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(54) **Light-emitting element, display device, and electronic appliance**

(57) The present invention provides a light-emitting element having a structure in which the drive voltage is comparatively low and a light-emitting element in which the increase in the drive voltage over time is small. Further, the present invention provides a display device in which the drive voltage and the increase in the drive voltage over time are small and which can resist long-term use. A layer in contact with an electrode in a light-emitting

element is a layer containing a P-type semiconductor or a hole-generating layer such as an organic compound layer containing a material having electron-accepting properties. The light-emitting layer (104) is sandwiched between the hole-generating layers (102,103), and an electron-generating layer (105) is sandwiched between the light-emitting layer (104) and the hole-generating layer on a cathode side (103).

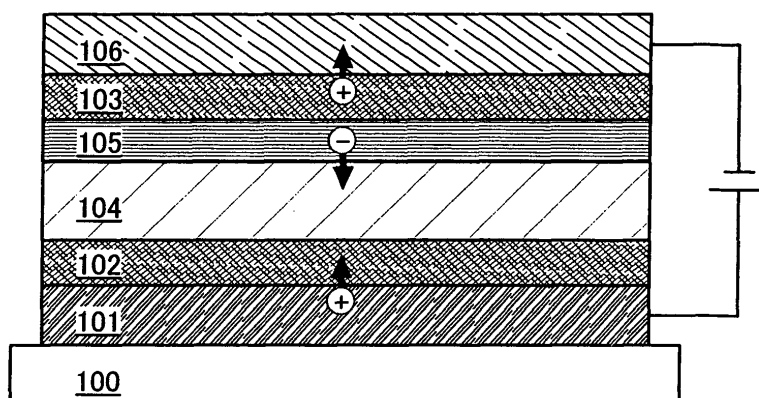


FIG. 1



EUROPEAN SEARCH REPORT

Application Number
EP 05 01 6696

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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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A	EP 1 030 382 A2 (PIONEER CORP [JP]) 23 August 2000 (2000-08-23) * claim 3; figure 3 *	1-13	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 28 February 2011	Examiner Faou, Marylène
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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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 05 01 6696

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28-02-2011

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专利名称(译)	发光元件，显示装置和电子设备		
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优先权	2004227734 2004-08-04 JP		
其他公开文献	EP1624502B1 EP1624502A2		
外部链接	Espacenet		

摘要(译)

本发明提供一种发光元件，其具有驱动电压相对较低的结构，以及驱动电压随时间的增加小的发光元件。此外，本发明提供一种显示装置，其中驱动电压和驱动电压随时间的增加小并且可以抵抗长期使用。与发光元件中的电极接触的层是包含P型半导体的层或诸如包含具有电子接受性质的材料的有机化合物层的空穴产生层。发光层（104）夹在空穴发生层（102,103）之间，电子发生层（105）夹在发光层（104）和阴极侧的空穴发生层之间（103）。

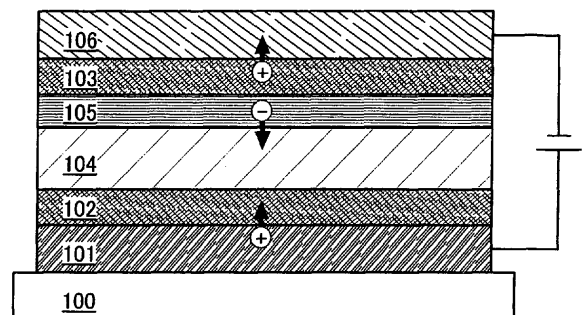


FIG. 1