

Title (en)

PRINTED LEDS AND WAVELENGTH CONVERSION AREA ON OBJECTS TO PROVIDE OPTICAL SECURITY FEATURE

Title (de)

GEDRUCKTE LED UND WELLENLÄNGENUMWANDLUNGSBEREICH AUF GEGENSTÄNDEN ZUR BEREITSTELLUNG EINES OPTISCHEN SICHERHEITSMERKMALS

Title (fr)

DEL IMPRIMÉES ET ZONE DE CONVERSION DE LONGUEUR D'ONDE SUR DES OBJETS POUR FOURNIR UN ÉLÉMENT DE SÉCURITÉ OPTIQUE

Publication

**EP 3807818 A1 20210421 (EN)**

Application

**EP 19820347 A 20190604**

Priority

- US 201816007189 A 20180613
- US 201916412139 A 20190514
- US 2019035456 W 20190604

Abstract (en)

[origin: WO2019240993A1] In one embodiment, an authentication area on a portable object comprises a random arrangement of printed LEDs and a wavelength conversion layer. The object to be authenticated may be a credit card, casino chip, or other object. When the LEDs are energized during authentication of the object, the emitted spectrum and/or persistence of the wavelength conversion layer is detected and encoded in a first code, then compared to valid codes stored in the database. If there is a match, the object is authenticated. The LED power may be remotely inductively coupled and may flash the LEDs, while the wavelength conversion layer emission slowly decays during its optical detection. The flash of blue LED light may be emitted from the edges of the object, which may act as a light guide, for optical feedback to the user that the object is being authenticated.

IPC 8 full level

**G06K 19/06** (2006.01); **G06K 7/12** (2006.01); **G06K 19/07** (2006.01); **G06K 19/10** (2006.01); **G06Q 20/40** (2012.01); **G07F 7/12** (2006.01)

CPC (source: EP)

**G06K 19/06009** (2013.01); **G06K 19/06112** (2013.01); **G06K 19/0614** (2013.01); **G06K 19/14** (2013.01); **G06Q 20/34** (2013.01); **G06Q 20/40** (2013.01); **G07F 7/0813** (2013.01); **G07F 7/12** (2013.01)

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)

**WO 2019240993 A1 20191219**; EP 3807818 A1 20210421; EP 3807818 A4 20220309; TW 202018595 A 20200516; TW I696116 B 20200611

DOCDB simple family (application)

**US 2019035456 W 20190604**; EP 19820347 A 20190604; TW 108120406 A 20190613