

# Transparent Solar Heat Reflective Coating for Domestic and Industrial Applications



- ☐ Introduction
- ☐ Concept
- ☐ Properties
- ☐ Technical Features
- ☐ USP of Infrared- Pro
- ☐ Applications
- ☐ Applications sectors



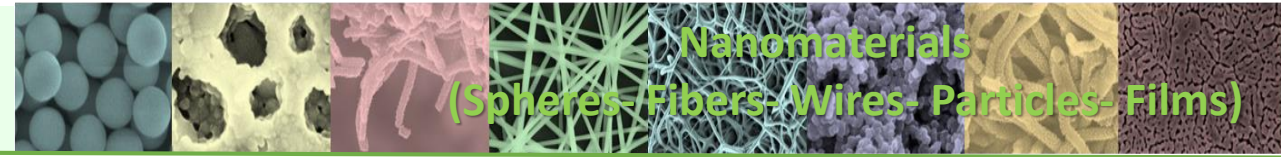


## Introduction

Infracut clear is a nano-structured Infra red radiation reflective coating for glass

- ☐ The coating does not change the appearance of the surface
- ☐ IR rays from the sun falling on the surface gets reflected from the surface of the coating
- ☐ The coating prevents the glass from getting heating up and the heat passing into the interiors
- ☐ The coating effectively reduces the temperature of the interiors and reduces the power of consumption by air conditioners





## Electromagnetic Spectra of Light and its Effects:

**UV A (280-400nm)**

- Harmful for Humans
- Causes Eye dryness and inflammation
- Can cause skin burn and skin cancer

**Visible (400nm -800 nm)**

- Detected by the human eye and perceived as visible light
- Required by humans to visual and interact with the surroundings

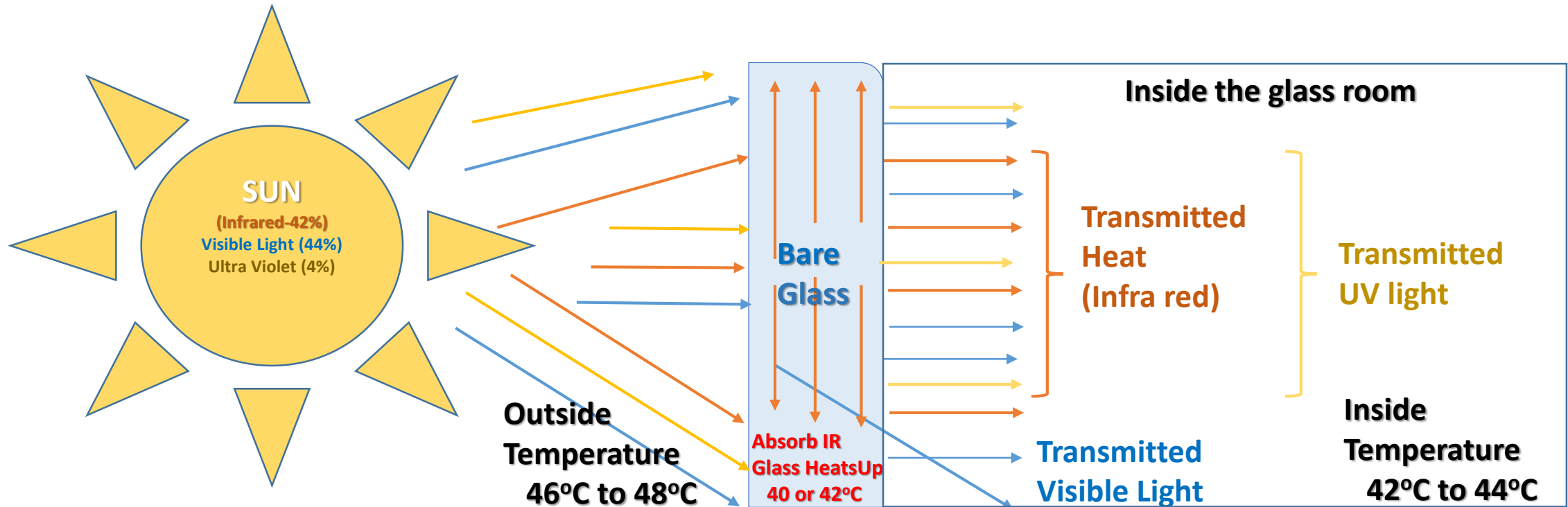
**Near Infrared Radiation (NIR)  
(800nm -2500 nm)**

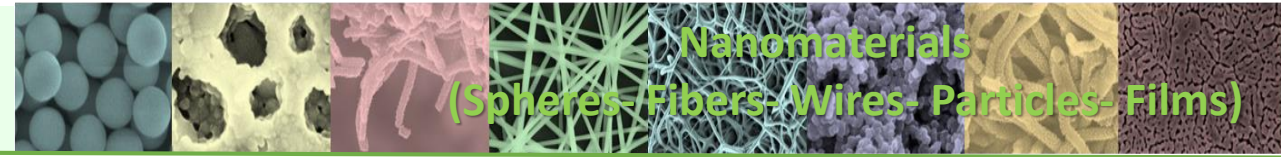
- Carries maximum amount thermal energy
- Responsible for the heating up of glass and building or automobile interiors



The incident radiation (Ultra violet + Infra red + Visible) on interacting with the surface can undergo the following processes

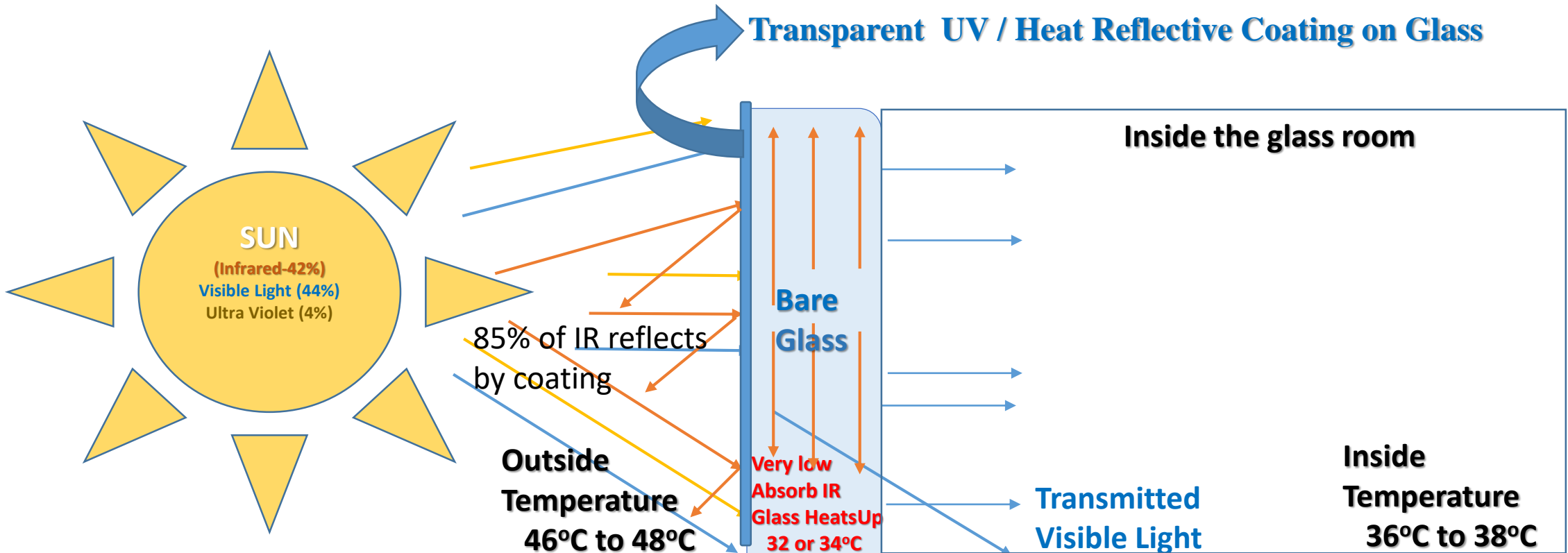
- Absorption - Reflection - Transmission
- The transmitted UV rays can cause health problem
- Transmitted IR rays causes heating up of glass & building / autointeriors

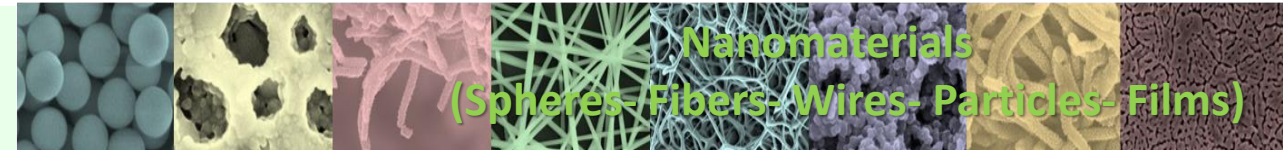




The incident radiation (Ultra violet + Infra red +Visible) on interacting with the surface of the glass can undergo the following processes:

- very little absorption by glass
- 85 to 90% Reflection of IR from the surface of the coating into atmosphere
- only 100% visible light transmission into the room





A nanostructured transparent ceramic coating which reduces the solar heat reflectivity of glass without affecting its transparency

## PROPERTIES

Appearance

IR Reflection (800 nm to 2.5 microns)

Visual Transmittance(400 to 800 nm)

UV Light Transmittance (200-400nm)

Methods of Application

Surface dry , minutes

Specific gravity @ 30°C, gms/ cc

Theoretical Spread Rate, ( sqft/ltr)@ 10 microns DFT

Standards Tested Condensation and abrasion resistance as per

Average temperature Difference between coated and coated glass

Average Interior temperature difference brought out by coating

## RESULTS

Clear thin liquid

≥ 80

~90%

> 96%

Spray

30

0.82

120-140

BS 1096

10-12 °C

7-8 °C



## Infracut Clear Features





## International Standards Tested

### Visible Transmittance

- 90 % --(BS 1096 2)

### IR Transmittance

- > 80 % --(BS 1096 2)

### UV Transmittance

- > 95 % --(BS 1096 2)

**Resistance to accelerated weathering:  
500 hours (ASTM G154)**



### Abrasion

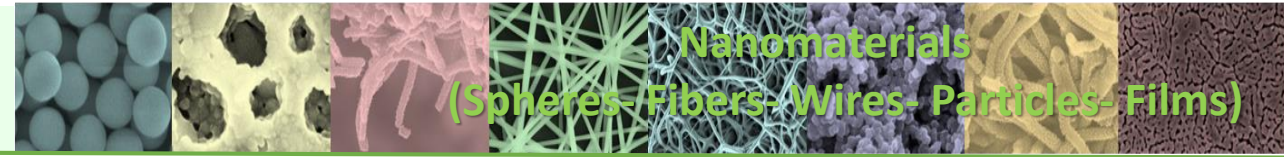
- 500 Strokes --(BS 1096 2)

### Adhesion

- Tape Test ( ASTM D3359)

### Touch Dry

- < 45 minutes (ASTM)



## Applications of Transparent Infrared-Pro Coating:

**Sector-1:** Individual Homes, Apartments, Villas, Resorts, Hotels, Restaurants, Temples (Government / Private)

**Sector-2:** Industrial sheds, Chemical / Pharma / Biotech companies solvent tanks, Cold storage sheds, Hospitals from various states, Ashrams, Schools (both Government and Private from different states)

**Sector-3:** Aquaculture, Horticulture, Poultry sheds, car show room sheds, Rice mills, brick industry sheds

**Sector-4:** Industrial roof shed Coil manufacturers, Asbestos Sheet manufacturers, Seeds storage sheds,

**Sector-5:** Middle east countries, African Countries, Turkey, Iran, Egypt, Australia, USA (southern part) and North American countries, Sri Lanka, Bangladesh, Burma, Thailand, Malaysia, Singapore, Philippines, etc.,

**Sector-6:** Direct approach of MSME (from different states)

**Sector-7:** Ceramic association, Metal association, Pharma parks, Industrial parks, Biotech parks, Malls roof tops

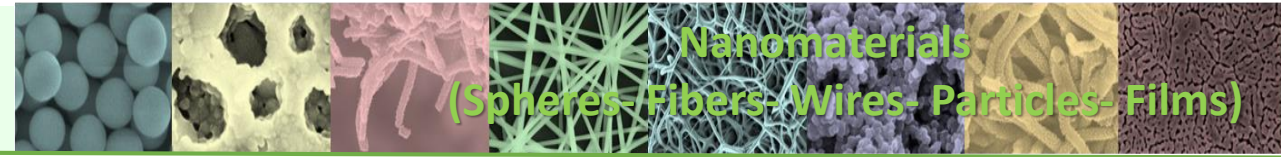
**Sector-8:** Containers in Harbour, Containers carrying cold items (prawns fish etc.,)

**Sector-9:** Defence, Air force, Naval – sheds, tents and other areas etc.,

**Sector-10: Government:** Airports roofs, Railways Sheds, compartments, Food corp. India (FCI) sheds, Buses and bus stands







**Make your glass building IR free..... and save energy**

**Thank You for  
Your Kind Attention**

**Looking forward for fruitful Business...**

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