# 3M AUTOMOTIVE WINDOW FILM SPEC SHEET 

Crystalline (CR) • Ceramic IR (IR) • Color Stable (CS) • Obsidian (OB)

* films and percentages in bold are the best for that tint level *


## Total Solar Energy Rejected (TSER)

The percentage of total solar energy rejected by filmed glass. The higher this value, the less solar heat is transmitted.

| CR90 | CR70 | CR60 | CR50 | CR40 |  |  |  | CR20 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 34\% | 50\% | 53\% | 56\% | 60\% |  |  |  | 62\% |  |  |
|  | IR70 |  | IR50 |  | IR35 | IR30 | IR25 |  | IR15 | IR5 |
|  | 41\% |  | 47\% |  | 52\% | 55\% | 57\% |  | 59\% | 63\% |
|  |  |  | CS50 |  | CS35 |  |  | CS20 |  | CS5 |
|  |  |  | 35\% |  | 40\% |  |  | 51\% |  | 57\% |
|  | OB70 |  | OB50 | OB40 | OB35 | OB30 | OB25 |  | OB15 | OB5 |
|  | 23\% |  | 28\% | 31\% | 33\% | 35\% | 38\% |  | 40\% | 44\% |

## Infrared Rejected (IRR)

The percentage of solar infrared energy rejection over the wavelength range from 900-1,000 nm. Infrared rays are primarily responsible for the heat you feel when driving.

| CR90 | CR70 | CR60 | CR50 | CR40 |  |  |  | CR20 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 90\% | 97\% | 97\% | 97\% | 97\% |  |  |  | 97\% |  |  |
|  | IR70 |  | IR50 |  | IR35 | IR30 | IR25 |  | IR15 | IR5 |
|  | 78\% |  | 83\% |  | 85\% | 88\% | 90\% |  | 90\% | 95\% |
|  |  |  | CS50 |  | CS35 |  |  | CS20 |  | CS5 |
|  |  |  | 49\% |  | 54\% |  |  | 68\% |  | 77\% |

## Infrared Energy Rejection (IRER)

The percent of solar infrared energy rejection over the wavelength range from 780-2,500 nm. IRER takes into account the transmitted and absorbed IR energy that will be reradiated into a car.

| CR90 | CR70 | CR60 | CR50 | CR40 |  |  | CR20 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $59 \%$ | $68 \%$ | $68 \%$ | $68 \%$ | $69 \%$ |  |  | $66 \%$ |  |  |
|  | IR70 |  | IR50 |  | IR35 | IR30 | IR25 |  |  |
|  | $58 \%$ |  | $60 \%$ |  | $61 \%$ | $62 \%$ | $63 \%$ | IR15 |  |

## Ultraviolet Rejection

The percentage of ultraviolet (UV) light that is rejected by the filmed glass. UV light contributed to sunburn and other harmful skin conditions and to the fading and deterioration of fabrics and leather.

## ALL FILMS HAVE 99\% UV REJECTION

## Glare Reduction

The percentage by which visible light is reduced by the addition of film.

| CR90 | CR70 | CR60 | CR50 | CR40 |  |  |  | CR20 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3\% | 22\% | 32\% | 32\% | 55\% |  |  |  | 77\% |  |  |
|  | IR70 |  | IR50 |  | IR35 | IR30 | IR25 |  | IR15 | IR5 |
|  | 12\% |  | 32\% |  | 49\% | 57\% | 65\% |  | 78\% | 93\% |
|  |  |  | CS50 |  | CS35 |  |  | CS20 |  | CS5 |
|  |  |  | 42\% |  | 56\% |  |  | 79\% |  | 90\% |
|  | OB70 |  | OB50 | OB40 | OB35 | OB30 | OB25 |  | OB15 | OB5 |
|  | 12\% |  | 30\% | 39\% | 49\% | 56\% | 69\% |  | 79\% | 91\% |

