



2009/2010 Tax Credit for Window Film – FAQs

What is the history of the window film tax credit?

The federal tax credit for energy-efficient home improvements was established by the Energy Policy Act of 2005. After expiring December 31, 2007, the credit was extended and expanded by The Energy Improvement and Extension Act of 2008 (H.R. 1424: Div. B, Sec. 302) and The American Recovery and Reinvestment Act of 2009 (H.R. 1: Div. B, Sec. 1121). The credit now applies to eligible equipment purchased between January 1, 2009, and December 31, 2010. To view a copy of Internal Revenue Code **26 USC § 25C** you can access the following link:

<http://www.dsireusa.org/documents/Incentives/US43F.htm>

How much is the tax credit?

Residential homeowners can receive a tax credit equal to 30% of the solar control film purchase price (not including installation costs) up to a maximum total credit of \$1500 for qualifying film installations. A maximum lifetime cumulative credit of \$1500 per taxpayer applies to all qualified home improvements completed in 2009 through 2010.

Which customers will qualify for the tax credit?

According to Internal Revenue Code 26 USC § 25C , customers that are taxpayers and installing the film in or on a dwelling unit located in the United States and owned and used by the taxpayer as the taxpayer's principle residence will qualify. The original use of the film must commence with the taxpayer and the film must reasonably be expected to remain in use for at least 5 years.

Which Solamatrix films qualify for the tax credit?

In general, Solamatrix window films with good heat-rejecting properties are likely to qualify for the tax credit, although fewer films qualify on simpler, less-efficient window systems. In addition, the energy-saving requirements become more stringent in the central and northern parts of the country which also limits the number of qualifying films. In order to determine which films qualify on different window systems and in different parts of the country, please refer to the Solamatrix Manufacturer's Certificate located at www.solamatrix.com.

What exactly is a tax credit?

A tax credit directly reduces an individual's income tax, unlike a deduction, which reduces the amount of income subject to tax. The credit then directly increases the tax refund or decreases the amount the individual must pay.

How does the consumer obtain the credit?

The consumer must complete IRS form 5695 and submit the form with their 2009 or 2010 Income Tax Return by April 15 of the following year. Forms are downloadable at www.energystar.gov along with a list of other available energy efficiency tax credits. The consumer must maintain copies of the dealer invoice and manufacturer's certification statement for your records.

Solamatrix Manufacturer's Certificate can be obtained at www.solamatrix.com



How does window film qualify under this Code?

Window film is considered insulation material or a system which is specifically and primarily designed to reduce the heat loss or gain of a dwelling unit when installed in or on such dwelling unit and meets the prescriptive criteria for such material or system established by the 2009 International Energy Conservation Code, as such Code (including supplements) is in effect on the date of the enactment of the American Recovery and Reinvestment Act of 2009 (ARRA).

What criteria from the 2009 International Energy Conservation Code (2009 IECC) are relevant to the consumer's compliance to tax credit guidelines?

Table 402.1.1 in the 2009 IECC entitled "Insulation and Fenestration Requirement by Component" outlines the specific guidelines for residential building fenestration U-factor and glazed fenestration SHGC. These criteria (as defined by the IECC) are based on the climate zone in which the film is installed (reference the Solamatrix Manufacturer's Certificate at www.solamatrix.com). In order for the tax credit requirements to be satisfied, the "system" of a particular solar control window film applied on a particular type of window must result in a finished window system which meets or exceeds both the U-factor and SHGC requirements of the building code for the particular climate zone where installed.

What specifically describes a window "system"?

A system exists when the characteristics of two or more components must be combined in order to achieve a given result. In the case of window film application, it is the combination of the inherent insulating effect of the window (U-factor) combined with the solar control of the film (SHGC) which brings a particular glazing system into compliance with the ARRA. Window film does not materially add to the U-factor of a glazing system, this is dominated by the particular type of window employed. It is this inherent U-factor performance of the specific window type which is responsible for restricting:

- o Single pane window/film systems to zone 1 only
- o Double pane window film systems to zones 1-3 only

Since U-factor is mainly an energy conservation factor in cold weather (heating dominated) regions of the country, only systems which incorporate U-factor suppression technology (like low-E glass, multiple-glazings, inert gas fill) will meet the stringent residential energy efficiency standards of zones 4-8.

How are U-factors and SHGC for various window systems calculated?

The basic optical performance properties of our Solamatrix window films on 3mm glass (clear and tinted) are analytically determined in our laboratory according to industry standards. The data is then imported into two industry-recognized software programs developed by the Lawrence Berkeley National Laboratory. These programs allow the user to simulate the performance of more sophisticated glazing configurations.

- o **Optics5** for the calculating optical properties of all coated and uncoated glazings
- o **WINDOW 5.2** for calculating total window thermal performance indices (i.e. U-values, solar heat gain coefficients, shading coefficients, and visible transmittances). It has the ability to analyze products made from any combination



of glazing layers, gas layers, frames, spacers, and dividers under any environmental conditions and at any tilt. Algorithms for the calculation of total fenestration product U-values and Solar Heat Gain Coefficient are consistent with ASHRAE SPC142, ISO15099, and the National Fenestration Rating Council. For more information on the software and Lawrence Berkley National Laboratory follow the link:

<http://windows.lbl.gov/software/window/window.html>

For an informative overview on the effects of glazing type on U-factor, SHGC and VT along with examples of simulated whole window properties based on framing material composition, the Efficient Windows Collaborative website is an excellent source:

http://www.efficientwindows.org/glazing_.cfm?id=1

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