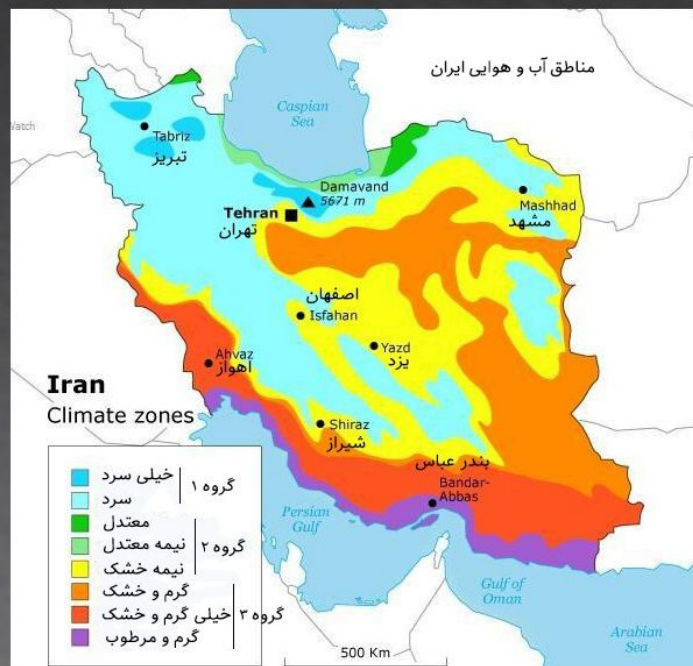


Iran is a country that is classified as a hot and dry country. But in some parts of Iran, the climate is cold and temperate. In most countries, according to the climatic conditions of different regions, the categories of heat transfer coefficient (bold) | U Value], solar heat absorption coefficient **SHGC** and the amount of light transmission (bold) | VT] or [(bold) | Light Transmission] is defined for windows and glass and their sum, but unfortunately there is no such definition in Iran. This article tries to perform this category according to the necessity of explaining these principles and based on the interpretation of modern standards.



1. Cold areas (group one)

In this group, due to the need to conserve energy inside the building and prevent its loss in winter, as well as the maximum absorption of solar radiation energy, the heat transfer coefficient of the total window and glass should be between 1.9 - 2.3 w / (m2.k). Also, the coefficient of heat absorption of the sun's (SHGC) glass should be considered to be about 0.2 to 0.5. Refer to Table 1 to select the appropriate glass.

2. Moderate areas (group two)

In this group, due to the fact that the temperature difference between inside and outside the building is not high on many days of the year, the total heat transfer coefficient of the window and glass should be between 2.4 - 2.8 w / (m2.k). In these areas, the use of natural daylight is a top priority, and the amount of light passing through the glass, **VT** or **Light Transmission** should be considered to be about 0.2 to 0.5. Refer to Table 1 to select the appropriate glass.

3. Tropical and dry areas (group three)

In this group, due to the intense sunlight and the resulting heat, the shade of the windows and the use of a canopy (canopy) at the top or next to the windows will be more important than other variables. In these climates, the total heat transfer coefficient of the window and glass between 2.9 - 3.2 w / (m2.k) is appropriate. In these areas, preventing direct sunlight from entering the building is a higher priority, and the use of light colored glass with a light transmittance of glass, **VT** or **Light Transmission** is about 0.60 to 0.50. It is suitable. Refer to Table 1 to select the appropriate glass.

جدول انتخاب شیشه				
نوع شیشه	تعداد لایه	ضریب جذب گرمای نور خورشید SHGC	میزان عبور نور VT	ضریب انتخاب شیشه LSG
فلوت ساده ۶ میلیمتر	۱	0.818	0.8836	1.08
فلوت ساده ۶ میلیمتر	۲	0.705	0.786	1.11
دودی ۶ میلیمتر	۲	0.47	0.401	0.85
برنز ۶ میلیمتر	۲	0.515	0.466	0.90
سبز ۶ میلیمتر	۲	0.391	0.579	1.48
آبی ۶ میلیمتر	۲	0.462	0.514	1.11
Low-E ساده ۶ میلیمتر	۲	0.521	0.616	1.18

- **LSG** is a factor equal to **VT / SHGC** which shows the acceptable combination of these two factors.
- The choice of glass with **LSG** will not be lower than a correct choice.

References :

- Lawrence Berkeley National Laboratory - Windows 7-7
- NFRC windows energy rating
- NAFS (North American Fenestration Standard)
- ASHRAE 189.1-2011. Standard for the Design of High-Performance Green Buildings

