

7 tips to boost your knowledge of Low-e glass (2020)



Good doors and windows will adopt excellent glass. Nowadays [Low-e glass](#) has become a beautiful landscape in applications such as doors and windows due to its energy-saving and superiority of other functions. So, what are the magical effects of installing Low e glass on doors and windows? Let's have a look.

1. Features of Low-e glass:

- High infrared reflectivity, can directly reflect far infrared heat radiation.
- The emissivity is low, less likely to absorb external energy.

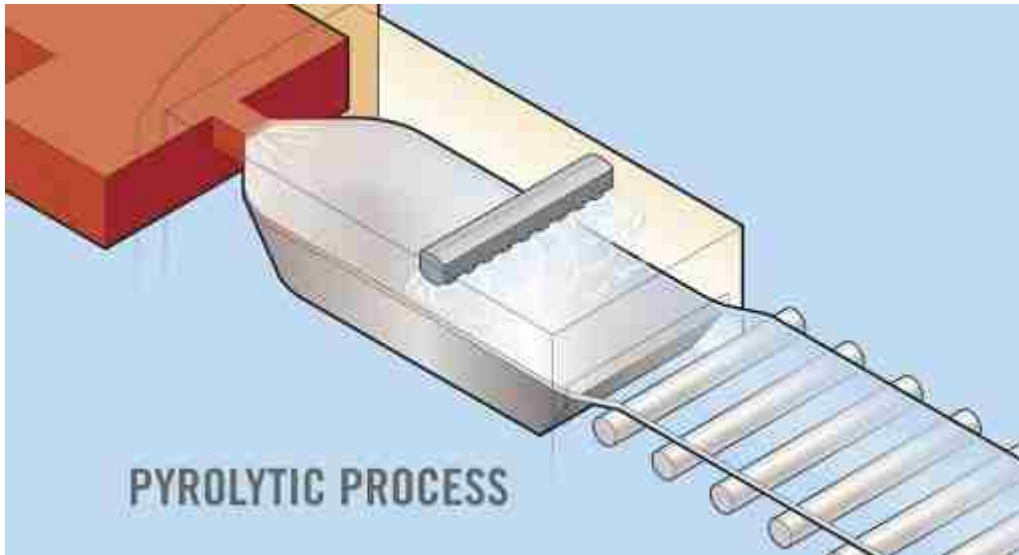
□The shading coefficient Sc has a wide range, and the penetration of solar energy can be controlled according to different requirements of the needs of different regions.

2. The Low-e glass can reflect heat characteristics

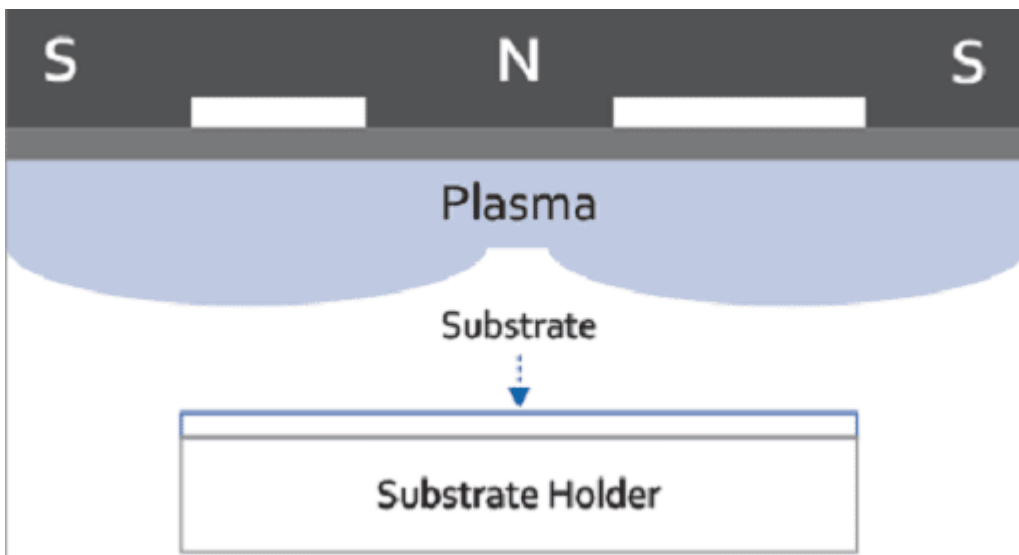
The Low e glass contains a silver layer, which can reflect more than 98% of the far-infrared heat radiation, thus directly reflecting heat like a mirror reflecting light. The shading coefficient Sc of low e glass can range from 0.15 to 0.8, which means the direct solar radiation energy entering the room can be adjusted according to needs.

3. Coating process of Low-e glass

There are two main types: online coating, vacuum magnetic sputtering coating (also called offline coating). Online coated glass is manufactured on a float glass production line. Online low e glass has a single variety of colors, less powerful heat reflectivity, but with low manufacturing cost. The variety of offline low e glass is rich and colorful, with excellent heat reflection performance and obvious energy-saving characteristics. The disadvantage is that it cannot be processed by hot bending.



[CVD coating method](#)



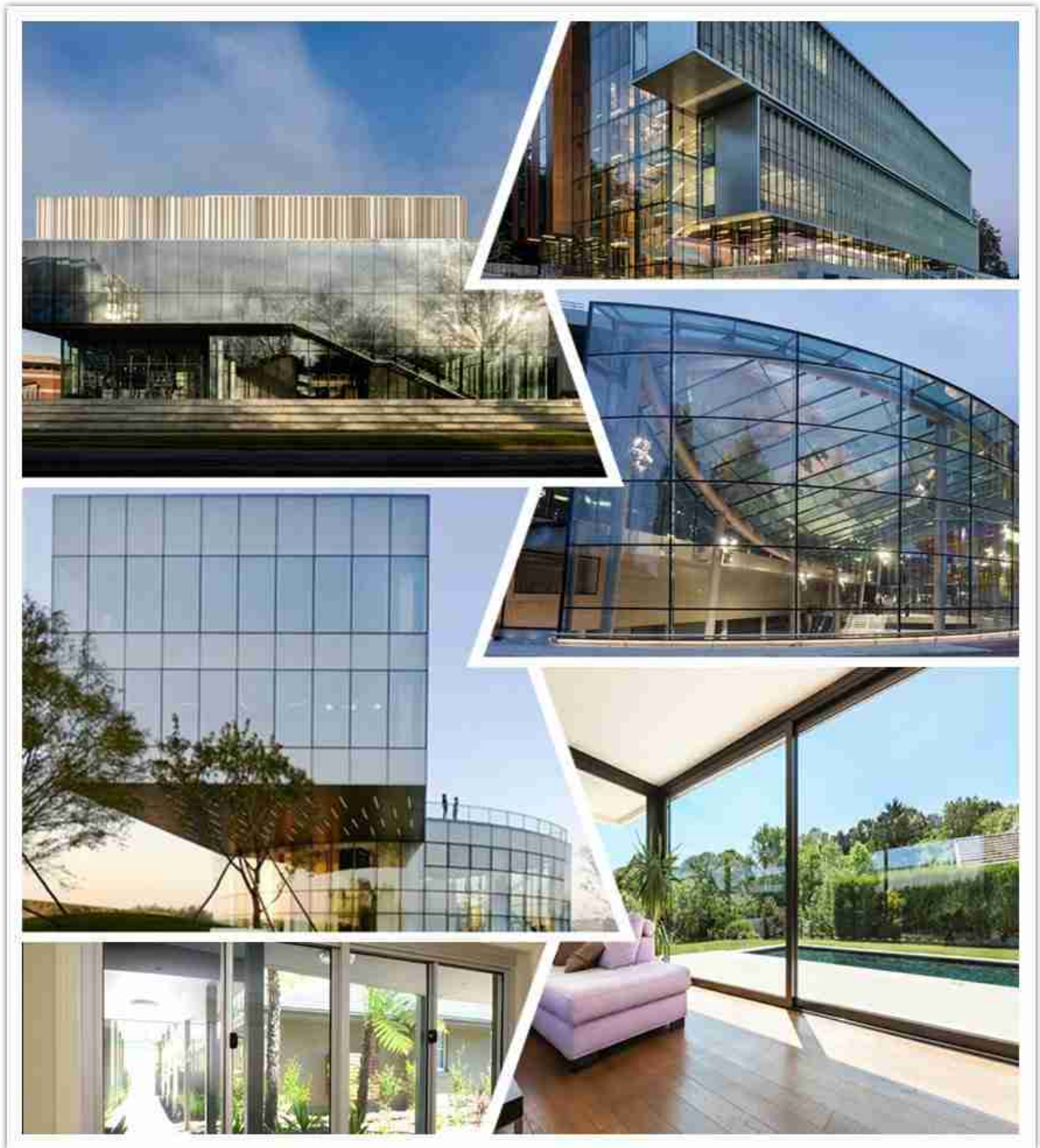
[PVD coating method](#)

4. The applications of Low-e glass

The offline Low-E glass cannot be used in a single panel, only applicable via insulated glass(double glazing structure). However, its emissivity is lower than 0.15. Offline Low e glass can be used as Low-e glass windows, doors, facade or

curtain wall, skylights, etc.

The online Low-E glass can be used in a single piece, but its emissivity $E=0.28$. Most of its applications are mainly for low rise buildings or some facade projects in which thermal performance data is not in high requirements.

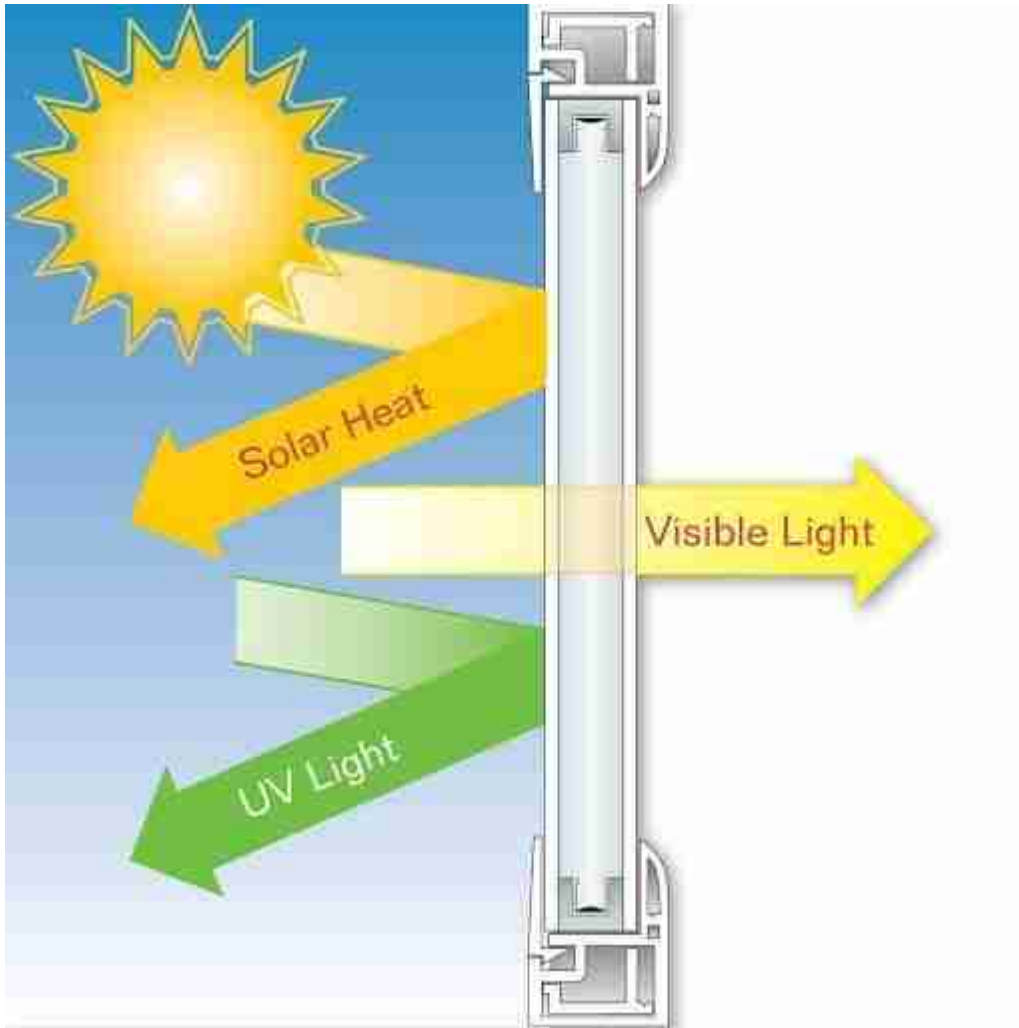


low e glass applications

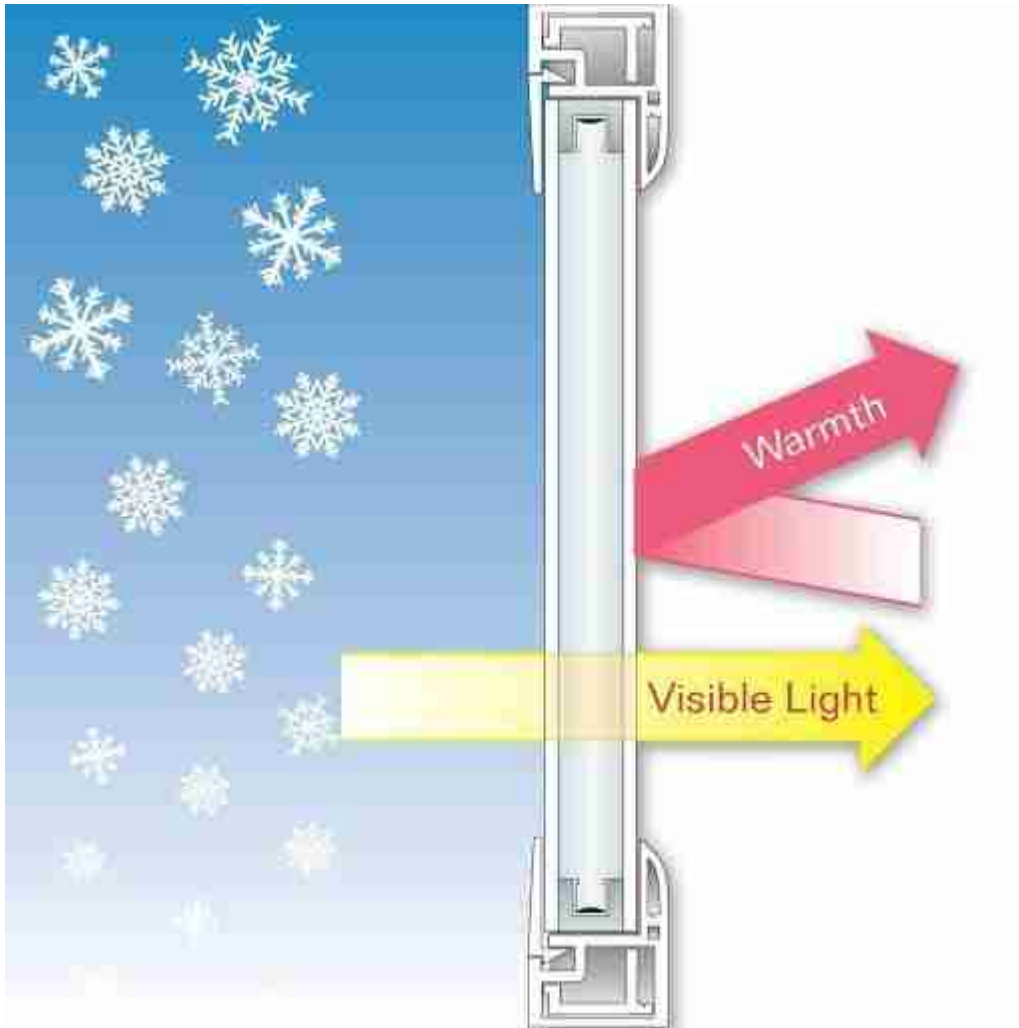
5. The working principle of Low e glass in summer and winter

In winter, the indoor temperature is higher than outdoor, and the far-infrared heat radiation mainly comes from indoors such as human body heat or stove heat. The Low-E glass can reflect the heat back to the indoor, **keep the indoor heat from escaping**.

In summer, the outdoor temperature is higher than indoors, and the far-infrared heat radiation mainly comes from outside outdoors. Low e glass can **reflect the solar heat out** preventing it from entering the room. For solar radiation from the outside, Low e glass with a low shading coefficient can be selected to restrict its entry into the room, therefore reducing air conditioning cost.



Low-e glass will reflect the heat to outside in summer.



Low e glass can keep warm in winter.

6. Argon in Low-e insulating glass

Argon gas is an inert gas, and it has better heat isolation performance than dry air. Therefore, filling argon gas into the insulating glass can reduce the U value of the insulating glass and increase the insulating properties of the insulating glass. For Low-E insulating glass, argon gas also adds the function of protecting the Low-E film layer.

7, Low e glass's anti-UV function

Compared with ordinary single-piece transparent glass, LOW-E glass can reduce UV rays by 25%. Compared with heat reflective coated glass, LOW-E glass can reduce UV rays by 14%.

After reading this article, how do you think of low e glass products? Have you other opinions in mind? [Please share with us!](#)