nanoparticle represented by the formula $WO_{2.72}$, the tungsten oxides-containing nanoparticle represented by the formula $Cs_{0.33}WO_3$ shows a better effect on shielding near-infrared ray.

Five of the near-infrared ray shielding films with size of 150 mm x 10 mm are roasted at 150°C for 30 minutes, followed by measuring the final size of the roasted near-infrared ray shielding films. The thermal shrinkage rate shown in TABLE 3 is calculated by dividing the mean value of the size of the roasted near-infrared ray shielding films by the mean value of the size of the near-infrared ray shielding films.

TABLE 3

Group	Thermal shrinkage rate (%)
~~A2~~A1	5
~~A3~~A2	1

Referring to TABLE 3, the near-infrared ray shielding film of group ~~A2~~ A1 without biaxially-orientating has a higher thermal shrinkage rate. As mentioned before, the near-infrared ray shielding film can be used to attach on transparent base material (i.e. glass). Therefore, the higher thermal shrinkage rate may result in easily peeling off from the transparent base material.

In conclusion, because of the addition of the tungsten

~~WHAT IS CLAIMED IS:~~CLAIMS

1. A near-infrared ray shielding film, characterized in the near-infrared ray shielding film comprises:

a PET film comprising PET, wherein a raw material of the PET film has a water content below 30 ppm, and

a plurality of tungsten oxides-containing nanoparticles which spread and are mounted in the PET film;

wherein the near-infrared ray shielding film comprises 80-99.99 wt% of PET and 0.01-20 wt% of the tungsten oxides-containing nanoparticle, wherein the plurality of tungsten oxides-containing nanoparticles spreads and are mounted in the PET film in a density of 0.01-10 grams per square meter of the PET film.

2. The near-infrared ray shielding film as claimed in claim 1, characterized in the near-infrared ray shielding film has a thickness of 1-1000 μm.

3. The near-infrared ray shielding film as claimed in claim 1, characterized in the tungsten oxides-containing nanoparticle is selected from a group consisting of a nanoparticle of tungsten oxides and a nanoparticle of tungsten bronzes.

8. The near-infrared ray shielding film as claimed in claim 3, characterized in the nanoparticle of tungsten bronzes is represented by a formula $Cs_{0.33}WO_3$, wherein Cs represents cesium, W represents tungsten, O represents oxygen.

9. The near-infrared ray shielding film as claimed in any of claims 1-8, characterized in the tungsten oxides-containing nanoparticle are particles between 1 and 800 nm in size.

10. A method of manufacturing a near-infrared ray shielding film, characterized in the method of manufacturing a near-infrared ray shielding film comprises:

providing a raw material of PET with a water content below 30 ppm;

providing a tungsten oxides-containing nanoparticle;

blending the raw material of PET and the tungsten oxides-containing nanoparticles at 180-360°C to obtain a polyester mixture with 80-99.99 wt% of the raw material of PET and 0.01-20 wt% of the tungsten oxides-containing nanoparticles;

extrusing or compression molding the polyester mixture to obtain a polyester sheet; and