

SEL EXHIBIT NO. 2021

INNOLUX CORP. v. PATENT OF SEMICONDUCTOR ENERGY
LABORATORY CO., LTD.

IPR2013-00064



[54] THIN FILM TRANSISTOR WITH A MULTI-METAL STRUCTURE A METHOD OF MANUFACTURING THE SAME

5,976,902 11/1999 Shih 438/30
5,981,972 11/1999 Kawai et al. 257/59
6,011,274 1/2000 Gu et al. 257/59

[75] Inventor: Wen-Jyh Sah, Jen Te, Taiwan

FOREIGN PATENT DOCUMENTS

[73] Assignee: Chi Mei Optoelectronics Corp., Hsinchu, Taiwan

2-219275 8/1990 Japan 257/66
2-224275 9/1990 Japan 257/61
3-44968 2/1991 Japan 257/61
6-85255 3/1994 Japan 257/72

[21] Appl. No.: 09/328,580

Primary Examiner—Donald L. Monin, Jr.

[22] Filed: Jun. 10, 1999

[57] ABSTRACT

[51] Int. Cl.⁷ H01L 29/04; H01L 31/036

The present invention includes forming a gate on a transparent substrate. A gate isolation layer is then formed on the gate. An amorphous silicon (a-Si) layer and n+ doped silicon layer are successively formed on the gate isolation layer. Then, the a-Si layer and the n+ doped silicon layer are patterned. A first, a second and a third metal layers are successively formed on the n+ doped silicon layer, thereby forming a multi-metal layer structure. Subsequently, a wet and a dry etching is utilized to etch the multi-metal layer, thereby defining the S/D electrodes. A passivation layer is deposited on the S/D structure.

[52] U.S. Cl. 257/59; 257/66; 257/72

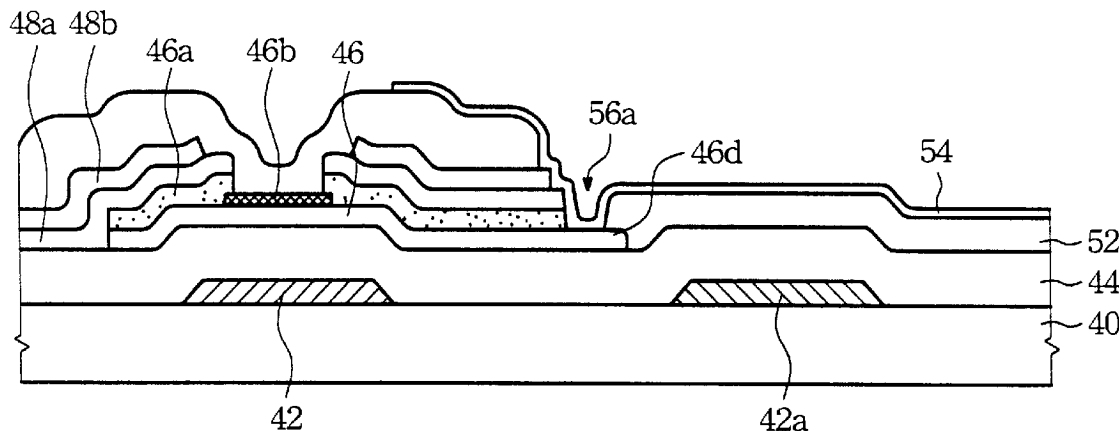
[58] Field of Search 257/59, 72, 66, 257/61, 57, 58, 60, 462, 459

[56] References Cited

U.S. PATENT DOCUMENTS

5,362,660 11/1994 Kwasnick et al. 437/40
5,498,573 3/1996 Whetten 437/192
5,867,242 2/1999 Yao et al. 349/122
5,905,274 5/1999 Ahn et al. 257/59
5,920,082 7/1999 Kitazawa et al. 257/59
5,942,767 8/1999 Na et al. 257/59

26 Claims, 9 Drawing Sheets



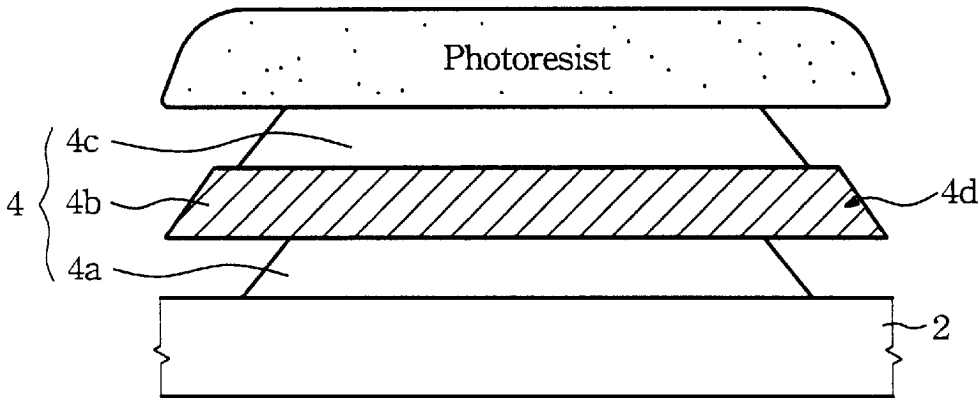


FIG.1
(Prior Art)

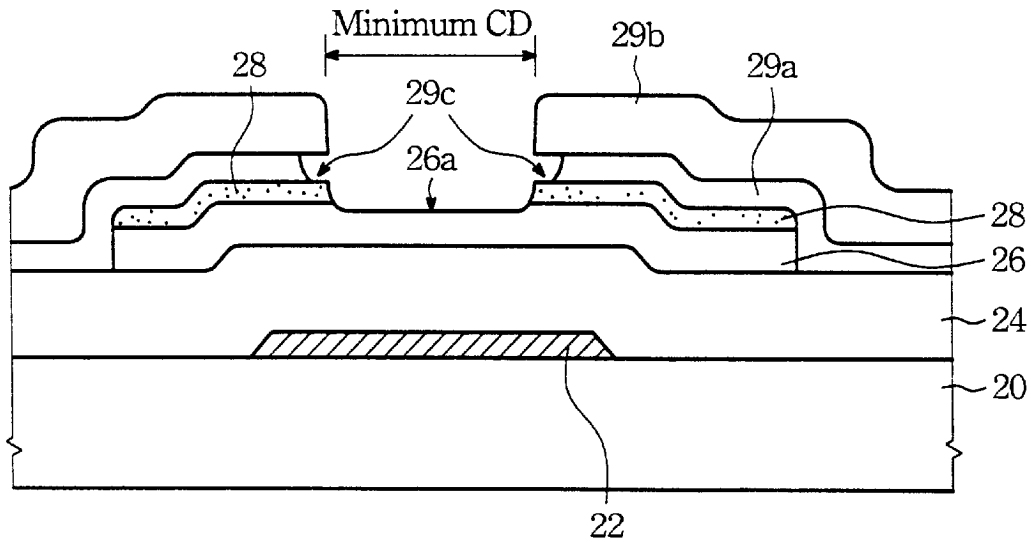


FIG.2
(Prior Art)

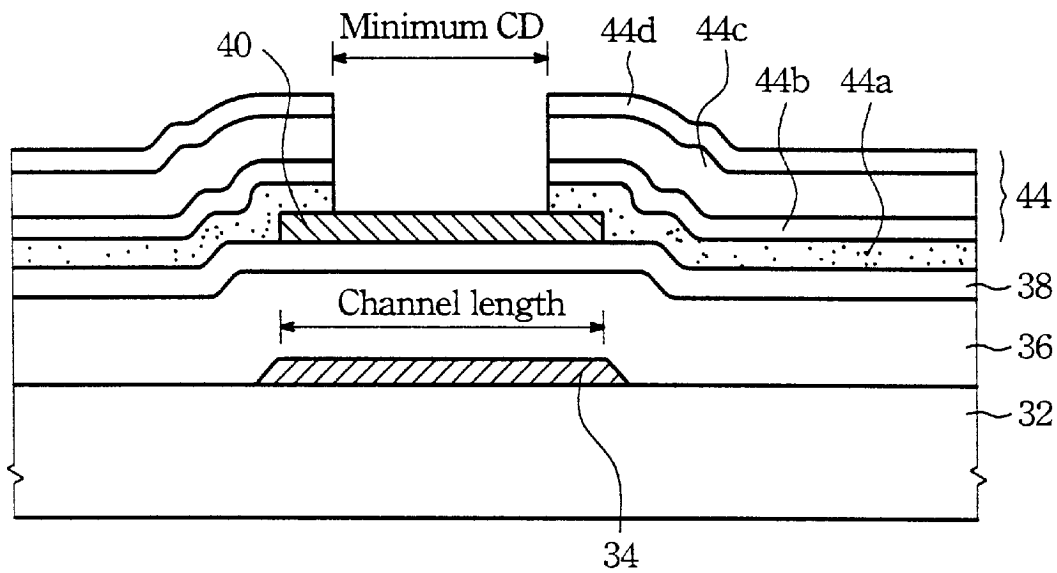


FIG.3
(Prior Art)

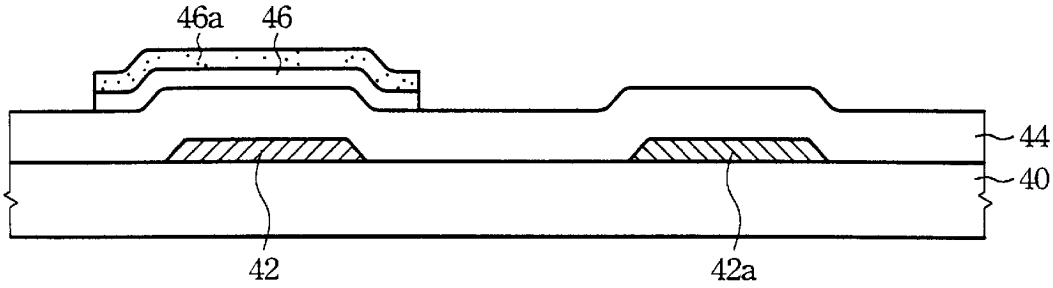


FIG.4

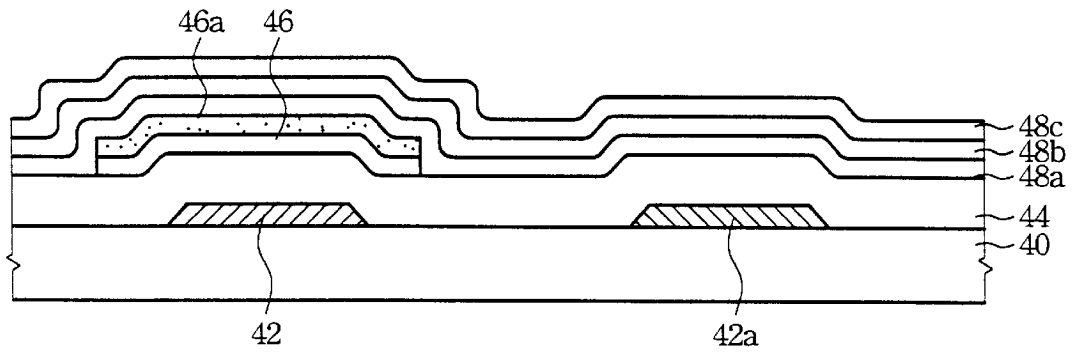


FIG.5

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.