

Title (en)

LED module for tool-free assembly of optical elements

Title (de)

LED-Modul für werkzeuglose Montage von optischen Elementen

Title (fr)

Module à DEL pour montage sans outil d'éléments optiques

Publication

EP 2816275 A3 20150318 (DE)

Application

EP 14166587 A 20140430

Priority

- DE 102013207958 A 20130430
- DE 102013217011 A 20130827

IPC 8 full level

F21K 99/00 (2010.01); **F21S 8/04** (2006.01); **F21V 15/01** (2006.01); **F21V 17/16** (2006.01); **F21V 21/03** (2006.01)

CPC (source: EP US)

F21K 9/20 (2016.07 - EP US); **F21S 8/04** (2013.01 - EP); **F21V 15/01** (2013.01 - EP); **F21V 17/164** (2013.01 - EP US); **F21Y 2115/10** (2016.07 - EP US)

Citation (search report)

- [XAY] US 2013083525 A1 20130404 - KOO WON-HOE [KR], et al
- [X] WO 2011104258 A2 20110901 - ZUMTOBEL LIGHTING GMBH [DE], et al
- [X] US 2009237928 A1 20090924 - DUBUC EDEN [CA]
- [YA] DE 102009023268 A1 20100610 - OSRAM GMBH [DE]
- [A] DE 102011076300 A1 20121129 - OSRAM AG [DE]

Cited by

DE102018123884A1

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 102013217011 A1 20141030; EP 2816275 A2 20141224; EP 2816275 A3 20150318; EP 2816275 B1 20160803

DOCDB simple family (application)

DE 102013217011 A 20130827; EP 14166587 A 20140430