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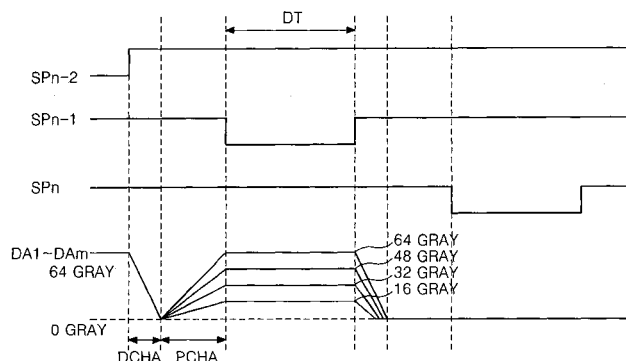
(54) **Passive matrix organic electro-luminescence display device and pre-charge method thereof**

(57) The present invention relates to an organic electro-luminescence display device and a method of driving the same that is adaptive for reducing power consumption by removing an unnecessary current as well as for improving a uniformity of a display screen.

video data to be realized at a Nth during discharge period (DCHA) when a data current corresponding to a gray level of digital video data to be realized at a (N-1)th calculates a pre-charge current corresponding to the detected gray level of digital video data to supply the calculated pre-charge current to the electro-luminescence elements. A data driver supplies data to the electro-luminescence elements charged with the pre-charge current during a pre-charge period (PCHA); and a scan driver supplies a scan pulse (SPn), synchronized with the data, to the scan lines.

An organic electro-luminescence display device according to an embodiment of the present invention includes a display panel in which a plurality of data lines and a plurality of scan lines cross each other and electro-luminescence elements are arranged at the crosses. A pre-charge driver, which detects a gray level of digital

FIG.7



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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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X	KR 2003 0024403 A (LG ELECTRONICS INC [KR]) 26 March 2003 (2003-03-26) * abstract; figures 6,7 * -----	1,5	
			TECHNICAL FIELDS SEARCHED (IPC)
			G09G
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 25 February 2008	Examiner Gartlan, Michael
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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摘要(译)

有机电致发光显示装置及其驱动方法技术领域本发明涉及一种有机电致发光显示装置及其驱动方法，其适于通过去除不必要的电流来降低功耗以及用于改善显示屏的均匀性。根据本发明实施例的有机电致发光显示装置包括显示面板，其中多条数据线和多条扫描线彼此交叉，并且电致发光元件布置在十字形处。预充电驱动器，当在a (N-1) 处实现对应于数字视频数据的灰度级的数据电流时，其检测在放电时段 (DCHA) 期间在第N个时实现的数字视频数据的灰度级。th计算与检测到的数字视频数据的灰度级对应的预充电电流，以将计算出的预充电电流提供给电致发光元件。数据驱动器在预充电期间 (PCHA) 向充有预充电电流的电致发光元件提供数据。扫描驱动器将与数据同步的扫描脉冲 (SPn) 提供给扫描线。

FIG.7

