

Wavelength filtering structure

Low cost and easy to optimize "wavelength filtering" with high design flexibility!

Summary

There is conventional technology that uses heat shielding materials (e.g., using one or more metal particles) that **reflect infrared rays** to prevent the penetration of heat rays from vehicles and building windows, etc. Although those heat shielding materials have excellent reflectivity at limited wavelengths such as infrared, there is a difficulty to provide a given wavelength selectivity, such as to reduce transmittance at other wavelengths due to the random arrangement of metallic particles.

This invention is able to solve the above problems and to provide a wavelength filtering system which is **low cost, easy to design,** and **easy to optimize** by ingenious way, and that can be applied to many applications which take advantage of filtering by incidence angle dependency.

Effect, application

Able to grant wavelength filtering capability in any wavelength range (In addition, able to control the angle)

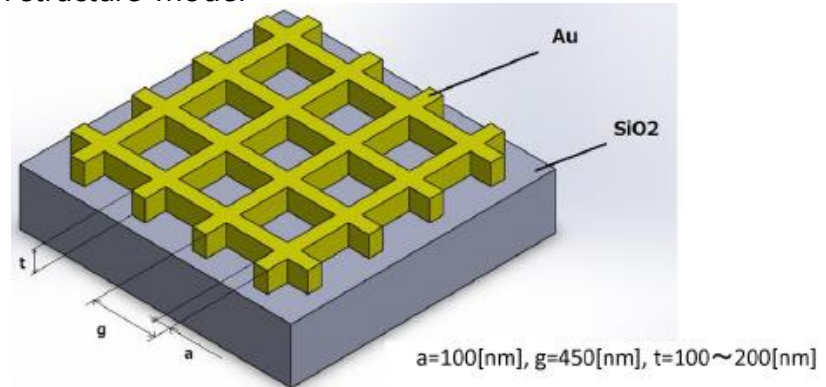
Application

- A window that reflects infrared light and allows visible light to pass through
- Peep proof film for smartphones, electronic devices, etc.

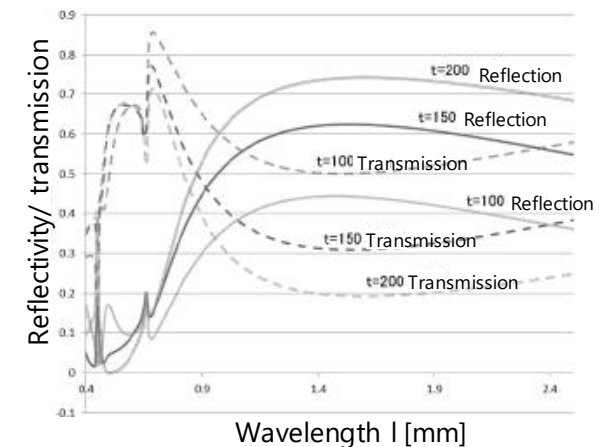
Patent Data Sheet

Patent number (Serial number): WO2019/102813 (T17-078)
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Mesh structure model



Demonstrated the **visible-light transmission**, and **infrared-light reflection**



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