**STEK Automotive** 

### Window Film Introduction



ICY Series

HP (High Performance)

**ACTION** Series

Nano-Carbon

**SMART** Series

Nano-Ceramic, Tungsten

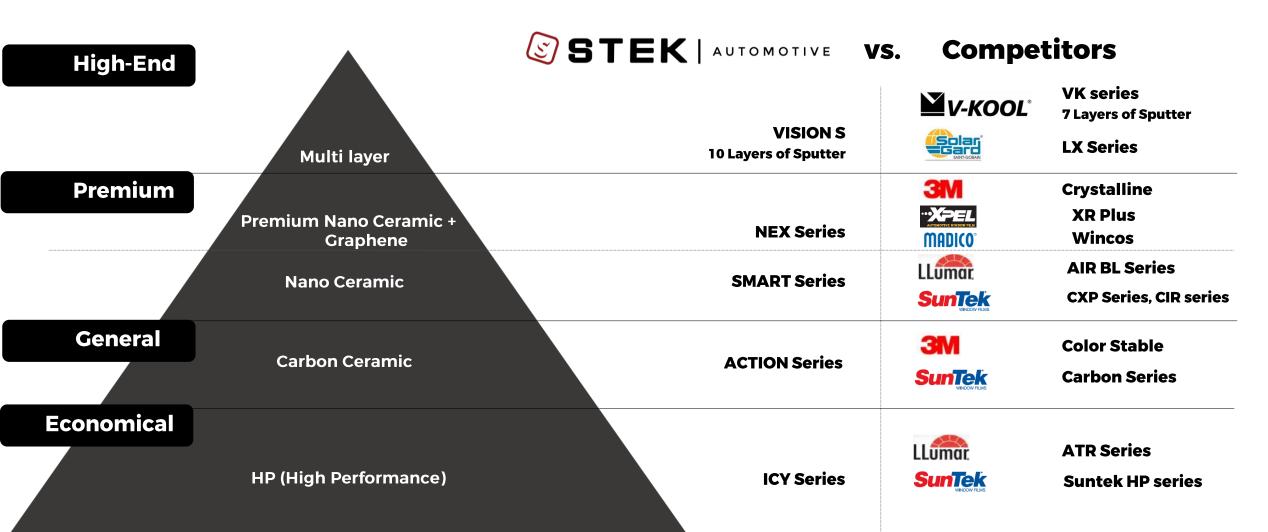
**NEX** Series

Nano-Ceramic, Tungsten, ATO, Graphene

VISION 70s

Multi-layer sputter

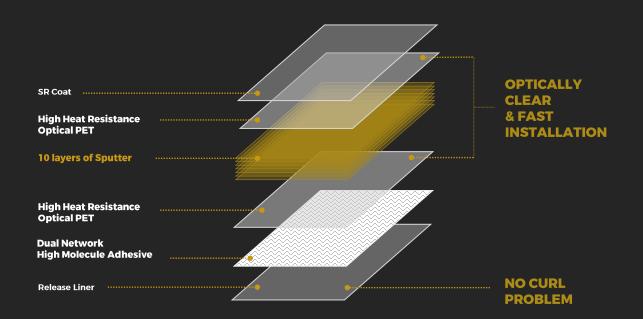
# OVERVIEW & COMPARISON



## VISION S

#### **High-end**

10 layers of Sputters



Our most technologically advanced window film, VISION 70S boasts 10 layers of premium sputter.

Its PET structure boasts outstanding heat-blocking properties, resulting in maximal comfort. With its robust, scratch-resistant coating, VISION 70S provides exceptional clarity for a luxurious drive.

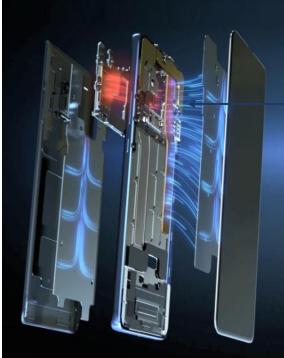


#### VISION

		70S
Visible Light Tra	ansmittance (VLT)	69%
Visible Light	Exterior	11%
Reflectance (VLR)	Interior	10%
	Transmittance	37%
Solar Energy	Reflectance	32%
	Absorbance	31%
IR Rejection	950 nm	89%
ik kejection	1400 nm	96%
UV Rej	jection	≥99%
Glare Re	eduction	26%
Total Solar Energ	y Rejected (TSER)	56%
Shading C	Coefficient	0.5

#### Performance of Solar Control with Graphene

Graphene film "cooling technology" is applied at smart phone battery for heat management purpose.



Smartphone Cooling system

Application:
Batteries, Transistors,
Computer chips,
Energy generation,
Touchscreens (LCD or
OLED display), Solar
Cells, etc.





#### **Heat Reduction** & Cooling Efficiency

NEX incorporates graphene as well as nano-ceramic particles—including tungsten & antimony tin oxide—in its proprietary structure. This allows it to both absorb heat and dramatically accelerate the rate of heat dissipation, keeping your vehicle consistently cool. With an IR rejection rate of up to 98% at 1400 nm, as well as a maximum TSER of 64%, NEX offers excellent cooling performance, reducing air conditioner load and fuel consumption.



#### Glare Reduction

Glare negatively affects driving visibility, and the NEX series is able to reduce up to 92% of this glare. This ensures top-notch clarity, leading to less eye strain and a more focused drive



#### **Privacy**

The NEX series blocks up to 95% of visible light in your vehicle, dramatically increasing passenger privacy.



#### **Graphene**

Graphene is composed of a single, ultra-dense layer of carbon atoms bonded in a honeycomb-shaped formation. It is the strongest, lightest, and thinnest material in existence, with superb flexibility and durability. Due to its outstanding thermal conductivitv—which is over ten times higher than both aluminum and copper—graphene forces heat to quickly dissipate to the film's exterior, allowing the nanoparticles within NEX to absorb the infrared rays as efficiently as possible. This advanced technology is also used in smartphone batteries, athletic wear, solar cells, and countless other products.



#### **UV Protection**

Ultraviolet light from the sun can cause dangerous health conditions, including skin cancer. The NEX series blocks 99% of these harmful UV rays, providing long-term protection. It also preserves electronics, fabric, leather, and plastic, preventing fading and discoloration of your car interior.

Ceramic window films typically contain carbon, tungsten, and ATO (antimony tin oxide), as well as ITO (indium tin oxide) on occasion. These high-end films use these nanoparticles to achieve superior heat rejection and optical clarity.

> Along with the nanoparticles used in ceramic window films, graphene—an extremely efficient thermal conductor—is added to increase the rate of heat dissipation.

Our series of premium nano-ceramic window films, **NEX** provides crystal clarity as well as top-notch UV and glare reduction.

Its fourth-generation design features advanced graphene cooling technology, resulting in exceptional heat rejection performance. Thanks to its lack of metal layers, NEX also never interferes with radio and satellite signals, guaranteeing full connectivity for all your devices.

NEX NEX	NEX	NEX	NEX	NEX
05 15	35	<b>45</b>	70	<b>85</b>



		05	15	35	45	70	85
Visible Light Tran	nsmittance (VLT)	5%	14%	35%	46%	69%	85%
Visible Light	Exterior	5%	5%	6%	7%	8%	8%
Reflectance (VLR)	Interior	5%	5%	6%	6%	8%	8%
	Transmittance	7%	12%	19%	26%	34%	63%
Solar Energy	Reflectance	5%	5%	5%	6%	6%	7%
	Absorbance	88%	83%	76%	69%	60%	30%
ID Dejection	950 nm	95%	94%	92%	92%	93%	26%
IR Rejection —	1400 nm	96%	95%	96%	97%	97%	84%
UV Reje	ction	≥99%	≥99%	≥99%	≥99%	≥99%	≥99%
Glare Red	luction	92%	83%	63%	50%	27%	5%
Total Solar Energy	Rejected (TSER)	64%	61%	56%	52%	46%	27%
Shading Co	efficient	0.41	0.45	0.51	0.56	0.63	0.85

## SMART Series

#### **Premium**

Tungsten - Nano Ceramic  $WO_3$  Blue color and excellent thermal conductivity. Used as a 950nm infrared blocking material.





### Heat Reduction & Cooling Efficiency

SMART incorporates nano-carbon particles, including tungsten and antimony tin oxide, in its patented structure, allowing it to absorb heat and prevent it from reaching your vehicle interior. With an IR rejection rate of up to 91% and a TSER rate of up to 54%, the cooling efficiency is significantly improved, reducing air conditioner load and fuel consumption.



#### **UV Protection**

Ultraviolet light from the sun can cause dangerous health conditions, including skin cancer. The SMART series blocks 99% of these harmful UV rays, providing long-term protection. It also preserves electronics, fabric, leather, and plastic, preventing fading and discoloration of your car interior.



#### **Glare Reduction**

Glare negatively affects driving visibility, and the SMART series is able to reduce up to 92% of this glare. This ensures top-notch clarity, leading to less eye strain and a more focused drive



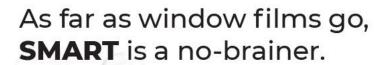
#### **Privacy**

The SMART series blocks up to 95% of visible light in your vehicle, dramatically increasing passenger privacy.





Ceramic window films typically contain **carbon, tungsten, and ATO (antimony tin oxide)**, as well as ITO (indium tin oxide) on occasion. These high-end films use these nanoparticles to achieve superior heat rejection and optical clarity.



Our optical-grade PET films contain nano-ceramic particles dispersed throughout their base material, resulting in outstanding temperature maintenance. Our advanced series also blocks 99% of UV rays and up to 95% of visible interior light, effectively keeping unwanted things—from sun damage to prying eyes—out.

SMART SMART  O5 15	SMART	SMART	SMART
	<b>35</b>	<b>45</b>	70



		05	15	35	45	70
Visible Light Tran	smittance (VLT)	5%	12%	33%	42%	72%
Visible Light	Exterior	5%	5%	6%	6%	8%
Reflectance (VLR)	Interior	5%	6%	6%	6%	7%
2	Transmittance	14%	22%	30%	34%	37%
Solar Energy	Reflectance	5%	5%	6%	5%	6%
	Absorbance	81%	73%	64%	61%	57%
IR Rejection	950 nm	78%	73%	76%	75%	84%
ik kejection	1400 nm	77%	80%	78%	78%	90%
UV Rejec	ction	≥99%	≥99%	≥99%	≥99%	≥99%
Glare Red	uction	92%	84%	63%	53%	24%
Total Solar Energy I	Rejected (TSER)	59%	54%	49%	46%	44%
Shading Co	efficient	0.46	0.52	0.58	0.62	0.65

## ACTION Series

#### General

#### **Carbon Window Film**

Carbon window films are resistant to fading and do not contain any dyes. Nano-carbon films use the smallest carbon particles available for the best clarity and haze reduction

SR Coat

High Heat Resistance Optical PET

**NANO CARBON** 

High Elasticity Poly Urea Adhesive

High Heat Resistance Optical PET

Release Liner

Dual Network ....... High Molecule Adhesive OPTICALLY CLEAR & FAST INSTALLATION

DAMAGE RECOVERY

NO CURL PROBLEM



### Heat Reduction & Cooling Efficiency

ACTION incorporates nano-carbon particles in its patented structure, allowing it to absorb heat and prevent it from reaching your vehicle interior. With an IR rejection rate of up to 70% and a TSER rate of up to 55%, the cooling efficiency is significantly improved, reducing air conditioner load and fuel consumption.



#### **Glare Reduction**

Glare negatively affects driving visibility, and the ACTION series is able to reduce up to 93% of this glare. This ensures top-notch clarity, leading to less eye strain and a more focused drive.



#### **UV Protection**

Ultraviolet light from the sun can cause dangerous health conditions, including skin cancer. The ACTION series blocks 99% of these harmful UV rays, providing long-term protection. It also preserves electronics, fabric, leather, and plastic, preventing fading and discoloration of your car interior.



#### **Privacy**

The ACTION series blocks up to 95% of visible light in your vehicle, dramatically increasing passenger privacy.





**Carbon window films** are resistant to fading and do not contain any dyes.

Nano-carbon films use the smallest carbon particles available for the best clarity and haze reduction.

### In terms of protection, **ACTION** never stops.

Our premium nano-carbon window films boast a 99% UV rejection rate, providing unparalleled heat rejection and virtually eliminating fading. Plus, thanks to its metal-free structure, ACTION also guarantees complete functionality for your GPS, cell phone, and other electronic devices—allowing you to stay connected on the go.

ACTION	ACTION	ACTION	ACTION		
05	15	20	35	50	



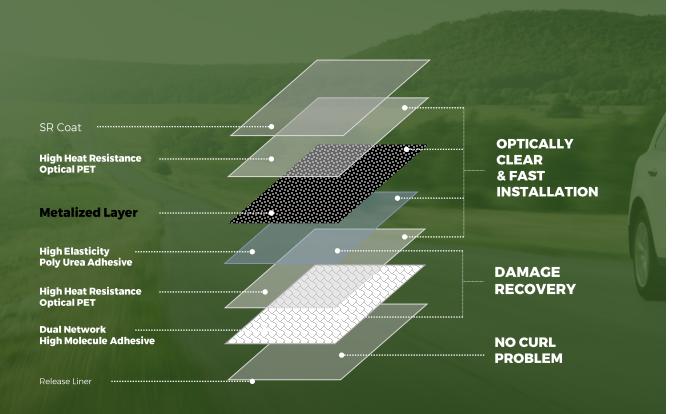
		05	15	20	35	50	80
Visible Light Tra	nsmittance (VLT)	6%	14%	20%	36%	49%	79%
Visible Light	Exterior	5%	5%	5%	6%	6%	8%
Reflectance (VLR)	Interior	6%	6%	5%	6%	7%	8%
	Transmittance	22%	30%	36%	47%	55%	58%
Solar Energy	Reflectance	5%	5%	5%	6%	7%	7%
	Absorbance	73%	65%	59%	47%	38%	35%
IR Rejection	950 nm	68%	57%	50%	39%	30%	37%
ik kejection	1400 nm	57%	46%	40%	31%	23%	65%
UV Rej	ection	≥99%	≥99%	≥99%	≥99%	≥99%	≥99%
Glare Re	duction	93%	84%	2	65%	50%	24%
Total Solar Energy	Rejected (TSER)	54%	49%	1%	38%	32%	32%
Shading C	oefficient	0.51	0.57		0.7	0.76	0.78

## ICY Series

#### **Economical**

### **High-Performance Window Film**

High-performance window films are a hybrid of dyed material and usually aluminum. These films are fairly reflective and provide a moderate level of heat rejection





### Heat Reduction & Cooling Efficiency

ICY is a metallized, dyed film that reflects the light that is primarily responsible for the heat you feel while you drive. The metal layer of the film reflects Infrared Light (IR), ultimately reducing the heat that enters your vehicle. ICY features an IR rejection rate of up to 40% at 1400 nm and a Total Solar Energy Rejection (TSER) rate of up to 44%. This enhances the performance in cooling efficiency by reducing air conditioner load and fuel consumption.



#### **UV Protection**

Ultraviolet light from the sun can cause dangerous health conditions, including skin cancer. The ICY series blocks 99% of these harmful UV rays, providing long-term protection. It also preserves electronics, fabric, leather, and plastic, preventing fading and discoloration of your car interior.



#### **Privacy**

The ICY series blocks up to 95% of visible light in your vehicle, dramatically increasing passenger privacy.



#### **Glare Reduction**

Glare negatively affects driving visibility, and ICY series is able to reduce up to 94% of this glare. This ensures top-notch clarity, leading to less eye strain and a more focused drive.





**High-performance window films** are a hybrid of dyed material and usually aluminum. These films are fairly reflective and provide a moderate level of heat rejection.

## Meet **ICY**, our series of window films with excellent heat and glare reduction properties.

Combined with effective UV protection, ICY reduces fading of your car's interior while keeping you cool. Plus, by blocking up to 95% of visible light within your vehicle, ICY guards your privacy wherever you go.





		05	15	20	35	50
Visible Light Tran	smittance (VLT)	5%	13%	20%	36%	50%
Visible Light	Exterior	5%	6%	5%	6%	7%
Reflectance (VLR)	Interior	5%	5%	5%	6%	7%
	Transmittance	37%	39%	43%	49%	53%
Solar Energy	Reflectance	6%	6%	6%	6%	7%
	Absorbance	57%	55%	51%	45%	40%
IR Rejection —	950 nm	42%	38%	39%	39%	39%
ik kejection	1400 nm	42%	37%	39%	36%	36%
UV Reje	ction	≥99%	≥99%	≥99%	≥99%	≥99%
Glare Red	uction	94%	86%	81%	62%	52%
Total Solar Energy	Rejected (TSER)	44%	43%	40%	36%	34%
Shading Co	efficient	0.62	0.63	0.66	0.64	0.75