



US009411185B2

(12) **United States Patent**
Kuo et al.

(10) **Patent No.:** **US 9,411,185 B2**
(45) **Date of Patent:** **Aug. 9, 2016**

(54) **SPLICING BACKPLANE FOR BACKLIGHT MODULE AND BACKLIGHT MODULE EMPLOYING SAME**

(56) **References Cited**

U.S. PATENT DOCUMENTS

(71) Applicant: **SHENZHEN CHINA STAR OPTOELECTRONICS TECHNOLOGY CO., LTD.**, Shenzhen, Guangdong (CN)

2006/0109616 A1* 5/2006 Lee G02F 1/133308 361/679.22

FOREIGN PATENT DOCUMENTS

(72) Inventors: **Yi Cheng Kuo**, Guangdong (CN);
Yuchun Hsiao, Guangdong (CN);
Yanxue Zhang, Guangdong (CN)

CN	1662124	A	8/2005
CN	1893784	A	1/2007
CN	102272662	A	12/2011
CN	102734763	A	10/2012
JP	2004-317919	A	11/2004
JP	2005234180	A	9/2005
JP	2007298670	A	11/2007

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

OTHER PUBLICATIONS

(21) Appl. No.: **13/983,776**

Liu YaLi, the International Searching Authority written comments, Mar. 2014, CN.

(22) PCT Filed: **Jun. 30, 2013**

(86) PCT No.: **PCT/CN2013/078530**

* cited by examiner

§ 371 (c)(1),
(2) Date: **Aug. 6, 2013**

Primary Examiner — Elmito Brevall

(87) PCT Pub. No.: **WO2014/201721**

PCT Pub. Date: **Dec. 24, 2014**

(57) **ABSTRACT**

(65) **Prior Publication Data**

US 2016/0139448 A1 May 19, 2016

The invention provides a splicing backplane for a backlight module, which is arranged on the backside of the backlight module. The splicing backplane comprises a mounting portion and a supporting portion, wherein the horizontal height of the mounting portion is level with or lower than that of the supporting portion; and a plurality of the splicing backplanes are assembled together by the mutual superposition of various mounting portions. A plurality of the splicing backplanes are superposed with each other and combined into one, and the height differences between the mounting portions and the supporting portions of two adjacent backplanes are unequal, so that one backplane can be accommodated into the other backplane. In addition, after the superposition, the overall thickness of the backplanes is invariable.

(30) **Foreign Application Priority Data**

Jun. 20, 2013 (CN) 2013 1 0248141

(51) **Int. Cl.**
G02F 1/1333 (2006.01)

(52) **U.S. Cl.**
CPC **G02F 1/133308** (2013.01); **G02F 2001/133314** (2013.01); **G02F 2001/133328** (2013.01)

(58) **Field of Classification Search**
CPC G02F 1/133308; G02F 2001/133314; G02F 2001/133328

See application file for complete search history.

17 Claims, 2 Drawing Sheets

