

# AUTOMOTIVE FILM SPECIFICATIONS

Film Mounted on 1/4" Clear Glass



All of Johnson Automotive Window Films reject 99% or more of harmful UV rays.

FILM TYPE	VISIBLE LIGHT TRANSMISSION	SOLAR ENERGY REJECTION	VISIBLE LIGHT REFLECTANCE	SHADING COEFFICIENT	SOLAR HEAT GAIN COEFFICIENT	GLARE REDUCTION	FADING REDUCTION	IRER REJECTION	SIRR REJECTION
CLEAR GLASS	88%	18%	8%	0.94	0.82	0%	N/A	N/A	N/A

780-2500 nm

**InsulatIR<sup>®</sup>**  
SUPERIOR INFRARED REJECTION

<b>IR 85</b>	82%	31%	9%	0.78	0.69	7%	52%	43%	60%
<b>IR 80</b>	76%	42%	8%	0.67	0.58	14%	56%	55%	80%
<b>IR 70</b>	66%	50%	7%	0.56	0.50	25%	61%	64%	93%
<b>IR 45</b>	45%	49%	6%	0.59	0.51	48%	66%	56%	80%
<b>IR 35</b>	32%	50%	6%	0.58	0.50	63%	69%	55%	79%
<b>IR 20</b>	17%	54%	5%	0.52	0.46	81%	74%	55%	79%
<b>IR 05</b>	6%	56%	5%	0.50	0.44	93%	77%	56%	80%

**Marathon<sup>®</sup>**  
HIGH-PERFORMANCE FILMS

<b>MN 45</b>	46%	42%	8%	0.67	0.58	48%	64%	41%	54%
<b>MN 35</b>	37%	43%	7%	0.66	0.57	58%	66%	40%	53%
<b>MN 30</b>	30%	45%	6%	0.64	0.55	66%	68%	39%	52%
<b>MN 20</b>	20%	49%	5%	0.58	0.50	77%	72%	38%	51%
<b>MN 15</b>	12%	58%	5%	0.52	0.49	86%	76%	49%	64%
<b>MN 05</b>	5%	60%	6%	0.47	0.40	94%	78%	50%	65%

**Renegade<sup>®</sup>**  
COLOR STABLE, NON-REFLECTIVE FILMS

<b>RN 50</b>	49%	31%	6%	0.79	0.69	44%	60%	22%	28%
<b>RN 43</b>	42%	34%	6%	0.76	0.66	52%	63%	22%	28%
<b>RN 35</b>	36%	35%	5%	0.75	0.65	59%	64%	22%	28%
<b>RN 30</b>	31%	37%	5%	0.73	0.63	65%	66%	22%	28%
<b>RN 20</b>	21%	39%	5%	0.71	0.61	76%	69%	22%	28%
<b>RN 05</b>	6%	43%	5%	0.66	0.57	93%	74%	22%	28%

**Ray Guard<sup>®</sup>**  
NON-REFLECTIVE WINDOW FILMS

<b>CH 35</b>	35%	37%	6%	0.73	0.63	60%	65%	22%	28%
<b>CH 20</b>	21%	40%	5%	0.69	0.60	76%	69%	22%	28%
<b>CH 15</b>	15%	43%	5%	0.66	0.57	83%	72%	22%	28%
<b>CH 05</b>	7%	45%	5%	0.64	0.55	92%	74%	22%	28%

**PlexShade<sup>®</sup>**  
PLASTIC APPLICATION FILMS

<b>PX 43</b>	42%	34%	6%	0.76	0.66	52%	N/A	22%	28%
<b>PX 20</b>	21%	39%	5%	0.71	0.61	76%	N/A	22%	28%
<b>PX 10</b>	10%	41%	5%	0.68	0.59	87%	N/A	20%	26%

**UV Clear<sup>®</sup>**  
TRANSPARENT UV PROTECTION

<b>UVCLR</b>	88%	18%	9%	0.94	0.81	N/A	45%	21%	27%
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The Skin Cancer Foundation recommends Johnson Window Films products as effective UV protectants.

All Johnson Window Films are protected by CST™ scratch resistant hardcoat.

Laws governing automotive window tinting are strictly enforced. Please stay within legal boundaries.

Solar specifications represent film mounted to 1/4" (6mm) clear glass.

Tests, equipment and methods according to ASTM, ANSI and NFRC standards. Calculations performed using Lawrence Berkeley Lab's Optics/Window 6. Values expressed hereof are typical and provided for comparative purposes only.

Only the user is aware of the conditions in which the product will be used. It is the user's responsibility to determine if the product is suitable for use.



**Johnson Window Films**  
Manufactured by Johnson Laminating & Coating, Inc.  
An ISO 9001:2015 Certified Company  
[www.johnsonwindowfilms.com](http://www.johnsonwindowfilms.com)



### VISIBLE LIGHT TRANSMISSION

Visible Light Transmission is the percentage of solar visible light (daylight) that passes through a glazing system.

### SOLAR ENERGY REJECTED

Solar Energy Rejected is the percentage of total solar energy (heat) that is rejected away from a glazing system. This equals solar heat reflectance plus the amount of solar heat absorbed that is then re-radiated outwards.

### VISIBLE LIGHT REFLECTANCE

This is the percentage of reflectivity (mirror effect) that occurs on the glazing system. The higher the value, the more reflective the exterior, providing a more mirror-like appearance.

### SHADING COEFFICIENT

Shading Coefficient is the ratio of solar heat gain passing through a glazing system to the solar heat gain that occurs under the same conditions if the window were made of clear, un-shaded double strength window glass (lower SC equals better solar shading performance).

### SOLAR HEAT GAIN COEFFICIENT

Solar Heat Gain Coefficient is the percentage of total solar heat that enters a glazing system. This includes heat directly transmitted as well as heat that is absorbed by the glass and then transmitted inwards (lower SHGC means less heat transfer from the exterior to the interior).

### GLARE REDUCTION

The ratio of the difference in visible transmission of the glass before and after installing film to the visible transmission of the glass with no film. It is expressed as a percentage and is determined by the respective visible transmission values of the glass with and without film.

### FADING REDUCTION

Combined fading percentages are determined by applying rejection percentages on each cause of fading to determine the overall reduction in fade that a specific product can return.

Using the IWFA fading explanation found at [www.iwfa.com](http://www.iwfa.com)

### INFRARED ENERGY REJECTION (IRER)

The measurement of heat experienced from solar infrared radiation (780 - 2,500 nm), which includes both re-radiated and absorbed energy.

### SELECTIVE IR REJECTION (SIRR)

Solar infrared radiation (780 - 2,500 nm) not directly transmitted through the glass.

