

The Delphion Integrated View



Title: US6002206: Organic EL devices and operation thereof

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PDerwent Title: Organic electroluminescent devices for displays and their operation

[Derwent Record]

PCountry: US United States of America

Inventor: Harrison, Nick; Cambridge, United Kingdom

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Assignee: Cambridge Display Technology Limited, Cambridge, United

Kingdom

other patents from CAMBRIDGE DISPLAY TECHNOLOGY LIMITED

(702903) (approx. 50)

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@ECLA Code: **G09G3/32A**; H01L27/32; H01L51/52B;

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Field of Search: 313/506,505,503,493,631 345/078,80 315/169.3

Priority Number: 1996-11-28 **GB1996000024705**

1997-01-07 GB199700000148

PAbstract: An organic electroluminescent device, particularly for use as a

display, is disclosed which is driven according to a pulsed mode of operation which allows much higher current densities to be injected into the device. This is achieved by selection of particular pulse durations and duty cycles, and by an improved geometry for the electroluminescent device in which the resistance of anode lines is

reduced.

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Assistant Examiners:

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Status: View Certificate of Correction

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Legal Status:

Family: Show 3 known family members

First Claim: Show all 22 claims

What is claimed is: 1. An electroluminescent device comprising:

- a first set of planar electrodes extending in a first orientation;
- a layer of an organic light emissive material arranged between the first and second electrodes;
- first and second terminals provided respectively on the first and second electrodes; a second set of planar electrodes extending in a second orientation; and
- circuitry adapted to apply a unipolar voltage pulse directly to the first and second terminals,
- wherein application of the voltage pulse to the terminals causes the light emissive layer to generate light in an electroluminescent manner, and the resistance of the first set of electrodes is selected such that a peak current density of greater than 50 A/sqcm is manifest in the light emissive material at an applied voltage pulse of less than 90V.

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Show 4 U.S. patent(s) that reference this one

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PDF	Patent	Pub.Date	Inventor	Assignee	Title
*	<u>US4253097</u>	1981-02	Hochstrate	Timex Corporation	Method and apparatus power consumption to electroluminescent par
×	<u>US5399936</u>	1995-03	Namiki et al.	Pioneer Electronic Corporation	Organic electrolumines
*	<u>US5670792</u>	1997-09	Utsugi et al.	NEC Corporation	Current-controlled lum array and method for pame
×	<u>US5707745</u>	1998-01	Forrest et al.	The Trustees of Princeton University	Multicolor organic light devices
*	<u>US5798170</u>	1998-08	Zhang et al.	Uniax Corporation	Long operating life for emitting diodes

Foreign References:

PDF	Publication	Date	IPC Code	Assignee	Title
A	WO9636959	1996-11	G09G 3/30	PHILIPS ELECTRONICS N.V.	DISPLAY DE

Other Abstract Info: Other

References:

DERABS C2000-085676 DERABS C2000-085676

- "Electroluminescence in Polymer Films", published in Nature, vol. 386, Mar. 13, '(1 pages) [ISI abstract]
- "Nanosecond Transient Electroluminescence from Polymer Light-Emitting Diode: Applied Physics Letters, 61(26), Dec. 28th, 1992, pp. 3092-3094.
- "Semiconducting Polymers: A New Class of Solid-State Laser Materials", publish vol. 273, Sep. 27th, 1996, pp. 1833-1836. (4 pages) Cited by 7 patents [ISI abstract
- "Photophysics of Phenylenevinylene Polymers", published in Synthetic Metals 80

58. (18 pages) Cited by 2 patents [ISI abstract]











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