

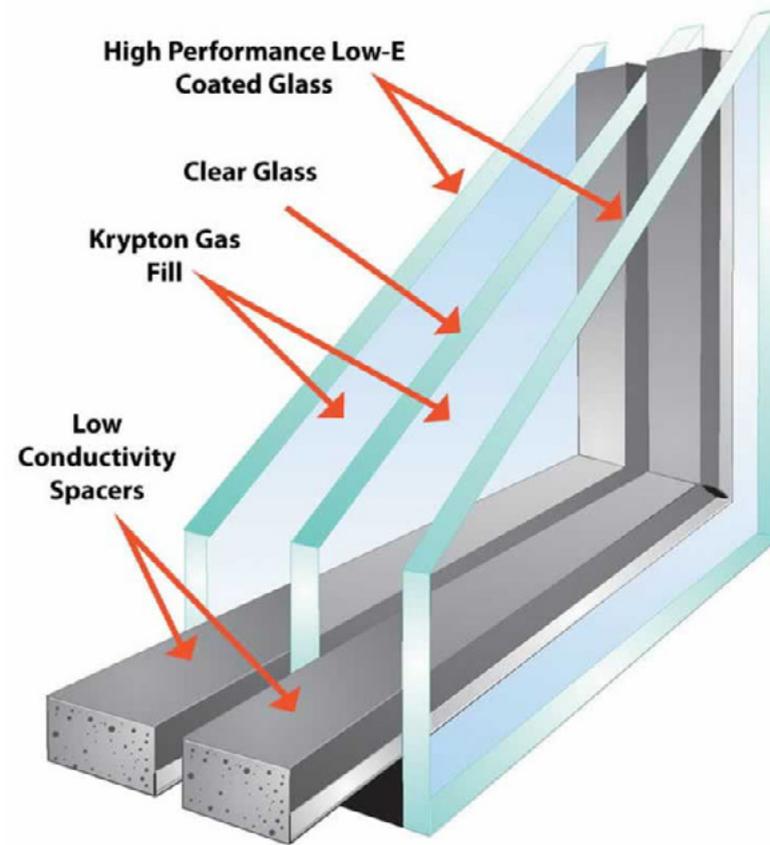


High-performance windows are critical for reducing the loss of heat and cold through a building's envelope. The Washington State Energy Code requires opaque windows to have a thermal rating of U-0.34 (fixed) and U-0.36 (operable). The lower the U-value, the better it performs for insulating.

Typical double-pane windows can perform up to approximately U-0.28.

The triple pane windows used in the Mount Vernon Library Commons, along with Low-E coatings and Argon gas, achieve approximate U-values of between U-0.16 and U-0.19. This is roughly 2 times better than Code!

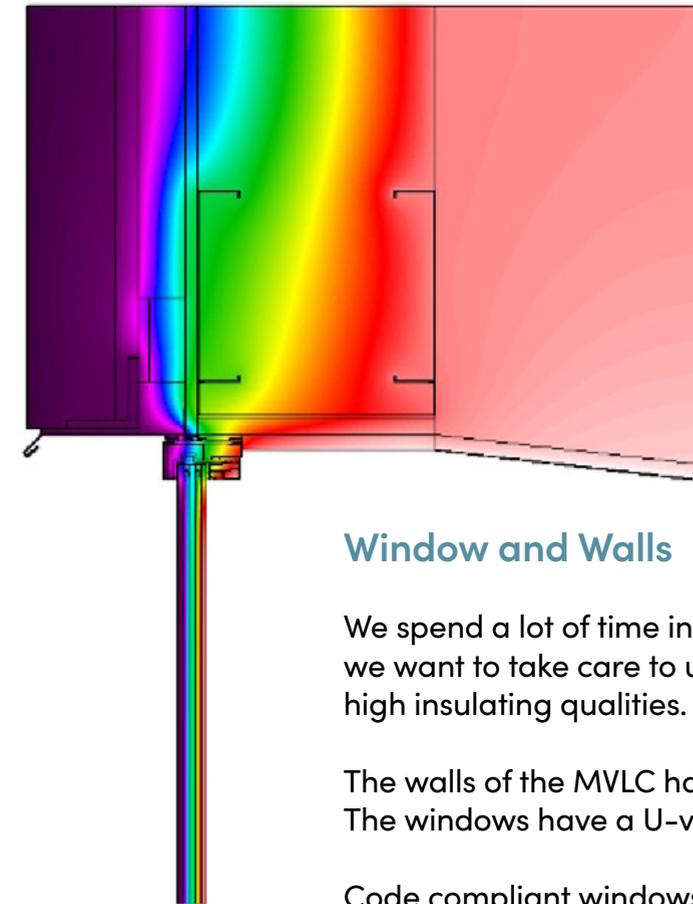
HIGH PERFORMANCE WINDOWS



Interesting fact about Krypton Gas

The MVLC windows were specified to have Krypton gas fill for superior thermal performance. Unfortunately, most of the world's Krypton is processed in Ukraine, and due to the conflict there, Krypton supplies were cut off to window manufacturers. The next best option is Argon, so that is what the MVLC windows use between the glass panes.

Both Krypton and Argon are a non-toxic, dense type of gas that helps slow and decrease the transfer of temperatures from one side of the glass to another, increasing the window's energy efficiency.



Window and Walls

We spend a lot of time insulating our building's walls, so we want to take care to use windows that have equally high insulating qualities.

The walls of the MVLC have an insulating value of R-46.6
The windows have a U-value of 0.19, or R-5.2.

Code compliant windows are R-2.9.

Figure 15 Model 7 (Infrared Image)

