

Title (en)

OPTICAL SYSTEM FOR REDUCING THE REFLECTION OF OPTICALLY TRANSPARENT SUBSTRATES

Title (de)

OPTISCHES SCHICHTSYSTEM ZUR VERRINGERUNG DER REFLEXION TRANSPARENTER OPTISCHER SUBSTRATE

Title (fr)

SYSTEME OPTIQUE POUR REDUIRE LA REFLEXION DE SUBSTRATS OPTIQUES TRANSPARENTS

Publication

**EP 1751586 A2 20070214 (DE)**

Application

**EP 04786810 A 20040913**

Priority

- DE 2004002091 W 20040913
- DE 10346282 A 20030929
- DE 10354091 A 20031111

Abstract (en)

[origin: WO2005033750A2] The invention relates to an optical system for reducing the reflection of optically transparent substrates. A layer system consisting of alternately arranged layers is formed on the surface of the respective substrate. The aim of the intention is to reduce the proportion of reflected light within a broad wavelength range, whereby it is possible to have a specific influence upon the value of the reflection, the respective wavelength range wherein a reduction is obtained, and, optionally, upon a colour impression arising therefrom. According to the invention, the alternately arranged layers of materials having lower and higher optical refraction indexes form stacks of layers. Said stacks of layers have an equivalent optical refraction index, in relation to a predefinable wavelength  $\lambda$ , which is lower than the optical refraction index of the substrate. At least two stacks of layers are formed on top of each other, wherein, the respective equivalent refraction index is increasingly reduced starting from the substrate. The optical thickness of the individual stacks of layers is such that it corresponds to twice the value of  $1/4$  of the predefinable wavelength  $\lambda$ .

IPC 8 full level

**G02B 1/11** (2006.01)

CPC (source: EP US)

**G02B 1/115** (2013.01 - EP US)

Citation (search report)

See references of WO 2005033750A2

Designated contracting state (EPC)

DE FR GB NL

DOCDB simple family (publication)

**WO 2005033750 A2 20050414; WO 2005033750 A3 20070308**; EP 1751586 A2 20070214; JP 2007520734 A 20070726; US 2007081249 A1 20070412

DOCDB simple family (application)

**DE 2004002091 W 20040913**; EP 04786810 A 20040913; JP 2006527266 A 20040913; US 57372004 A 20040913