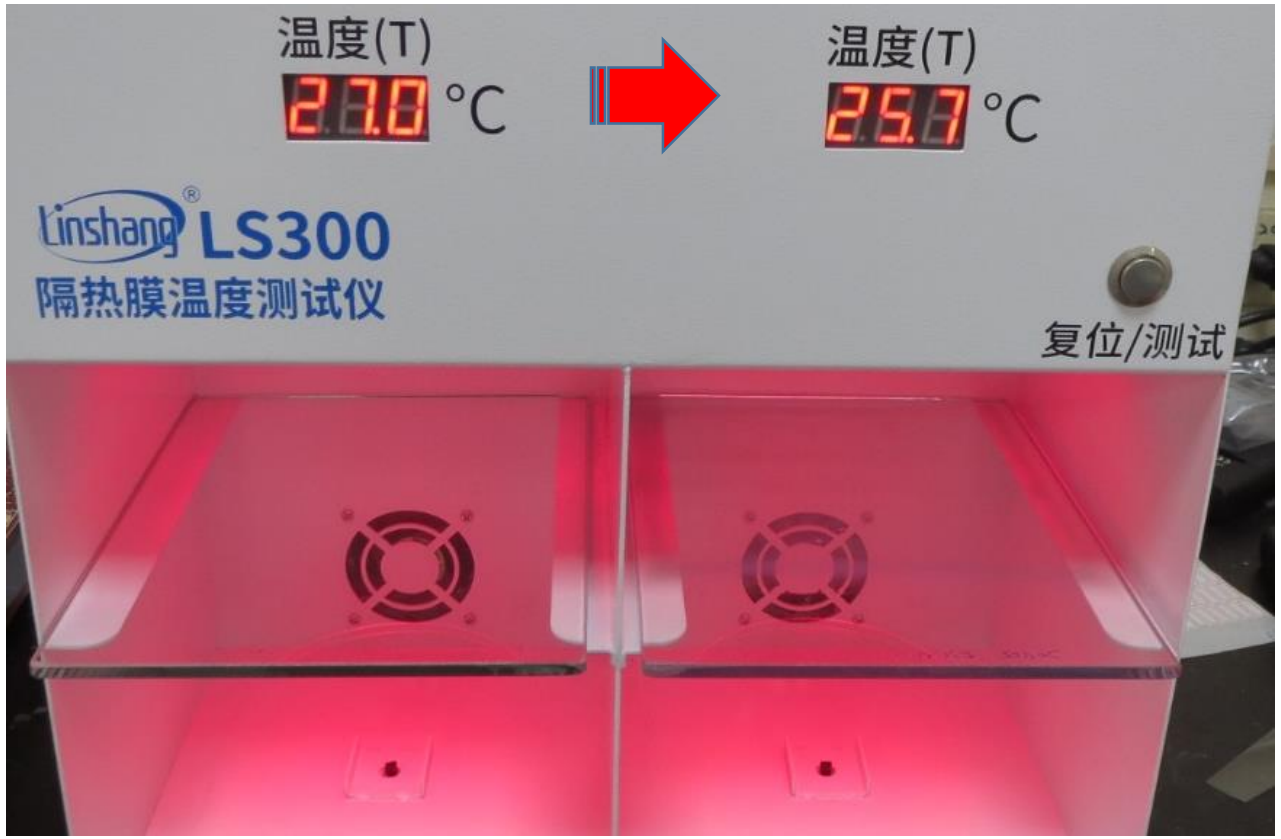
Only IR

5% ST20022

Specialty Chemicals

特化事業處

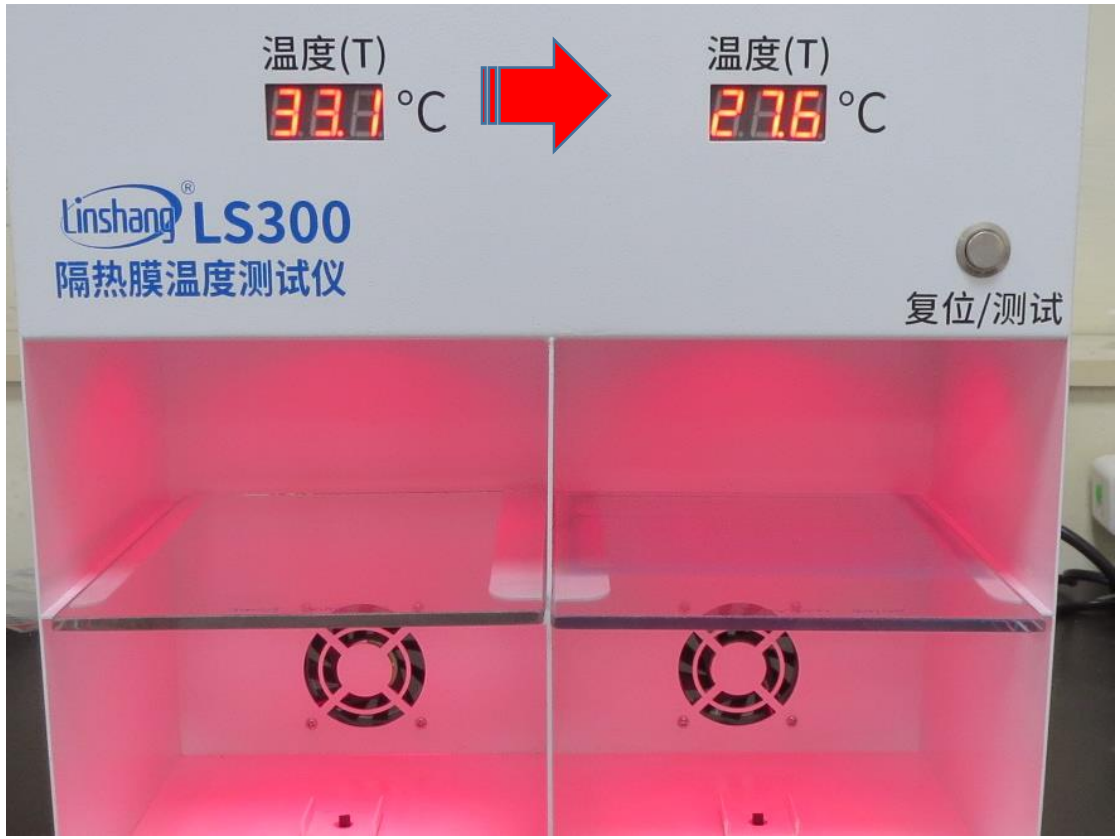
Waterborne UV-IR Cut Tester 1 —ST20022



Blank

5% ST20022 in WB Resin
Coated on Glass

1 minute



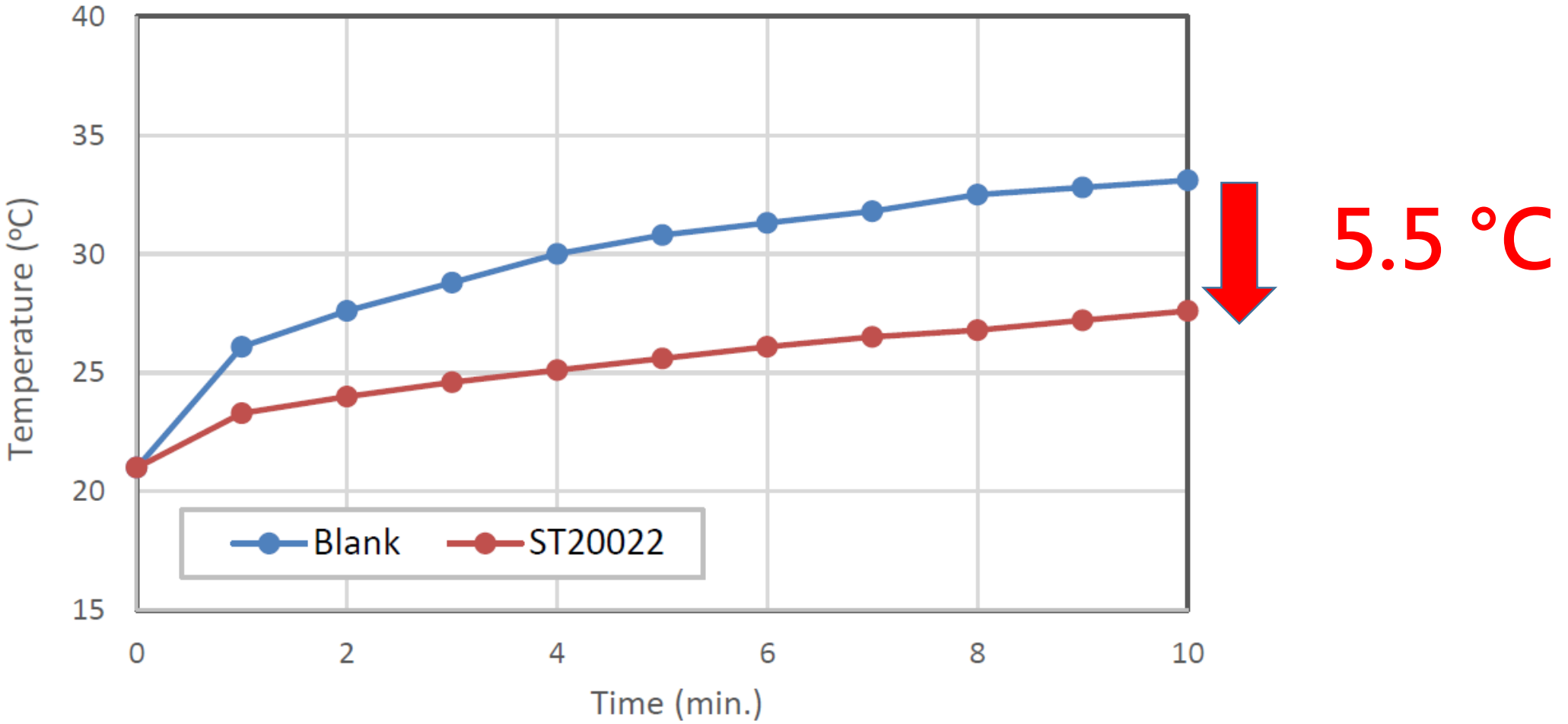
Blank

5% ST20022 in WB Resin
Coated on Glass

10 minutes

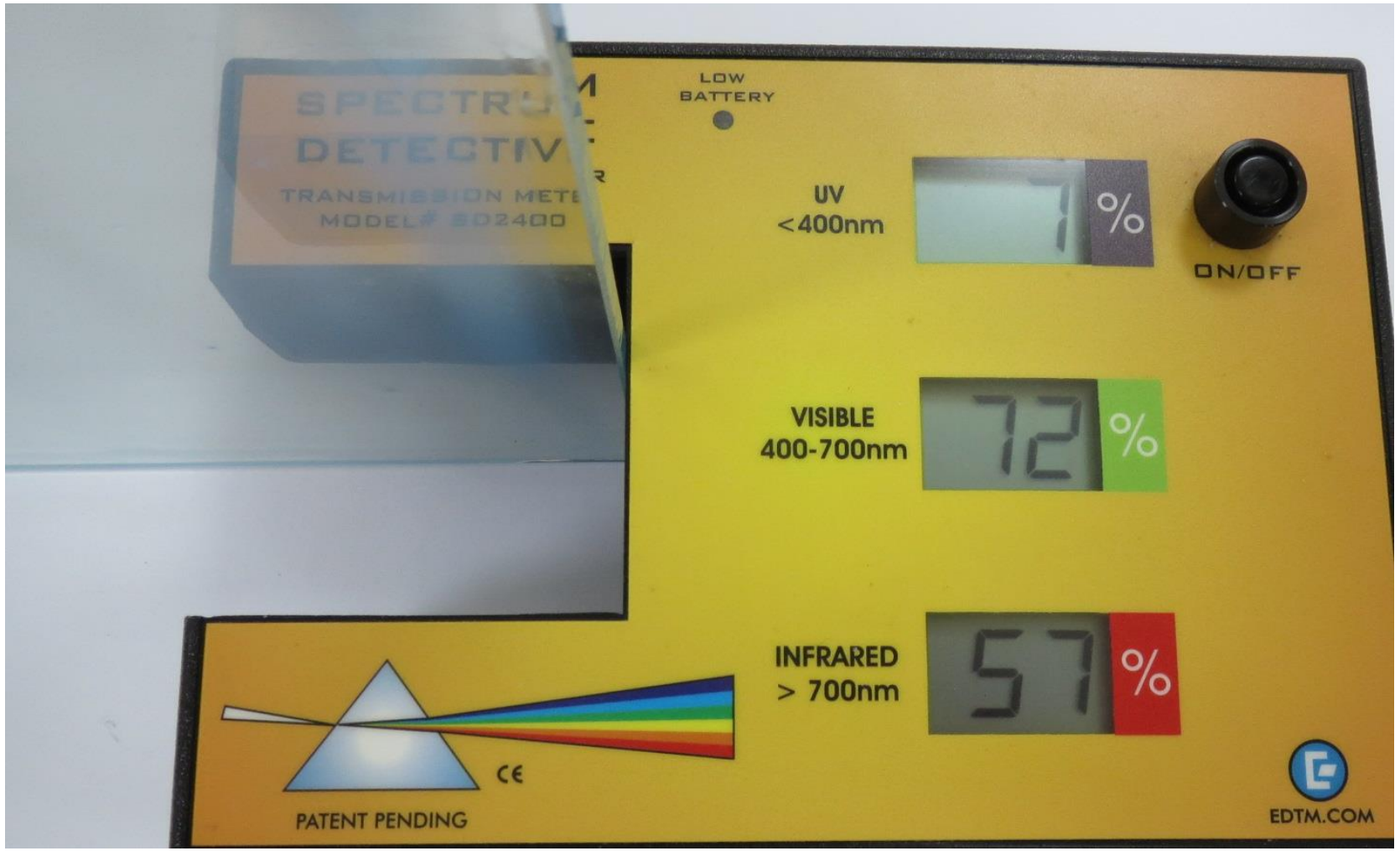
Specialty Chemicals
特 化 事 業 處

Waterborne UV-IR Cut Test for 10 minutes —ST20022



Specialty Chemicals
特化事業處

Waterborne UV-IR Cut Tester 2 —ST20022



5% ST20022 in WB Resin Coated on Gloss

Specialty Chemicals
特化事業處

Waterborne UV-IR Cut Tester 3 —ST20022

Glass

5879 W/m²

(100%)

5% ST20022

3380 W/m² (irradiance Energy)

(57.5%)

Specialty Chemicals
特化事業處