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(54) **METHOD OF MAKING LIGHT CONVERTING SYSTEMS USING THIN LIGHT TRAPPING STRUCTURES AND PHOTOABSORPTIVE FILMS**

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(57) **ABSTRACT**

The present invention relates to a method of making a light converting optical system. The method involves providing a first optical layer having a microstructured front surface comprising an array of linear grooves that reflect first light rays using total internal reflection and deflect second light rays using refraction. A thin sheet of reflective light scattering material is positioned parallel to the first optical layer. A second optical layer is provided with a microstructured front surface. A continuous photoabsorptive film layer comprising a light converting semiconductor material is positioned between the first optical layer and the reflective material, with a thickness less than the minimum thickness required for absorbing all light traversing through the film layer. The method further involves providing a light source and positioning the second optical layer on the light path between the light source and the photoabsorptive film layer.