

Title (en)

Flexible light-emitting textile display with floats for covering electronic devices

Title (de)

Flexibles lichtemittierendes textiles Display mit Flottierungen zur Abdeckung elektronischer Vorrichtungen

Title (fr)

Affichage textile électroluminescent flexible avec des flottés pour couvrir des dispositifs électroniques

Publication

EP 2784198 A1 20141001 (EN)

Application

EP 13193532 A 20131119

Priority

LV 130039 A 20130325

Abstract (en)

The invention relates to light-emitting electronic textiles for smart clothing and smart textiles related applications. The two-dimensional flexible light-emitting textile display is designed with floats for covering electronic elements and electronic contacts insulation which at the same time provides an opportunity to develop aesthetic design of the display in the single piece construction of material. The display consists of interwoven conductive yarns (2, 3), insulating yarns (6, 13) and one or more light emitting devices (7) attached to the conductive yarns (2, 3), and may also contain one or more other electronic devices. For display electronic circuits design a matrix display construction is used with conductive yarns in weft (2) and warp (3) systems, some of which are partly integrated into the textile structure and partly form the same or different lengths floats on textile right or left side.

IPC 8 full level

D03D 1/00 (2006.01); **D03D 11/00** (2006.01); **D03D 13/00** (2006.01)

CPC (source: EP)

D03D 1/0088 (2013.01); **D03D 11/00** (2013.01); **D03D 13/004** (2013.01); **D10B 2401/18** (2013.01)

Citation (search report)

- [XDI] US 2012327654 A1 20121227 - BHATTACHARYA RABIN [US], et al
- [A] US 2003211797 A1 20031113 - HILL IAN GREGORY [US], et al
- [I] ANNETT DÖRFEL ET AL: "Entwicklung von Lösungen zum Einweben von Inserts auf Band- und Breitwebmaschinen für Smart Textiles und Automobiltextilien", 13 January 2011 (2011-01-13), XP055112401, Retrieved from the Internet <URL:http://tu-dresden.de/die_tu_dresden/fakultaeten/fakultaet_maschinenwesen/itm/forschung/forschungsthemen/inserts/index_html> [retrieved on 20140407]
- [A] ZYSSET C ET AL: "Woven active-matrix display", IEEE TRANSACTIONS ON ELECTRON DEVICES, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 59, no. 3, 1 March 2012 (2012-03-01), pages 721 - 728, XP011445257, ISSN: 0018-9383, DOI: 10.1109/TED.2011.2180724

Cited by

DE102015120528A1; CN112813558A; FR3054247A1; CN110923897A; CN107923081A; CN111893615A; EP3206212A1; US10692623B2; US11668026B2; WO2017030851A3; WO2017140944A1; DE102018105653A1; WO2019174827A1; US10910315B2; US11315880B2

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)

EP 2784198 A1 20141001; LV 14680 A 20130520; LV 14680 B 20130720

DOCDB simple family (application)

EP 13193532 A 20131119; LV 130039 A 20130325