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(54) **OPTICAL POLYMER BLEND WITH BIMODAL PARTICLE SIZES**

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(57) **ABSTRACT**

An optical polymer blend includes sub-wavelength particles to modify the refractive index of a polymer to match the refractive index of micro-particles added to adjust the bulk coefficient of thermal expansion of the blend. A relatively large amount of material may be added to the resin to adjust the bulk coefficient of thermal expansion without unduly increasing the viscosity of the blend before setting. In some applications blends are used for molded or extruded optical elements, in other applications, blends are used for optical adhesives with low coefficients of thermal expansion.

21 Claims, 4 Drawing Sheets