



SilverScreen

SilverScreen

**The innovation in solar
heat and light control**



INSOLROLL^{INC.}
WINDOW SHADING SYSTEMS



SilverScreen

Introducing
SilverScreen

*The innovation in
solar heat and
light control*





SilverScreen

Product description

What is it?

- SilverScreen is based on a 'common' screen fabric with intrinsic good view through properties.

How is it made?

- On this fabric a very thin aluminium layer is put on by vacuum metalising.

Why is it special?

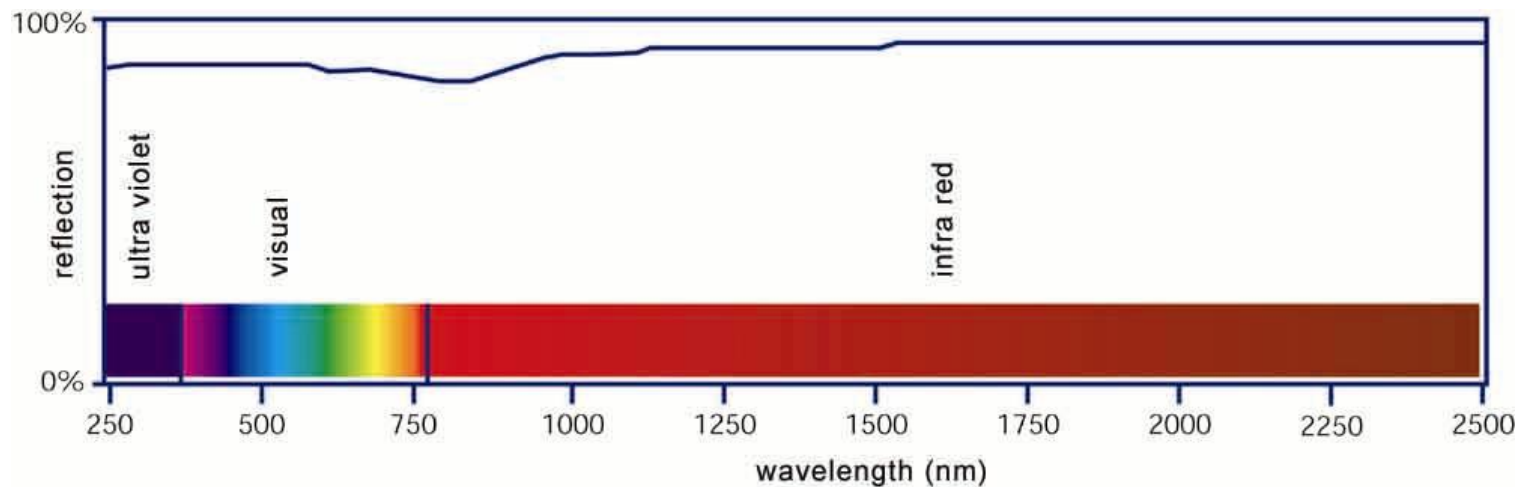
- This process keeps all pores open, enhances view through, lowers light transmission, and is highly reflective for solar radiation.



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Why a metal layer ?

Aluminium is highly reflective for solar radiation



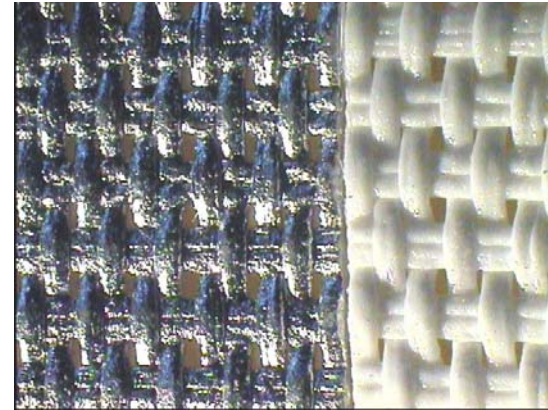
SilverScreen reflects about 75% of the solar radiation



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Visual effect of the metal layer

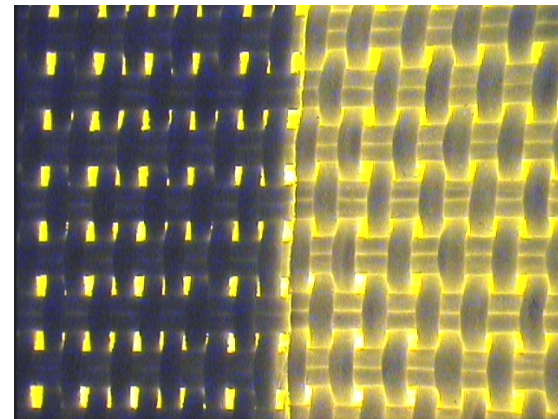
Microscopic picture



with metal

without metal

Visual light effects





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Key benefits of SilverScreen

SilverScreen offers an excellent combination

- **Glare Control**

- **View through**

- **Heat Control**



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- Glare Control

- View through

- Heat Control

Glare control: what does it mean?

- No disability glare
- No discomfort glare (or minimal)
- Limited luminance contrasts
- Light has a good colour rendering

Good Glare control results in increased productivity



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- Glare Control

- View through

- Heat Control

Glare control: benefits of SilverScreen?

- SilverScreen reduces light transmission strongly
- It reduces luminance contrasts in a room
- It prevents from disability glare
- Diminishes discomfort glare
- Colour rendering is excellent



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Visual comfort

Performance Indices:

- Light transmission of shading
- LT value
- Openness factor
- Ra (is Colour Rendering index)

LT value: the light transmission of glass and shading.

Openness factor: amount of specular light which goes through shading. Enables view though.

Ra: reflects how close the light is to daylight.

(Should be at least 80, but above 90 is very good.)

• Glare Control

• View through

• Heat Control



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Visual comfort

• Glare Control

• View through

• Heat Control

Critical points:

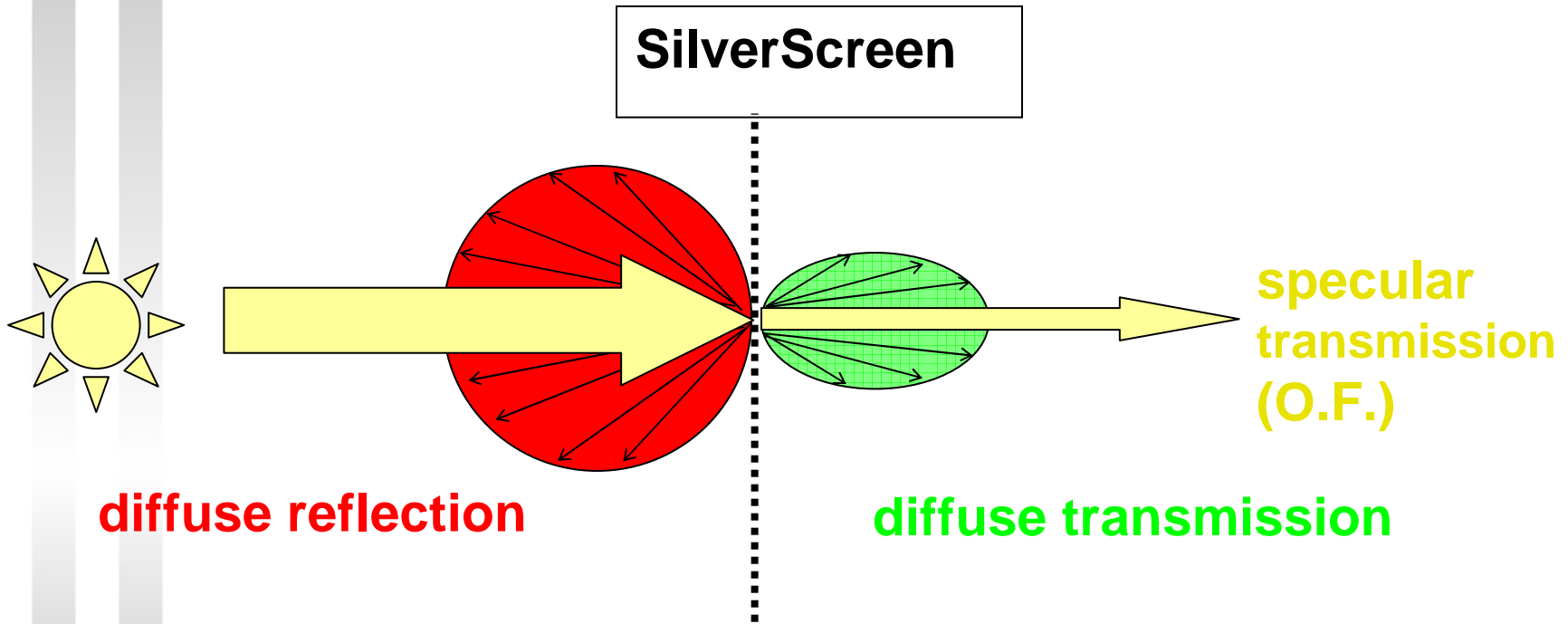
- When the Openness Factor is too high it will cause glare.
- When LT value is too high it will cause glare too.
- When Ra is below 80 it will have a negative impact on well being



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Glare control

- Glare Control
- View through
- Heat Control



diffuse reflection

diffuse transmission

specular transmission (O.F.)

**Light Transmission =
specular + diffuse transmission**



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- Glare Control

- **View through**

- Heat Control

View through: what does it mean?

- Maintaining a good contact to the outside world
- With less possible obstructions
- Can cause conflicts with glare control

Contact to the outside is very important for well being



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- Glare Control

- **View through**

- Heat Control

View through:

SilverScreen provides even in light colours:

- low light transmission
- good view through
- no disability glare





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View through

• Glare Control

• **View through**

• Heat Control

Performance indices:

- Openness Factor
- Light Transmission of textile

Light Transmission should be close to openness factor

For South façades Openness Factor should be 4% or less

Openness Factor SilverScreen is 4%



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• Glare Control

• View through

• **Heat Control**

**Heat control is a
good balance of:**

- Temperature
- Radiation
- Humidity
- Ventilation (fresh air)



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- Glare Control

- View through

- Heat Control

Heat control:

SilverScreen has a very positive effect, by

- Reducing Solar Heat Gain (g-value)
- Reducing radiation heat
- Keeping room temperature under control
- No temperature drops near windows



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Heat Control

• Glare Control

• View through

• Heat Control

Performance indices

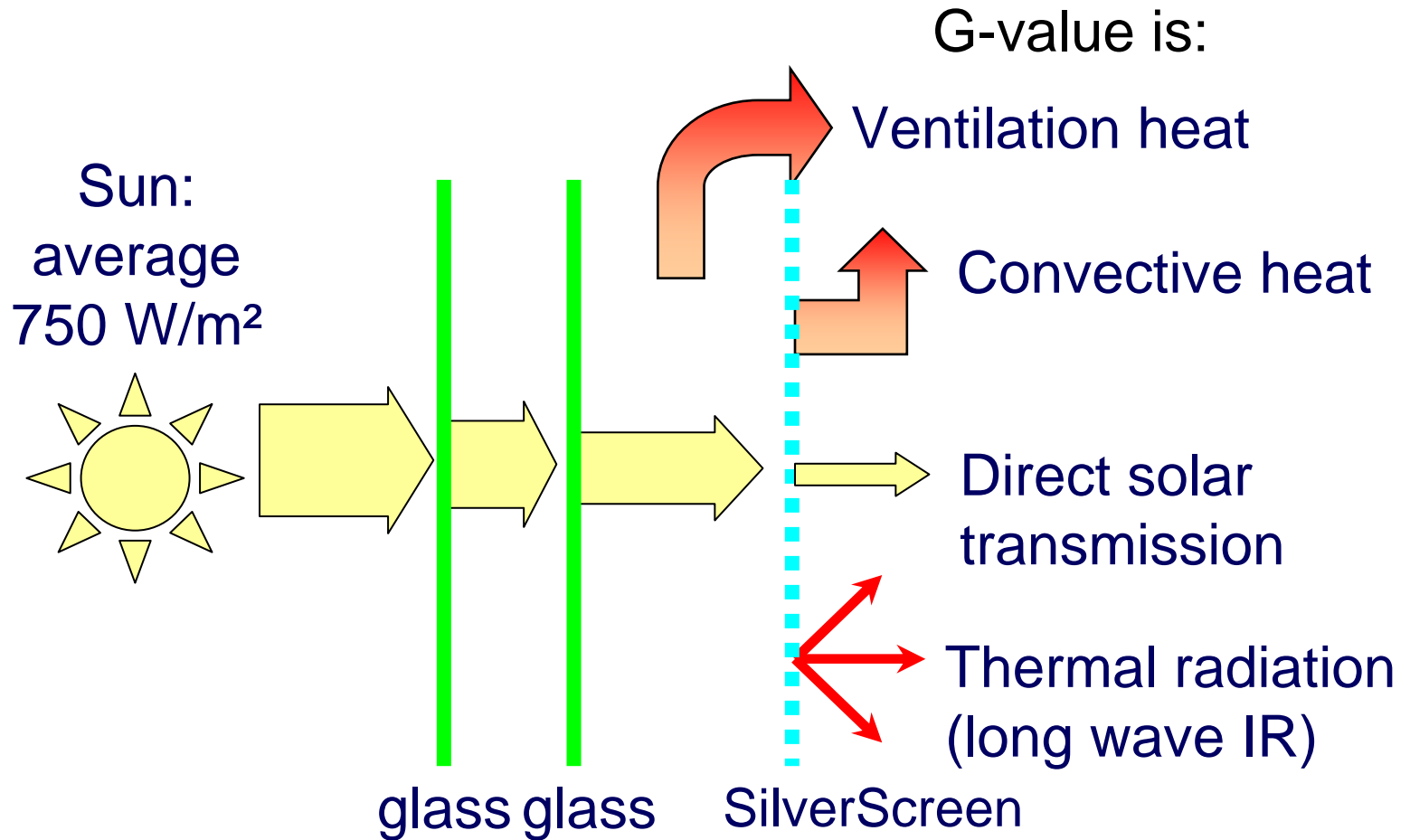
- g-value
- U-value
- g-Value is the Solar Heat Gain Coefficient and is based on the combination glass and shading. It reflects the portion solar energy which actually enters the interior. g-Value is important for cooling loads in Summer.
- U-value reflects the warmth insulation of glass and shading. U-value is in W/m^2K and is important for heating in Winter



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Heat Control

- Glare Control
- View through
- Heat Control

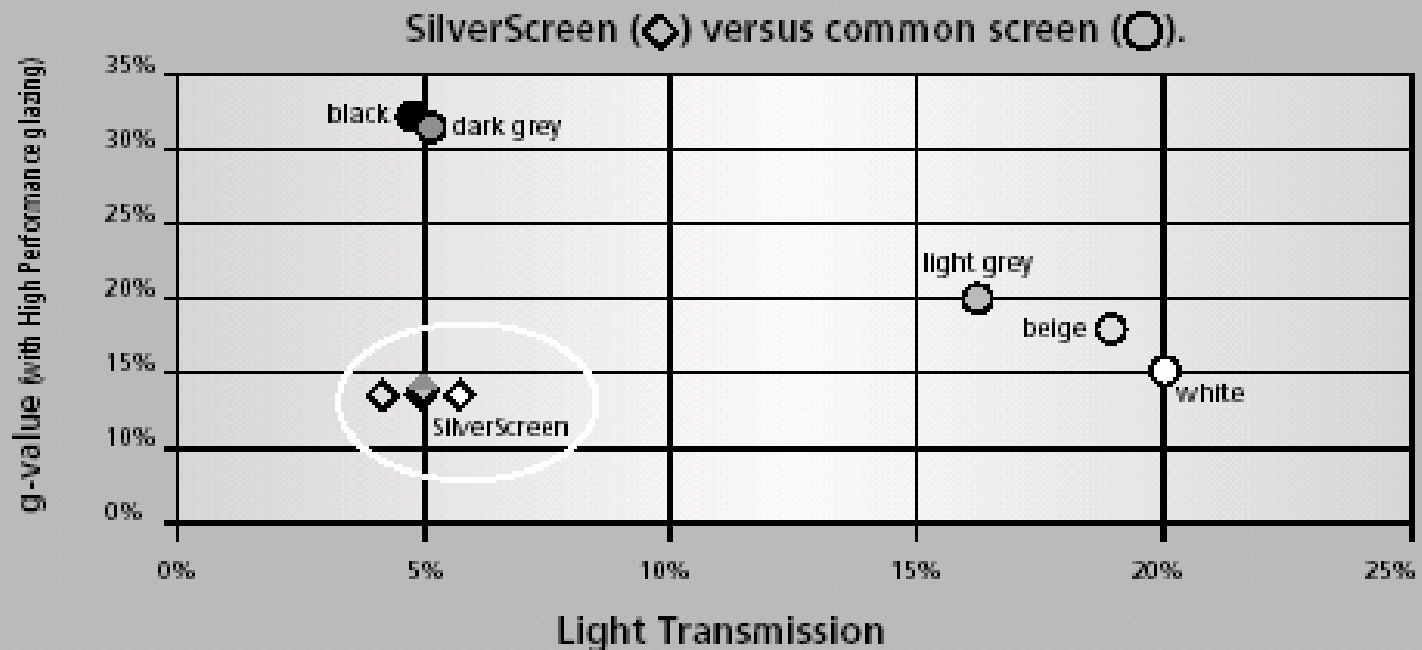




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Compared to common screens:
SilverScreen reduces light transmission
and heat gain, independent of the colour

SilverScreen performances





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Conclusion SilverScreen

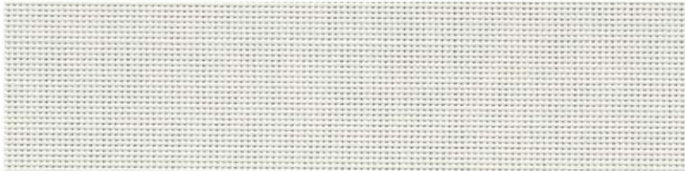
- Glare Control
- View through
- Heat Control




- Increased productivity
- Substantial energy savings



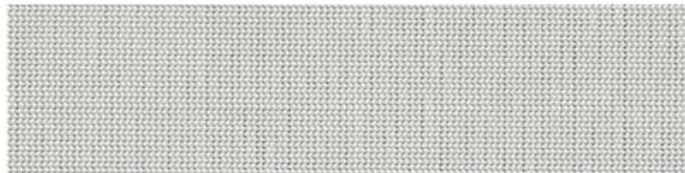
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White ED01 



Beige ED02 



Light grey ED03 



Dark grey EB02 



Black EB01 

More information
is available on:

www.SilverScreen-fabrics.com



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Specifications texts

Composition:	Glass fibre
Weight:	400 g/m ²
Thickness:	0,5 mm
Flame retardant:	NFP 92503 Classification M1
Openness factor:	4 %
Light transmission:	5 %
Transmission solar radiation:	5 %
Reflection solar radiation aluminium:	75 %
g-value with High Performance glazing:	14 %
U-value with High Performance glazing (W/m ² K):	0,7
LT-value with High Performance glazing:	4 %
Aluminium adhesion:	ISO 2409 classification 0
Colourfastness:	ISO105-B02 Metal side: 8
Environment:	Öko tex standard 100 Formaldehyde free

All figures given are subject to normal production tolerances.

Fabric measured is colour EB01 (black)