MERMET

The Essentials of

KOOLBLACK™

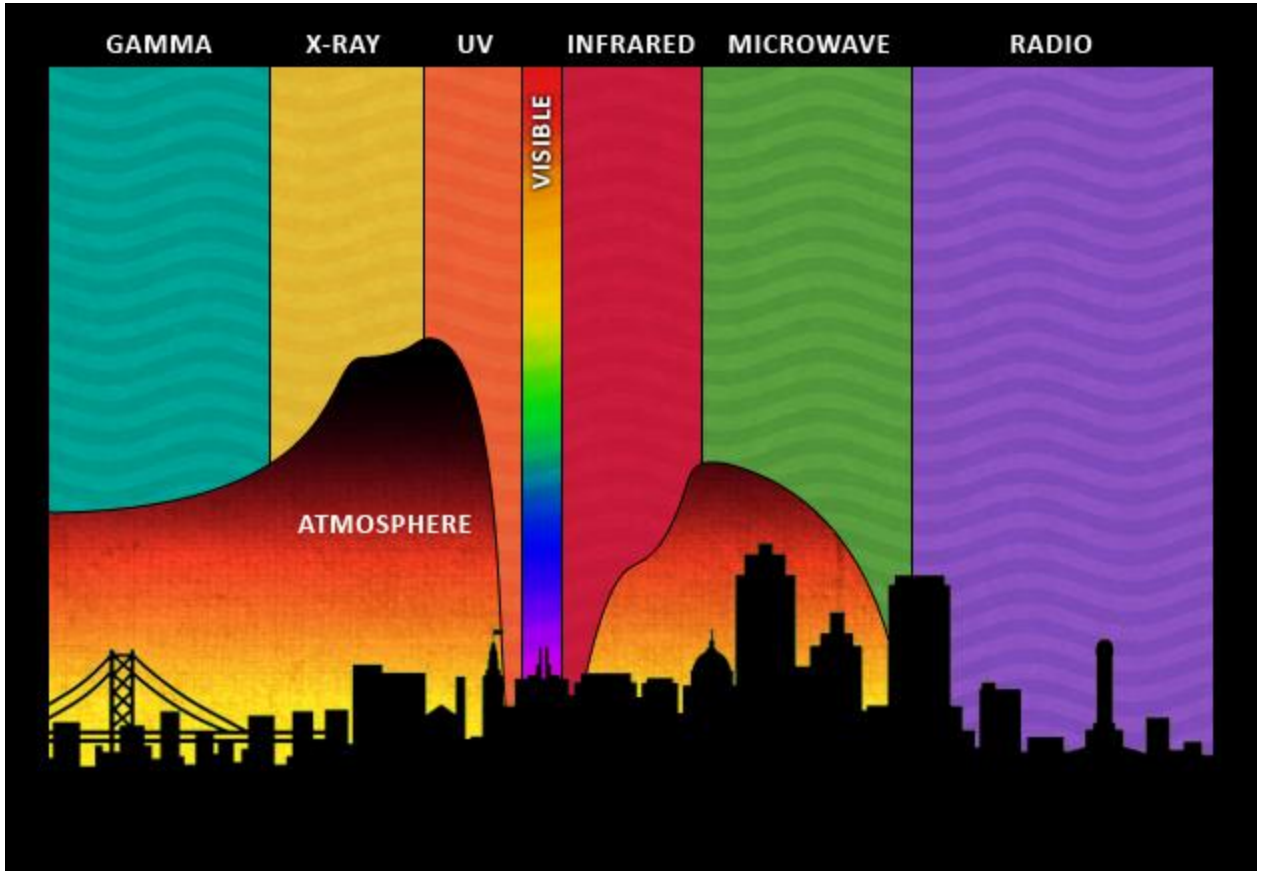
TECHNOLOGY

Solar Energy Spectrum

The three types of solar radiation that affect solar shades are:

- Ultraviolet (UV)
- Visible
- Infrared

The only other wavelength frequency to penetrate our atmosphere and reach the ground are radio waves, which are harmless and do not effect us.



What Are Solar Shades Doing?

Blocking **UV**

Reflecting **Infrared**

Reducing **Visible** glare

Ultraviolet (UV)

Effects in the solar shade industry:

- Cracking of polymers
  material literally breaks apart
- Many pigments absorb UV
- Fading
- Color change

Ultraviolet is not about heat
Solar shades block UV

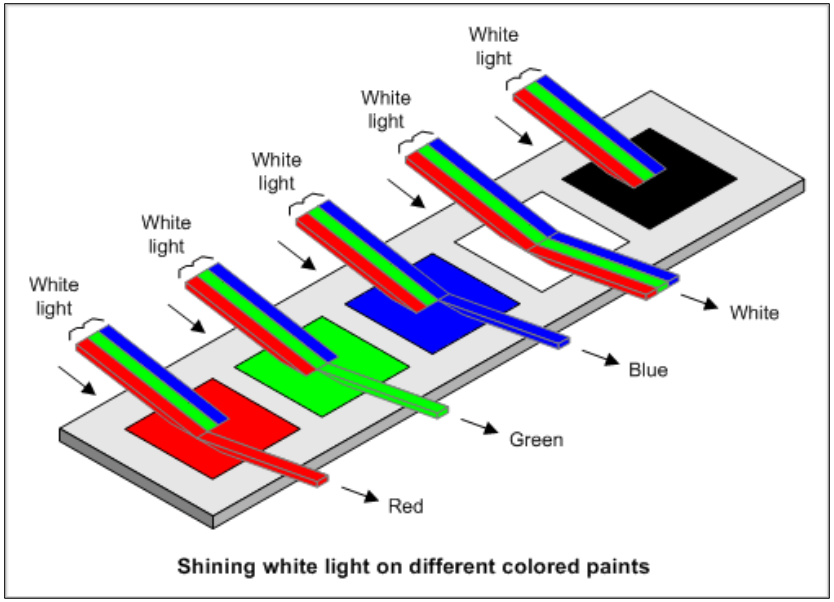
- Dependant on openness factor

Visible

WHITE COLOR
Is the reflection of all colors.

BLACK COLOR
Is the absorption of all colors.

White solar shades reflect all visible light, which causes glare when looking through.



Shining white light on different colored paints

Black solar shades absorb all visible light, reducing glare and allowing clear views when looking through.

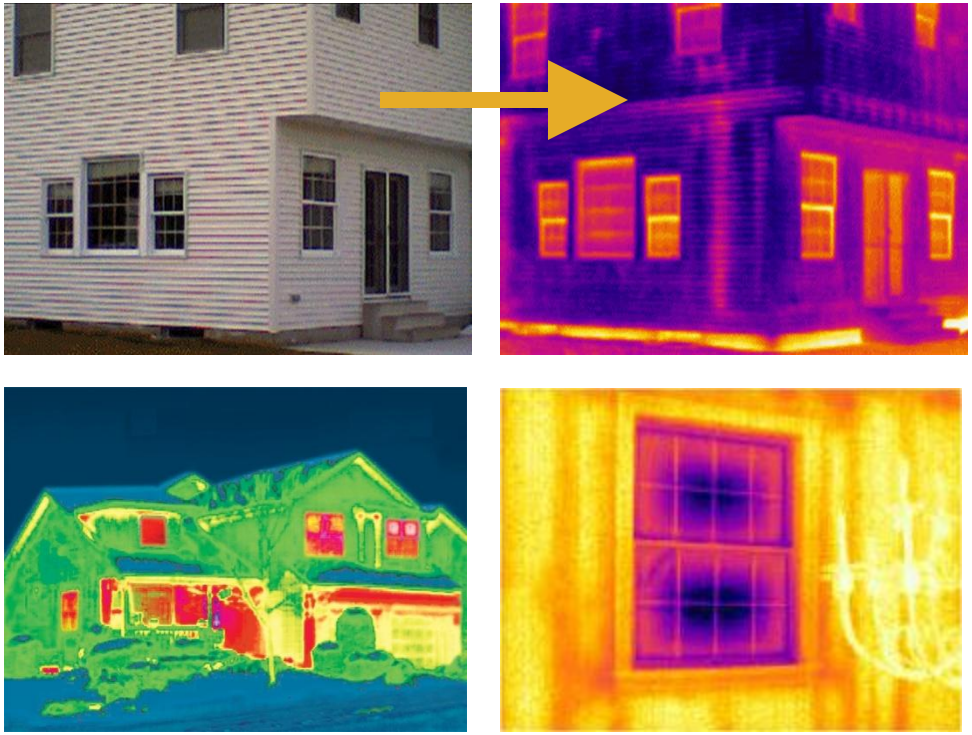
Infrared

Popularly known as heat, or heat radiation.

Infrared is a form of light, that we can not see, but can feel.

These thermal-infrared imaging photos show how much heat is generated at the windows of this home.

Solar shades reflect infrared heat, dependant on the color.



Dark Colors That Reflect Heat?

Mermet set out to develop a high-performance fabric that would allow the shade to:

Block UV (All Colors)
Absorb Visible Light (Black)
Reflect Infrared Heat (White)

How do we get BLACK to REFLECT Infrared heat?

we create:

KOOLBLACK™ TECHNOLOGY

Developing KOOLBLACK™ Technology

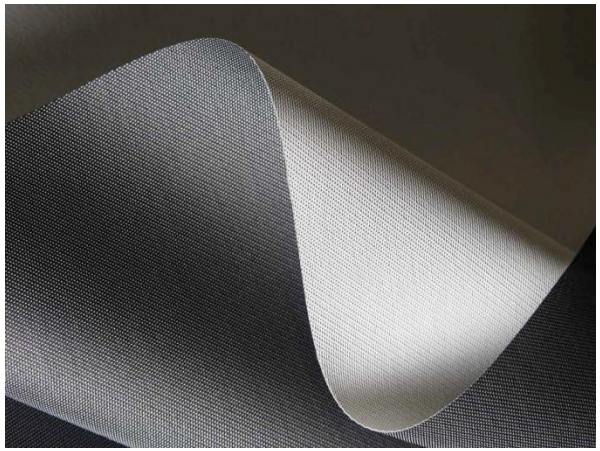
In 2007, Mermet formed a partnership with BASF, the world's largest chemical company, to develop KOOLBLACK™ Technology for the window shades industry.

In 2012, Mermet introduced E-Screen with KOOLBLACK™ Technology to a select few, and with great success.

In 2014, Mermet launched T-Screen with KOOLBLACK™ Technology, bringing a brand new level of high-performance fabrics to the market.

BASF
The Chemical Company

KOOLBLACK™
TECHNOLOGY



Intro to KOOLBLACK™ Technology

What is KOOLBLACK™ Technology ?

- It is a patented technology which enhances dark color yarn's heat reflectivity.

How does it work?

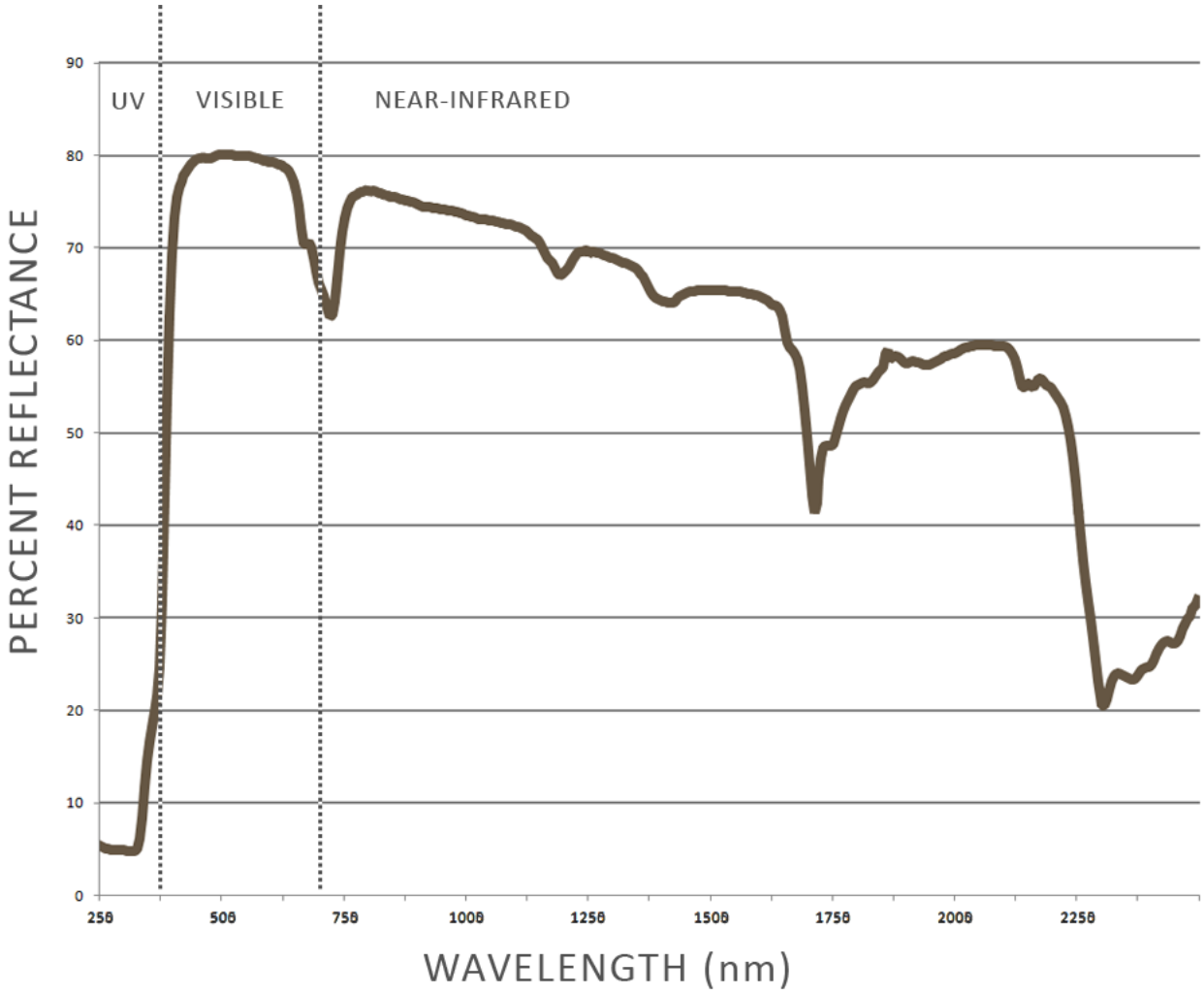
- Increases yarn's near-infrared reflection and lowers heat absorption.
- Uniform look around yarn.
- No back or front side.
  - Technology is in the PVC coating, allowing 100% of the KOOLBLACK™ Technology yarn to contain the benefits.
- Extended performance.
  - PVC Coated Enduris™ Glass Core Fiberglass
- Nothing to rub off.

Reflectance Comparison

Graph measures reflectance in UV, Visible and Infrared solar radiation.

Original White, as you would expect, reflects high amounts of Infrared, reducing heat, but also high amounts of visible light, causing glare.

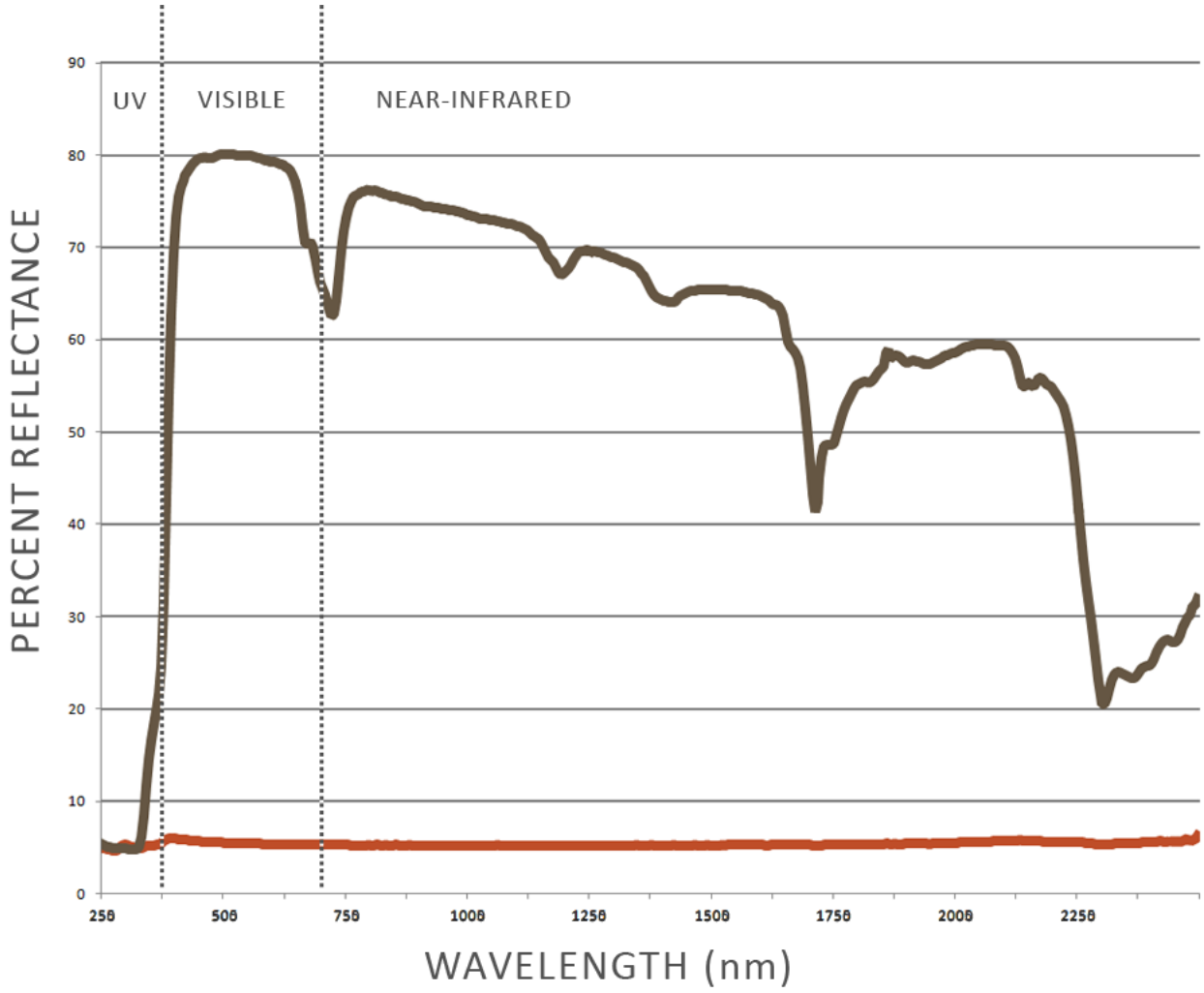
Original E Screen White



Reflectance Comparison

Black fabric will naturally absorb visible light, which allows crisp views to outside, and no glare inside the room.

Black also absorbs Infrared, causing the blind to generate heat that radiates into the room.



Original E Screen Black

Original E Screen White

Reflectance Comparison

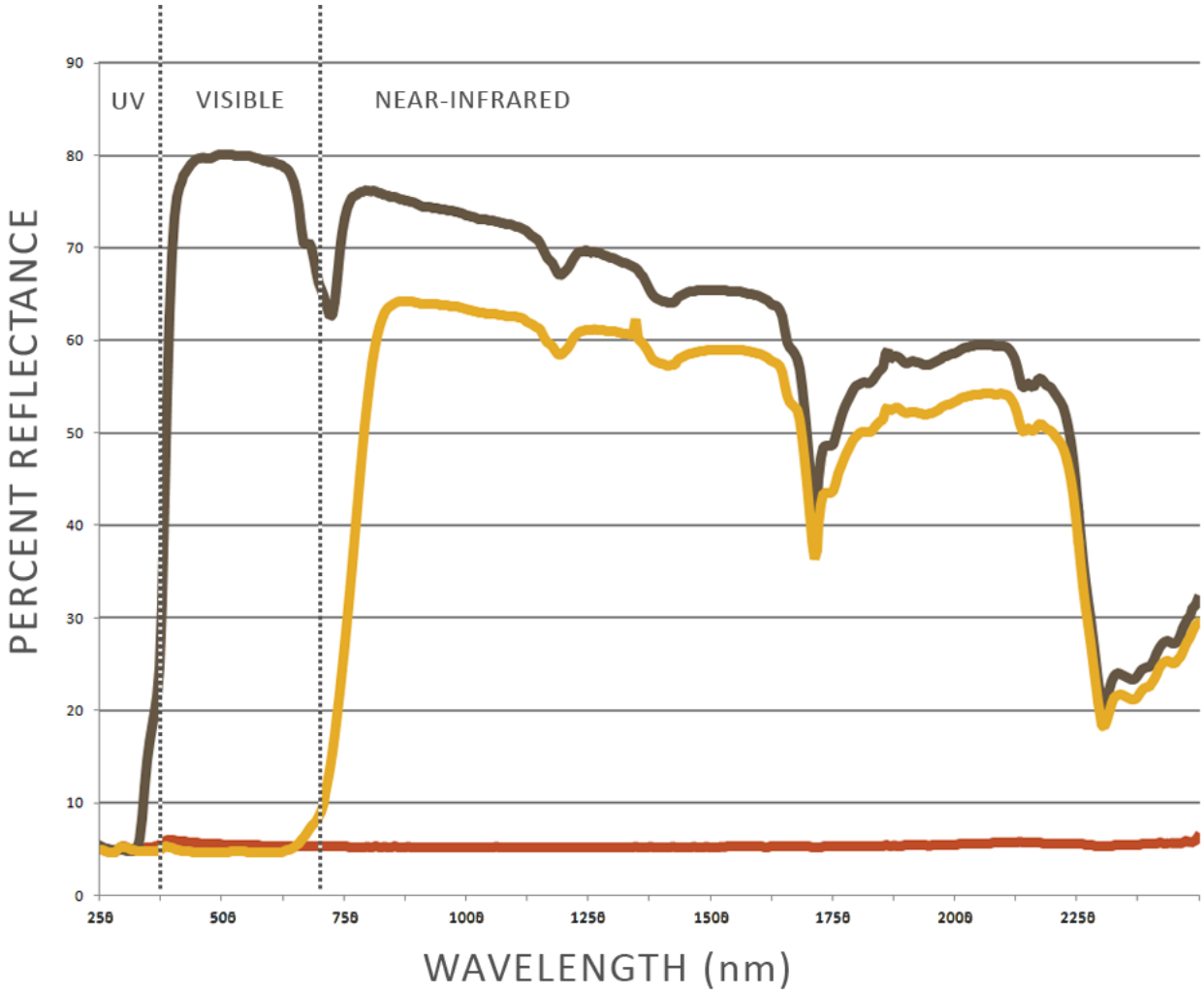
E Screen with KOOLBLACK™ Technology absorbs visible light, performing the same as original black, allowing crisp views to outside, and reducing glare inside.

However, it also reflects high amounts of Infrared, unnatural for a dark color, nearly imitating white, clearly demonstrating the KOOLBLACK™ Technology in this high performance fabric.

E Screen with KOOLBLACK™ Technology

Original E Screen Black

Original E Screen White



Reflectance Comparison

T Screen with KOOLBLACK™ Technology is a dual sided fabric and woven with original white facing outside and KOOLBLACK™ Technology facing inside.

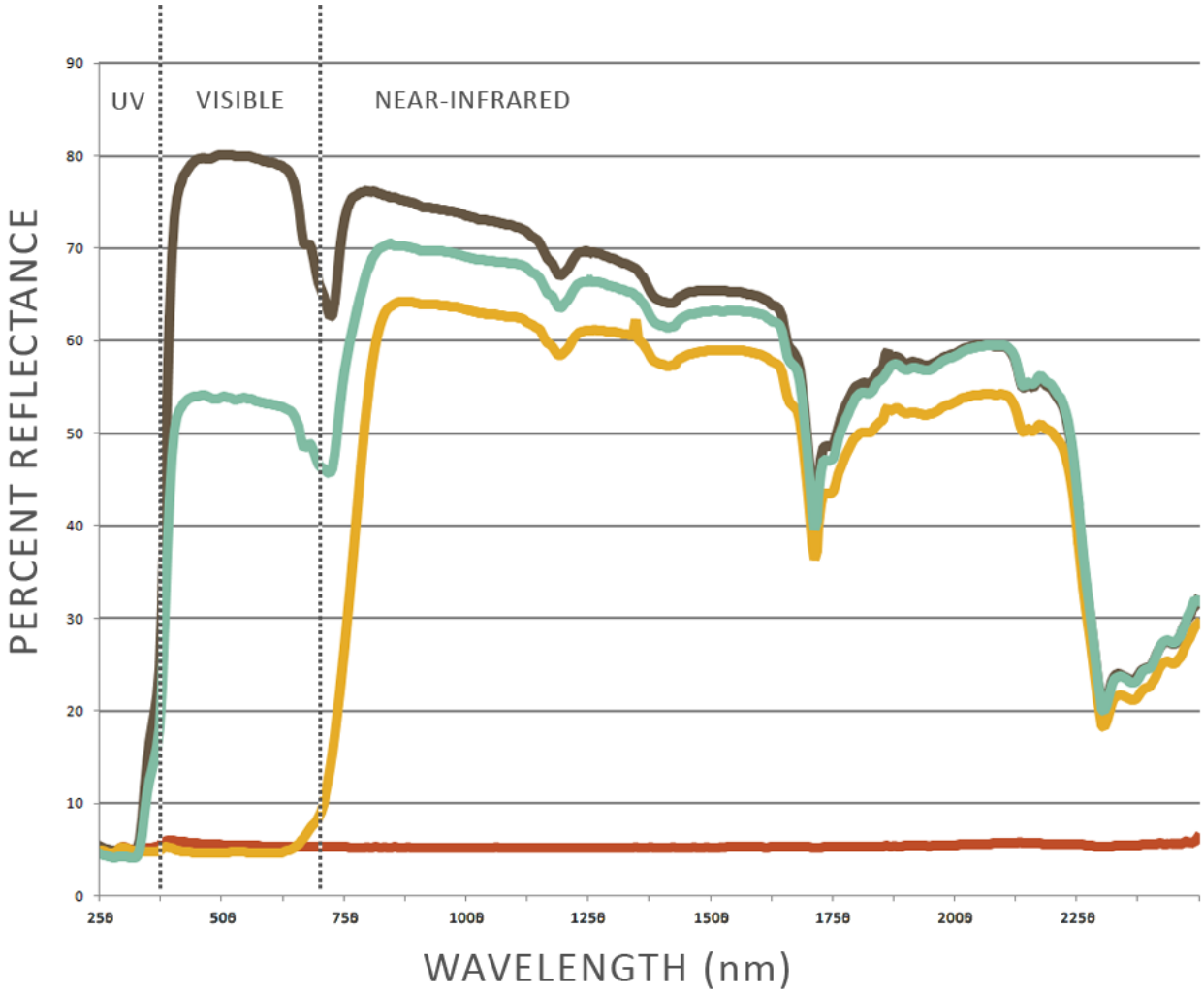
This allows high levels of Infrared reflectance, while black facing inside allows crisp views to outside, reducing glare.

T Screen with KOOLBLACK™ Technology

E Screen with KOOLBLACK™ Technology

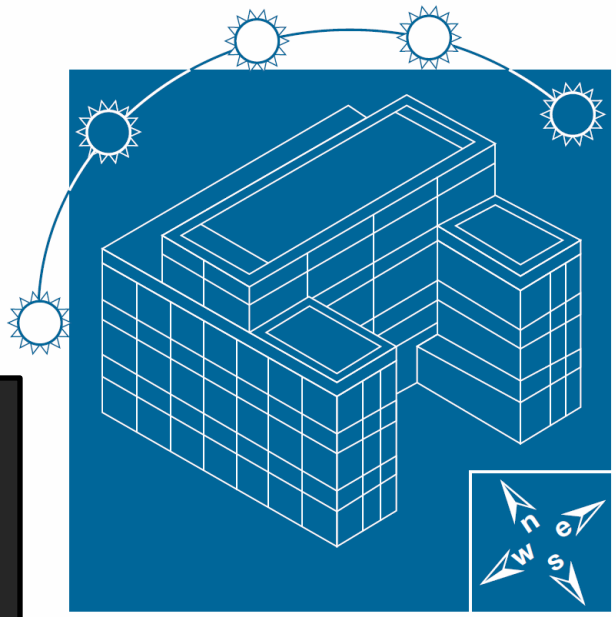
Original E Screen Black

Original E Screen White



Only silver backed fabrics reflect UV waves.
PVC Coated fabrics absorb UV, still preventing it from entering your room.

E Screen with KOOLBLACK™ Technology
Perfect Commercial Solution



EASTERN/WESTERN EXPORSURES:

E Screen with KOOLBLACK™ Technology

Improved Comfort and Energy Savings

NORTHERN/SOUTHERN EXPORSURES:

E Screen Original

Value Offering and Seamless Coordination

E Screen with KOOLBLACK™ Technology

2012 PIA "Product Innovation Award" presented by Architectural Products Magazine

Winner of the 2013 WCMA "Window Covering Manufacturing Award". Award category "Green" Products Energy Efficiency. Fabrics made with KOOLBLACK™ Technology **reduce heat gain by up to 20%.**

Organized in the 1950s as the Venetian Blind Council, the Window Covering Manufacturers Association (WCMA) represents the interests of the window covering industry manufacturers, fabricators and assemblers.

WCMA
WINDOW COVERING MANUFACTURERS ASSOCIATION

E Screen with KOOLBLACK™ Technology
Available Styles

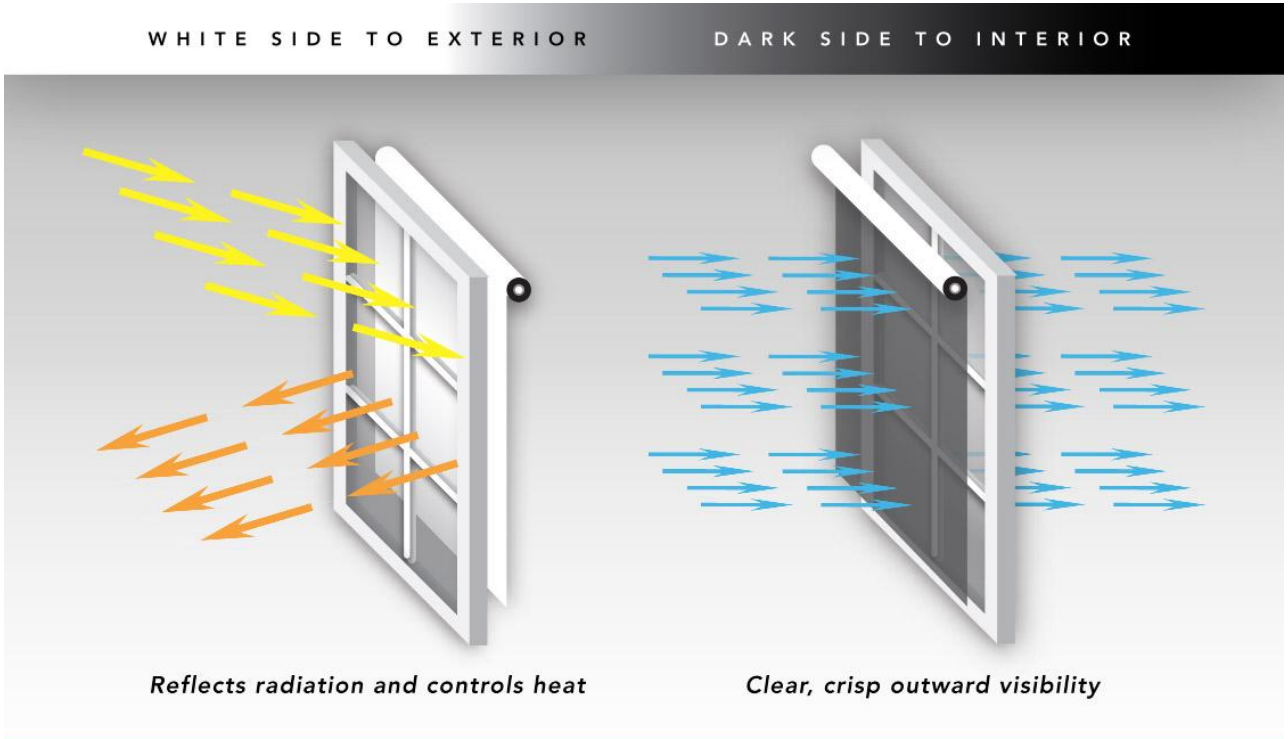
Construction:	2 x 2 Basket Weave
Openness Factors:	3%, 5%
Standard Widths:	98" (250cm), 122" (310cm)
Colors:	Charcoal / Charcoal Charcoal / Apricot Charcoal / Cocoa Cocoa / Apricot Cocoa / Cocoa
Ratings & Certifications:	FR Class: NFPA 701-10 FR Class: California 19 GREENGUARD Gold Certified ROHS Lead Free Certified Enduris Glass Core ASTM E2180 & G21 Bacteria and Fungal Resistance

T Screen with KOOLBLACK™ Technology

Dark to the inside for clear view and superior glare control.

White to the exterior for superior heat reflectivity.

T Screen with KOOLBLACK™ Technology



- Improved near-infrared reflection for enhanced reduction in heat gain
- Reflects up to 63% of all solar radiation
- High reflectivity reduces temperatures and cooling costs
- Provides the clean, crisp views of dark fabrics
- Blocks up to 93% of all visible light for visual comfort
- Maximum glare control for effective daylighting and comfortable spaces

T Screen with KOOLBLACK™ Technology

- Dual colored fabric.
- Combines the superior heat reflectivity of a white fabric with the glare control and crisp-view through of a dark fabric.
- Engineered with KOOLBLACK™ Technology for maximized heat reflective properties.
- KOOLBLACK™ Technology yarn enhances reflective performance of white side, supercharging the reflective properties.
- Both sides reflect heat – versatility of use.

T Screen with KOOLBLACK™ Technology
Available Styles

Construction:	2 x 2 Basket Weave
Openness Factors:	3%, 5%
Standard Widths:	98" (250cm), 122" (310cm)
Colors:	White / Grey White / Cocoa White / Charcoal White / Charcoal-Grey White / Charcoal-Cocoa
Ratings & Certifications:	FR Class: NFPA 701-10 FR Class: California 19 GREENGUARD Gold Certified ROHS Lead Free Certified Enduris Glass Core ASTM E2180 & G21 Bacteria and Fungal Resistance

Disclaimer & Notices

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