

Title (en)
Lighting arrangement

Title (de)
Beleuchtungsanordnung

Title (fr)
Arrangement d'éclairage

Publication
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Application
EP 14152186 A 20140122

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Abstract (en)

The invention relates to a lighting arrangement (1), comprising a lighthouse (3) which is connected by way of a deflectable spring arm (4; 41) to operating theatre ceiling structures (5) and which includes a plurality of light elements (31) present in a single mounting plane (T) and provided with one or more light emitting diodes (31 c), as well as a protective shield (32) covering these light elements. Each light element (31) of the lighting arrangement comprises a light emitting diode or LED (31c), said light element being mounted on a specific point of the mounting plane (T), whereby the light emitting diode is connected to directing implements (31 b), as well as to optics (31 a) deflectable with the directing implements, said directing implements (31 b) being operatively coupled to a control unit (8) for controlling the optics (31 a) of each light element, the control unit further comprising a pointer, such as a remote controller (6), whose pointer function enables a specific spot of the operating table, i.e. a designated spot (61), to be optically pointed out, a detection unit (88) for detecting a position of the lighthouse mounting plane (T) on which the light elements (31) are fixed, as well as the spot (61) of an operating table (2) which has been optically designated with a pointer, such as the remote controller (6), a processor (81) for determining a basic center line position (P0) of the light elements' (31) light beams (7) and each light element's (31) distance vector (d) to the designated spot (61) on the basis of the detected position of said mounting plane (T), said distance vectors (d) constituting a portion of center lines (P) of the light elements' (31) light beams (7) as the light elements are directed towards the designated spot (61), as well as for generating a control command for each light element (31), said control command enabling the directing implements (31 b) of each light element (31) to be controlled in such a way that the light beam (7) of each light element (31) is focused on the designated spot (61), and a data transfer unit (88) for transmitting a light element-specific control command to the directing implements (31 b) of each light element (31) for focusing the light element (31) on the designated spot (61).

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Citation (search report)

- [Y] US 2011285515 A1 20111124 - FUSHIMI SHIGEMI [JP], et al
- [Y] JP 2010257742 A 20101111 - PANASONIC ELEC WORKS CO LTD
- [Y] EP 2413018 A1 20120201 - CORPORACIO SANITARIA PARC TAULI [ES], et al
- [A] DE 102006040393 A1 20080313 - MACH GMBH & CO KG DR [DE]
- [A] ES 2272180 A1 20070416 - UNIV CATALUNYA POLITECNICA [ES], et al
- [Y] WO 2012172383 A1 20121220 - DEBRECENI EGYETEM [HU], et al
- [A] US 2012323083 A1 20121220 - HALL GRAEME [GB]

Cited by
WO2017117237A1; US10502399B2; US11313544B2; EP3498216A1; WO2019115728A1; WO2017212126A1; US10928039B2

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