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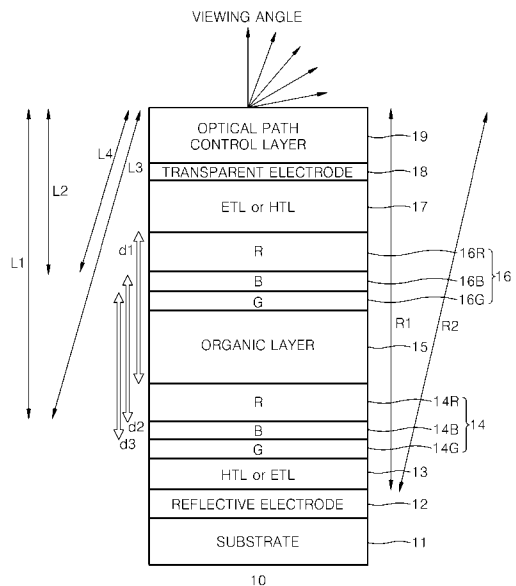
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(54) **Organic light emitting device and color display apparatus using the same**

(57) A top-emitting or bottom-emitting OLED (10) has a wide color gamut and reduces a variation in color with a viewing angle. The OLED includes a reflective electrode (12) and a transmissive or semi-transmissive electrode (18) disposed opposite each other; at least two organic emission layers (EMLs) (14,16) interposed between the reflective electrode (12) and the transmissive or semi-transmissive electrode (18); and an optical path control layer (19) disposed on an outer surface of the transmissive or semi-transmissive electrode (18). A resonator is formed between the reflective electrode and the optical path control layer so a resonance mode of light extracted from the optical path control layer is a multi-resonance mode having at least two modes in a visible light region. A distance between the organic EMLs satisfies the condition of constructive interference between light beams emitted by the respective organic EMLs. A color display apparatus using the OLED are taught.

FIG. 1



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EUROPEAN SEARCH REPORT

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The present search report has been drawn up for all claims			
2	Place of search The Hague	Date of completion of the search 15 April 2011	Examiner De Laere, Ann
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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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 15 April 2011	Examiner De Laere, Ann
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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The members are as contained in the European Patent Office EDP file on
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	有机发光器件和使用其的彩色显示装置		
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[标]申请(专利权)人(译)	三星电子株式会社 三星斯笛爱股份有限公司		
申请(专利权)人(译)	SAMSUNG ELECTRONICS CO. , LTD. 三星SDI CO. , LTD.		
当前申请(专利权)人(译)	三星DISPLAY CO. , LTD.		
发明人	KIM, SANG-YEOL, SAMSUNG ADVANCED INSTITUTE OF TECHNOLOGY KIM, MU-GYEOM, SAMSUNG ADVANCED INSTITUTE OF TECHNOLOGY LEE, SUNG-HUN, SAMSUNG ADVANCED INSTITUTE OF TECHNOLOGY SONG, JUNG-BAE, SAMSUNG ADVANCED INSTITUTE OF TECHNOLOGY		
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CPC分类号	H01L51/5265 H01L51/5036 H01L51/5278		
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其他公开文献	EP2051312A2		
外部链接	Espacenet		

摘要(译)

顶部发射或底部发射OLED (10) 具有宽色域并且减小了视角的颜色变化。 OLED包括反射电极 (12) 和彼此相对设置的透射或半透射电极 (18) ;至少两个有机发射层 (EML) (14,16) 置于反射电极 (12) 和透射或半透射电极 (18) 之间;光路控制层 (19) 设置在透射或半透射电极 (18) 的外表面上。谐振器形成在反射电极和光路控制层之间, 因此从光路控制层提取的光的谐振模式是在可见光区域中具有至少两种模式的多谐振模式。有机EML之间的距离满足由各个有机EML发射的光束之间的相长干涉的条件。教导了使用OLED的彩色显示装置。

