Automotive Window Film Selector Guide

VortexIR™

CERAMIC FILM SERIES

SolarGard® SAINT-GOBAIN

www.solargard.com

1/4” Clear Glass

% Visible light transmittance	89
% Total solar energy rejected	18
% Ultraviolet blocked (300 to 380 nanometers)	34
% Infrared energy rejected (IRER)	23
% Selective infrared rejection (SIRR)	22
% Glare reduction	N/A
% Visible light reflectance	9

SolarGard® SAINT-GOBAIN

VortexIR™ 70

Our new VortexIR™ Ceramic Film Series combines the power of timeless raw materials and nanotechnology. Ceramic nanoparticles create a deeper black that won't make your windows look like mirrors. But more than that, VortexIR premium technology absorbs energy from the sun instead of reflecting light and radio waves like other films on the market. For you, that means a cooler interior, more bars on your cell phone and a look that will last a lifetime.

% Visible light transmittance	71
% Visible light transmittance applied to auto glass	60
% Total solar energy rejected	40
% Total solar energy rejected applied to auto glass	50
% Ultraviolet blocked (300 to 380 nanometers)	>99
% Infrared energy rejected (IRER)	52
% Selective infrared rejection (SIRR)	60
% Glare reduction	20
% Visible light reflectance	8

SolarGard® SAINT-GOBAIN

VortexIR™ 55

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% Visible light transmittance	53
% Visible light transmittance applied to auto glass	45
% Total solar energy rejected	47
% Total solar energy rejected applied to auto glass	55
% Ultraviolet blocked (300 to 380 nanometers)	>99
% Infrared energy rejected (IRER)	56
% Selective infrared rejection (SIRR)	72
% Glare reduction	40
% Visible light reflectance	7

SolarGard® SAINT-GOBAIN

VortexIR™ 45

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% Visible light transmittance	46
% Visible light transmittance applied to auto glass	39
% Total solar energy rejected	49
% Total solar energy rejected applied to auto glass	56
% Ultraviolet blocked (300 to 380 nanometers)	>99
% Infrared energy rejected (IRER)	57
% Selective infrared rejection (SIRR)	72
% Glare reduction	48
% Visible light reflectance	6

SolarGard® SAINT-GOBAIN

VortexIR™ 35

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% Visible light transmittance	38
% Visible light transmittance applied to auto glass	32
% Total solar energy rejected	53
% Total solar energy rejected applied to auto glass	59
% Ultraviolet blocked (300 to 380 nanometers)	>99
% Infrared energy rejected (IRER)	60
% Selective infrared rejection (SIRR)	74
% Glare reduction	57
% Visible light reflectance	6

SolarGard® SAINT-GOBAIN

VortexIR™ 30

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% Visible light transmittance	30
% Visible light transmittance applied to auto glass	25
% Total solar energy rejected	55
% Total solar energy rejected applied to auto glass	60
% Ultraviolet blocked (300 to 380 nanometers)	>99
% Infrared energy rejected (IRER)	59
% Selective infrared rejection (SIRR)	78
% Glare reduction	67
% Visible light reflectance	6

SolarGard® SAINT-GOBAIN

VortexIR™ 25

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% Visible light transmittance	24
% Visible light transmittance applied to auto glass	20
% Total solar energy rejected	57
% Total solar energy rejected applied to auto glass	62
% Ultraviolet blocked (300 to 380 nanometers)	>99
% Infrared energy rejected (IRER)	61
% Selective infrared rejection (SIRR)	81
% Glare reduction	73
% Visible light reflectance	5

SolarGard® SAINT-GOBAIN

VortexIR™ 15

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% Visible light transmittance	17
% Visible light transmittance applied to auto glass	15
% Total solar energy rejected	60
% Total solar energy rejected applied to auto glass	63
% Ultraviolet blocked (300 to 380 nanometers)	>99
% Infrared energy rejected (IRER)	62
% Selective infrared rejection (SIRR)	82
% Glare reduction	80
% Visible light reflectance	5

SolarGard® SAINT-GOBAIN

VortexIR™ 5

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% Visible light transmittance	8
% Visible light transmittance applied to auto glass	7
% Total solar energy rejected	63
% Total solar energy rejected applied to auto glass	65
% Ultraviolet blocked (300 to 380 nanometers)	>99
% Infrared energy rejected (IRER)	63
% Selective infrared rejection (SIRR)	88
% Glare reduction	91
% Visible light reflectance	5

SolarGard® SAINT-GOBAIN

SOLAR ENERGY TECHNICAL DEFINITIONS

VISIBLE LIGHT TRANSMITTANCE (VLT)

The percent of total visible light that is transmitted through the window film/glass system. The lower the number, the less visible light transmitted.

TOTAL SOLAR ENERGY REJECTED (TSER)

The percent of total solar energy that is directly reflected and absorbed and radiated outwards. The higher the number, the more total solar energy rejected. Calculated as 1-SHGC (Solar Heat Gain Coefficient).

ULTRAVIOLET LIGHT BLOCKED

The percent of invisible light blocked between 300 nm and 380 nm. The higher the number, the more ultraviolet light blocked. This light is a primary cause of skin cancer, fading and discoloration of furnishings, and materials. Solar Gard window films block more than 99% of both UVA and UVB.

INFRARED ENERGY REJECTION (IRER)

The percent of infrared energy (780 nm to 2500 nm) that is directly reflected and absorbed and radiated outwards. Calculated as 1 – SHGC (780 nm to 2500 nm) using Lawrence Berkeley National Laboratory (LBNL) Window software and NFRC 200 solar spectrum from 780 nm to 2500 nm. The higher the number, the more infrared energy reflected and absorbed and released outwards. IRER is the endorsed calculation method of IWFA.

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SOLAR ENERGY TECHNICAL DEFINITIONS *(continued)*

SELECTIVE INFRARED REJECTION (SIRR)

Calculated as 1 - average unweighted transmittance from 780 nm to 2500 nm using ASTM E 903. The higher the number, the less infrared directly transmitted.

GLARE REDUCTION

The percent of glare that is reduced by window film/glass system. The higher the number, the more glare reduced.

VISIBLE LIGHT REFLECTANCE

The percent of total visible light that is reflected by the window film/glass system. The lower the number, the less visible light reflected.

SOLAR GARD® AUTOMOTIVE WINDOW FILMS

PERFORMANCE NOTES

Performance results were generated with LBNL Windows 7.6 applied to 1/4" (6mm) clear glass and have calculated and reported in accordance with NFRC standards. Solar Gard® is a participating member of AIMCAL and the IWFA.

Performance results based on film applied to a representative automotive glass with a base visible light transmission of 75%. Due to variations in glass performance, these values should not be used to comply with local tinting laws.

Performance results are subject to variations within industry standards and should be used for comparative purposes only. Important: Solar Gard is not responsible for automotive window film installation compliance with the laws of your state, or the laws of any other state where the vehicle may be utilized. You must therefore determine whether such window film is in compliance with any such laws. Do not install any window film product in violation of any law.

What matters most to you…

We're On It!

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