

Title (en)  
PIXEL CIRCUIT FOR AN ACTIVE MATRIX OLED DISPLAY

Title (de)  
PIXELSCHALTUNG FÜR EIN AKTIV-MATRIX OLED-DISPLAY

Title (fr)  
CIRCUIT DE PIXELS POUR UN AFFICHAGE À DIODES ÉLECTROLUMINESCENTES ORGANIQUES À MATRICE ACTIVE

Publication  
**EP 2564383 B1 20170125 (DE)**

Application  
**EP 11738944 A 20110427**

Priority  
• DE 102010019667 A 20100428  
• DE 2011000464 W 20110427

Abstract (en)  
[origin: WO2011134461A1] The invention relates to a circuit arrangement for organic light-emitting diodes arranged in a two-dimensional matrix. It can be used in particular in microdisplays. The object of the invention is to enable extensive influencing of the brightness and of the electromagnetic radiation emitted by the organic light-emitting diodes. With the circuit arrangement according to the invention, each organic light-emitting diode (5) can be driven by means of a storage circuit (10), a read amplifier (20) and a driver circuit (30). The driver circuit is formed by at least three series-connected transistors (1-3) and a further output transistor (4), the drain of which is connected to the anode of the respective organic light-emitting diode. In this case, a constant electrical operating voltage LVDD is applied to the source of the transistor (1) acting as driver, and a further likewise constant electrical operating voltage VDrive is applied to the gate of said transistor. The drain of the first transistor (1) is connected to the source of the transistor (2) which is connected in series next to said first transistor. Both gates of the following series-connected transistors (2, 3), which form a switch, are connected to the output of the read amplifier, and the electrical output voltage VSenseOut of said read amplifier is applied to said gates. The drains of the two transistors forming the switch are connected to the source of the output transistor (4), the gate of which is connected to ground potential or has a negative electrical voltage applied to it.

IPC 8 full level  
**G09G 3/3233** (2016.01); **G09G 3/20** (2006.01); **G09G 3/3258** (2016.01); **G09G 3/3291** (2016.01); **H05B 37/02** (2006.01)

CPC (source: EP KR US)  
**G09G 3/32** (2013.01 - KR); **G09G 3/3233** (2013.01 - EP KR US); **G09G 3/3258** (2013.01 - KR); **G09G 3/3291** (2013.01 - KR); **H05B 47/10** (2020.01 - EP US); **G09G 3/2018** (2013.01 - EP US); **G09G 3/3258** (2013.01 - EP US); **G09G 3/3291** (2013.01 - EP US); **G09G 2300/0809** (2013.01 - EP KR US); **G09G 2300/0814** (2013.01 - EP KR US); **G09G 2300/0852** (2013.01 - EP US); **G09G 2300/0861** (2013.01 - EP KR US); **G09G 2310/0251** (2013.01 - EP KR US); **G09G 2310/0262** (2013.01 - EP KR US); **G09G 2320/0626** (2013.01 - EP KR US); **G09G 2320/0633** (2013.01 - EP KR US); **G09G 2320/064** (2013.01 - EP US); **G09G 2330/04** (2013.01 - EP US)

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

DOCDB simple family (publication)  
**DE 102010019667 A1 20111103**; **DE 102010019667 B4 20140220**; CN 102971783 A 20130313; CN 102971783 B 20160120; EP 2564383 A1 20130306; EP 2564383 B1 20170125; KR 101681666 B1 20161201; KR 20130094687 A 20130826; US 2013099700 A1 20130425; US 9066379 B2 20150623; WO 2011134461 A1 20111103

DOCDB simple family (application)  
**DE 102010019667 A 20100428**; CN 201180032087 A 20110427; DE 2011000464 W 20110427; EP 11738944 A 20110427; KR 20127027676 A 20110427; US 201113643188 A 20110427