

Title (en)

DLC COATING FOR AN OPTICAL IR COMPONENT AND OPTICAL IR COMPONENTS HAVING SAID DLC COATING

Title (de)

DLC-BESCHICHTUNG FÜR EIN OPTISCHES IR-BAUELEMENT UND OPTISCHE IR-BAUELEMENTE MIT DLC-BESCHICHTUNG

Title (fr)

REVÊTEMENT DLC CONÇU POUR UN COMPOSANT IR OPTIQUE ET COMPOSANT IR OPTIQUE POURVU D'UN REVÊTEMENT DLC

Publication

**EP 2850469 A1 20150325 (DE)**

Application

**EP 13732080 A 20130517**

Priority

- DE 102012010291 A 20120518
- DE 2013100184 W 20130517

Abstract (en)

[origin: CA2873932A1] The invention relates to a DLC coating (4) for optical IR components (1) and to optical IR components (1) having the DLC coating (4) according to the invention. The DLC coating (4) according to the invention is characterised in that the DLC coating (4) consists at least of an outer layer (4.1) having a first modulus of elasticity (E1) and an inner layer (4.2) having a second modulus of elasticity (E2) which are applied one above the other on a support surface of a support, wherein the inner coat (4.2) has an inner surface (4.6) by means of which the inner coat (4.2) is in direct contact with the support surface of the support and the outer coat (4.1) has an outer surface (4.5) which faces away from the support surface and the value of the first modulus of elasticity (E1) is greater than the value of the second modulus of elasticity (E2). The DLC coating (4) according to the invention can be used in an optical IR component (1) with a substrate (2) and an anti-reflection coating (3, 8). An optical IR component (1) according to the invention makes both broadband and multispectral use possible, depending on the configuration.

IPC 8 full level

**G02B 1/10** (2015.01); **C23C 14/06** (2006.01); **C23C 16/02** (2006.01); **C23C 16/26** (2006.01)

CPC (source: CN EP US)

**C23C 14/06** (2013.01 - CN); **C23C 16/02** (2013.01 - CN); **C23C 16/26** (2013.01 - CN); **C23C 28/044** (2013.01 - EP US); **C23C 28/046** (2013.01 - EP US); **G02B 1/105** (2020.05 - EP); **G02B 1/11** (2013.01 - US); **G02B 1/113** (2013.01 - CN); **G02B 1/14** (2015.01 - EP US)

Citation (search report)

See references of WO 2013170854A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**DE 102012010291 A1 20131121**; CA 2873932 A1 20131121; CN 104303078 A 20150121; CN 104303078 B 20160420; DE 112013002563 A5 20150129; EP 2850469 A1 20150325; IL 235616 A0 20150129; JP 2015517686 A 20150622; US 2015109663 A1 20150423; WO 2013170854 A1 20131121

DOCDB simple family (application)

**DE 102012010291 A 20120518**; CA 2873932 A 20130517; CN 201380026041 A 20130517; DE 112013002563 T 20130517; DE 2013100184 W 20130517; EP 13732080 A 20130517; IL 23561614 A 20141110; JP 2015511932 A 20130517; US 201314401929 A 20130517