United States Patent [19]

Kawachi

[11] **Patent Number: 4,767,679**

[45] **Date of Patent: Aug. 30, 1988**

[54] **THIN FILM EL PANEL**

[75] Inventor: **Kazuhiko Kawachi**, Furukawa, Japan

[73] Assignee: **Alps Electric Co., Ltd.**, Japan

[21] Appl. No.: **86,373**

[22] Filed: **Aug. 17, 1987**

[30] **Foreign Application Priority Data**

Oct. 22, 1986 [JP] Japan 61-250983

[51] **Int. Cl.**[4] **B32B 9/00**; H01J 1/62

[52] **U.S. Cl.** **428/690**; 428/691; 428/917; 313/503; 313/504; 313/505; 313/506; 313/512

[58] **Field of Search** 428/690, 691, 917; 313/503–506, 512

[56] **References Cited**

U.S. PATENT DOCUMENTS

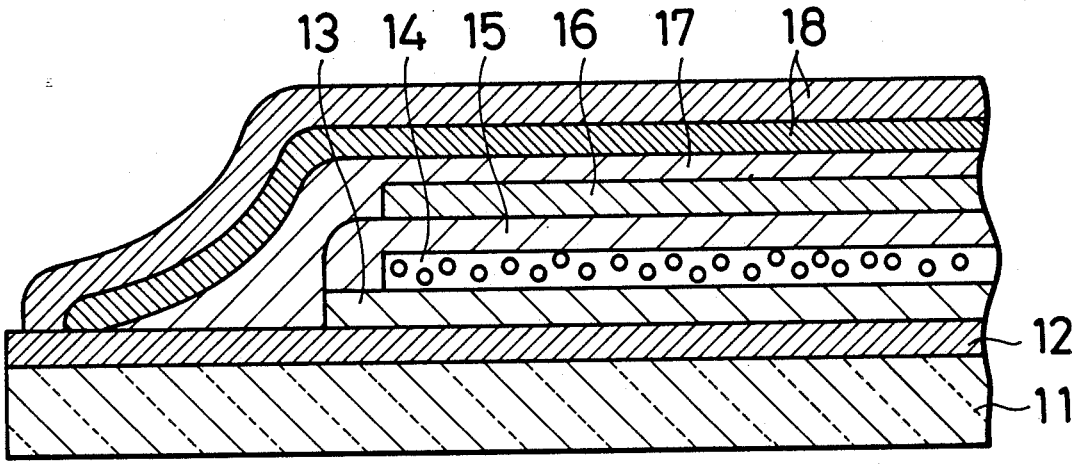
3,346,758 10/1967 Dell 313/512
4,020,389 4/1977 Dickson et al. 313/512
4,593,228 6/1986 Albrechtson et al. 313/512
4,647,337 3/1987 Simozoulos et al. 756/633

FOREIGN PATENT DOCUMENTS

0188881 7/1986 European Pat. Off. 313/512
0083196 6/1986 Japan 313/512

Primary Examiner—John E. Kittle
Assistant Examiner—Patrick J. Ryan
Attorney, Agent, or Firm—Guy W. Shoup; Paul J. Winters; Leighton K. Chong

[57] **ABSTRACT**

A thin film EL panel including at least a transparent electrode, an EL luminescent layer, an insulating layer and an opposite electrode laminated on a transparent insulating substrate, wherein the thin-film-formed side of the substrate is sealed by a moisture-proof film with a thermoplastic resin interposed between them.

2 Claims, 1 Drawing Sheet