

Title (en)

OPTICALLY VARIABLE SECURITY ELEMENT

Title (de)

OPTISCH VARIABLES SICHERHEITSELEMENT

Title (fr)

ÉLÉMENT DE SÉCURITÉ OPTIQUEMENT VARIABLE

Publication

**EP 2773514 B1 20160203 (DE)**

Application

**EP 12787372 A 20121105**

Priority

- DE 102011117677 A 20111104
- EP 2012004600 W 20121105

Abstract (en)

[origin: WO2013064268A1] The invention relates to an optically variable security element (12) for security papers, value documents and other data carriers, with a substantially transparent carrier (20) having opposing first and second main surfaces (22, 24), an arrangement of micro-lenses (26) on the first main surface (22) of the carrier (20), and a laser-sensitive recording layer (32) arranged on the second main surface of the carrier (20). According to the invention, the micro-lens arrangement (26) is furnished with a laser-sensitive cover layer (28) having at least one cut-out (30) produced by the effect of laser radiation and extending over several micro-lenses (26), the laser-sensitive recording layer (32) comprises a plurality (34) of micro-markings (36) produced by the effect of laser radiation, wherein each micro-marking (36) is associated with one micro-lens (26) and is visible through the associated micro-lens (26) during inspection of the security element (12), and the plurality (34) of micro-markings (36) on the carrier (20) is arranged precisely aligned directly opposite the at least one cut-out (30).

IPC 8 full level

**B42D 25/00** (2014.01)

CPC (source: EP US)

**B42D 25/21** (2014.10 - US); **B42D 25/29** (2014.10 - EP); **B42D 25/373** (2014.10 - US); **B42D 25/435** (2014.10 - US); **B42D 25/324** (2014.10 - EP);  
**B42D 2035/20** (2022.01 - EP); **B42D 2035/44** (2022.01 - EP)

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

DOCDB simple family (publication)

**DE 102011117677 A1 20130508**; AU 2012331447 A1 20140515; AU 2012331447 B2 20160804; AU 2016238893 A1 20161027;  
CN 104023991 A 20140903; CN 104023991 B 20160210; EP 2773514 A1 20140910; EP 2773514 B1 20160203; PL 2773514 T3 20160729;  
WO 2013064268 A1 20130510

DOCDB simple family (application)

**DE 102011117677 A 20111104**; AU 2012331447 A 20121105; AU 2016238893 A 20161006; CN 201280065704 A 20121105;  
EP 12787372 A 20121105; EP 2012004600 W 20121105; PL 12787372 T 20121105