

PROSHIELD

AUTOMOTIVE FILM & PAINT PROTECTION FILM

WINDOW FILM

TECHNICAL CATALOG

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Solar Energy Technical Definitions

The following technical terms define the standard measurement criteria used to evaluate the performance of window films.

VLT — Visible Light Transmittance

The percent of total visible light (Wavelength: 380–780 nm) that passes through a glazing system.

VLR — Visible Light Reflectance

The percent of total visible light (Wavelength: 380–780 nm) that is reflected by a glazing system.

TSA — Total Solar Absorption

The percent of incident solar radiation that is absorbed by a glazing system.

TST — Total Solar Transmittance

The percent of incident solar radiation that directly passes through a glazing system.

TSR — Total Solar Reflectance

The percent of incident solar radiation that is reflected by a glazing system.

TSER — Total Solar Energy Rejection

The percent of total solar energy (heat) rejected by a glazing system. It equals the solar reflectance plus the part of solar absorption which is re-radiated outward.

UVR — Ultraviolet Radiation Rejection

The percent of total ultraviolet light (100–400 nm) that is prevented from passing through a glazing system.

IRR — Infrared Rejection

The percent of infrared radiation rejected by the film. Infrared wavelength: >780 nm.

SHGC — Solar Heat Gain Coefficient

A measure of solar heat admitted through the film. The lower the number, the better the solar shading performance.

SC — Shading Coefficient

The ratio of solar heat gain passing through a glazing system to the solar heat gain under the same conditions with clear, unshaded double-strength window glass. The lower the number, the better the shading.

** Technical data is representative and should be used for reference purposes only. It should not be used for specification purposes.*

Carbon Ceramic Series — CS Series

2-ply construction | Thickness: 1.5 mil | Warranty: 5 Years | UV Rejection: 99%

Carbon Ceramic — CS0550		Warranty: 5 Years
Characteristic	Value	
Structure	2ply	
Thickness	1.5 mil	
VLT — Visible Light Transmittance	% 5.3	
VLR — Visible Light Reflectance	% 6.19	
UVR — Ultraviolet Radiation Rejection	% 99	
IRR — Infrared Rejection	% 74.4	
TSER — Total Solar Energy Rejection	% 64.66	
SHGC — Solar Heat Gain Coefficient	0.41	

Carbon Ceramic — CS1550		Warranty: 5 Years
Characteristic	Value	
Structure	2ply	
Thickness	1.5 mil	
VLT — Visible Light Transmittance	% 12.6	
VLR — Visible Light Reflectance	% 7.99	
UVR — Ultraviolet Radiation Rejection	% 99	
IRR — Infrared Rejection	% 66.7	
TSER — Total Solar Energy Rejection	% 60.98	
SHGC — Solar Heat Gain Coefficient	0.45	

Carbon Ceramic — CS2050		Warranty: 5 Years
Characteristic	Value	
Structure	2ply	
Thickness	1.5 mil	
VLT — Visible Light Transmittance	% 16.8	
VLR — Visible Light Reflectance	% 7.42	
UVR — Ultraviolet Radiation Rejection	% 99	
IRR — Infrared Rejection	% 64.2	
TSER — Total Solar Energy Rejection	% 59.21	
SHGC — Solar Heat Gain Coefficient	0.46	

Carbon Ceramic — CS3550		Warranty: 5 Years
Characteristic	Value	
Structure	2ply	
Thickness	1.5 mil	
VLT — Visible Light Transmittance	% 37.3	
VLR — Visible Light Reflectance	% 7.15	
UVR — Ultraviolet Radiation Rejection	% 99	
IRR — Infrared Rejection	% 41.3	
TSER — Total Solar Energy Rejection	% 46.70	
SHGC — Solar Heat Gain Coefficient	0.57	

Carbon Ceramic — CS5050		Warranty: 5 Years
Characteristic	Value	
Structure	2ply	
Thickness	1.5 mil	
VLT — Visible Light Transmittance	% 48.5	
VLR — Visible Light Reflectance	% 7.81	
UVR — Ultraviolet Radiation Rejection	% 99	
IRR — Infrared Rejection	% 35.4	
TSER — Total Solar Energy Rejection	% 41.74	
SHGC — Solar Heat Gain Coefficient	0.62	

Nano Ceramic Series — NS Series

2-ply construction | Thickness: 1.5 mil | Warranty: 10 Years | UV Rejection: 99%+

Nano Ceramic — NS0580		Warranty: 10 Years
Characteristic	Value	
Structure	2ply	
Thickness	1.5 mil	
VLT — Visible Light Transmittance	% 5.69	
VLR — Visible Light Reflectance	% 6.49	
UVR — Ultraviolet Radiation Rejection	% 99	
IRR — Infrared Rejection	% 82.70	
TSER — Total Solar Energy Rejection	% 68.44	
SHGC — Solar Heat Gain Coefficient	0.43	

Nano Ceramic — NS1580		Warranty: 10 Years
Characteristic	Value	
Structure	2ply	
Thickness	1.5 mil	
VLT — Visible Light Transmittance	% 15.1	
VLR — Visible Light Reflectance	% 6.58	
UVR — Ultraviolet Radiation Rejection	% 99	
IRR — Infrared Rejection	% 97.1	
TSER — Total Solar Energy Rejection	% 69.91	
SHGC — Solar Heat Gain Coefficient	0.36	

Nano Ceramic — NS2080		Warranty: 10 Years
Characteristic	Value	
Structure	2ply	
Thickness	1.5 mil	
VLT — Visible Light Transmittance	% 18.8	
VLR — Visible Light Reflectance	% 6.7	
UVR — Ultraviolet Radiation Rejection	% 99	
IRR — Infrared Rejection	% 95.9	
TSER — Total Solar Energy Rejection	% 67.86	
SHGC — Solar Heat Gain Coefficient	0.38	

Nano Ceramic — NS3580		Warranty: 10 Years
Characteristic	Value	
Structure	2ply	
Thickness	1.5 mil	
VLT — Visible Light Transmittance	% 35.7	
VLR — Visible Light Reflectance	% 4.48	
UVR — Ultraviolet Radiation Rejection	% 99	
IRR — Infrared Rejection	% 95.3	
TSER — Total Solar Energy Rejection	% 61.56	
SHGC — Solar Heat Gain Coefficient	0.43	

Nano Ceramic — NS5080		Warranty: 10 Years
Characteristic	Value	
Structure	2ply	
Thickness	1.5 mil	
VLT — Visible Light Transmittance	% 48.70	
VLR — Visible Light Reflectance	% 4.43	
UVR — Ultraviolet Radiation Rejection	% 99.5	
IRR — Infrared Rejection	% 95.70	
TSER — Total Solar Energy Rejection	% 58.45	
SHGC — Solar Heat Gain Coefficient	0.53	

Nano Ceramic — NS7080		Warranty: 10 Years
Characteristic	Value	
Structure	2ply	
Thickness	1.5 mil	
VLT — Visible Light Transmittance	% 67.39	
VLR — Visible Light Reflectance	% 11.94	
UVR — Ultraviolet Radiation Rejection	% 99	
IRR — Infrared Rejection	% 91.2	
TSER — Total Solar Energy Rejection	% 48.46	
SHGC — Solar Heat Gain Coefficient	0.54	