

Title (en)
TILE LIGHTING METHODS AND SYSTEMS

Title (de)
KACHELBELEUCHTUNGSVERFAHREN UND -SYSTEME

Title (fr)
PROCÉDÉS ET SYSTÈMES D'ÉCLAIRAGE DE DALLE

Publication
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Application
EP 20172270 A 20040421

Priority

- US 46418503 P 20030421
- US 46791303 P 20030505
- US 50075403 P 20030905
- US 52390303 P 20031120
- US 55840004 P 20040331
- EP 18182693 A 20040421
- EP 15174450 A 20040421
- EP 04760087 A 20040421
- US 2004012314 W 20040421

Abstract (en)
[origin: WO2004094896A2] A tile lighting system is provided in which an interior space of a tile is lit by LEDs, such as in a grid or edge-lit formation, and a light diffusing panel is disposed over the interior space. The tile lighting system can be combined with others to tile any surface, such as a floor, ceiling, wall, or building exterior. Lighting control signals can be supplied to generate a wide range of effects on the tile lighting units, including effects coordinated among different tile lighting units. Two- and three-dimensional embodiments are contemplated.

IPC 8 full level
A63J 17/00 (2006.01); **E04F 13/08** (2006.01); **E04F 15/02** (2006.01); **F21V 23/04** (2006.01); **F21V 33/00** (2006.01); **G09F 3/04** (2006.01); **G09F 9/302** (2006.01); **G09F 11/00** (2006.01); **G09F 13/02** (2006.01); **G09G 3/32** (2006.01); **G09G 3/34** (2006.01); **G09G 5/00** (2006.01); **H01L 33/00** (2010.01); **H01L 33/48** (2010.01); **H01L 33/50** (2010.01); **F21Y 115/10** (2016.01)

IPC 8 main group level
F21S (2006.01)

CPC (source: EP US)
E04F 13/08 (2013.01 - EP US); **E04F 15/02** (2013.01 - EP); **F21V 23/04** (2013.01 - EP); **F21V 33/006** (2013.01 - EP); **G09F 9/3026** (2013.01 - EP); **E04F 2290/026** (2013.01 - EP); **F21Y 2115/10** (2016.08 - EP US)

Citation (opposition)
Opponent : ZKW Group GmbH

- WO 0170538 A2 20010927 - GENTEX CORP [US]
- US 2001028227 A1 20011011 - LYS IHOR [US], et al
- US 5420482 A 19950530 - PHARES LOUIS A [CA]
- US 2001019486 A1 20010906 - THOMINET VINCENT [CH]

Designated contracting state (EPC)
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WO 2004094896 A2 20041104; WO 2004094896 A3 20050922; CN 103017017 A 20130403; CN 103017017 B 20190514; DK 3419388 T3 20200824; DK 3722533 T3 20221205; EP 1620843 A2 20060201; EP 1620843 A4 20130821; EP 1620843 B1 20150902; EP 1620843 B8 20151111; EP 3002512 A1 20160406; EP 3002512 B1 20180919; EP 3419388 A2 20181226; EP 3419388 A3 20190116; EP 3419388 B1 20200617; EP 3721958 A1 20201014; EP 3721959 A1 20201014; EP 3721959 B1 20221123; EP 3722533 A1 20201014; EP 3722533 B1 20221026; ES 2814649 T3 20210329; ES 2935908 T3 20230313; ES 2936257 T3 20230315; FI 3722533 T3 20230113; HK 1088431 A1 20061103; HK 1221277 A1 20170526; HU E051881 T2 20210329; HU E060631 T2 20230428; HU E061062 T2 20230528; JP 2007525690 A 20070906; PL 1620843 T3 20160129; PL 3419388 T3 20210125; PL 3722533 T3 20230306; SI 3419388 T1 20201231; SI 3722533 T1 20230131

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US 2004012314 W 20040421; CN 201210470710 A 20040421; DK 18182693 T 20040421; DK 20172248 T 20040421; EP 04760087 A 20040421; EP 15174450 A 20040421; EP 18182693 A 20040421; EP 20172248 A 20040421; EP 20172261 A 20040421; EP 20172270 A 20040421; ES 18182693 T 20040421; ES 20172248 T 20040421; ES 20172270 T 20040421; FI 20172248 T 20040421; HK 06108506 A 20060731; HK 16109278 A 20060731; HU E18182693 A 20040421; HU E20172248 A 20040421; HU E20172270 A 20040421; JP 2006513195 A 20040421; PL 04760087 T 20040421; PL 18182693 T 20040421; PL 20172248 T 20040421; SI 200432499 T 20040421; SI 200432524 T 20040421