Trials@uspto.gov
Tel: 571-272-7822

Paper 7
Entered: April 24, 2013

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CHIMEI INNOLUX CORPORATION
Petitioner

v.

SEMICONDUCTOR ENERGY LABORATORY CO., LTD.[1]
Patent Owner

Case IPR2013-00068(SCM)
Patent 8,068,204 B2

Before SALLY C. MEDLEY, KARL D. EASTHOM, and KEVIN F. TURNER, *Administrative Patent Judges.*

EASTHOM, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

---

[1] *See* Paper 5 at 1-2 (counsel for Semiconductor Energy Laboratory Co., Ltd., referring to a USPTO recorded assignment of application number 09/165,628, at reel 009581, frame 0943, as evidence of ownership of the `204 patent).

I. BACKGROUND

Petitioner, Chimei Innolux Corp. ("CMI"), filed a Petition[2] to institute an *inter partes* review of claims 31, 33, 36, 38, 40, 43, 45, 46, 48, 51, 53, 54, 56, 59, 61, 63, 66, 68, 70, 73, 75, 76, 78, 81, and 83 of U.S. Patent 8,068,204 B2 owned by Semiconductor Energy Laboratory Co., Ltd. ("SEL"). *See* 35 U.S.C. § 311. In response, Patent Owner, SEL, filed a Preliminary Response.[3] The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a):

> THRESHOLD – The Director may not authorize an inter partes review to be instituted unless the Director determines that the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.

Pursuant to the defined threshold under 35 U.S.C. § 314(a), the Board institutes an *inter partes* review of claims 31, 33, 36, 38, 40, 43, 45, 46, 48, 51, 53, 54, 56, 59, 61, 63, 66, 68, 70, 73, 75, 76, 78, 81, and 83 of the `204 patent.

A. The `204Patent

The `204 patent describes LCD (liquid-crystal display) devices having two opposing substrates bonded together with a sealant material. (*See* Ex. 1001, Abstract.) According to the `204 patent, prior art LCD devices have non-uniform seals which create an uneven gap between the two opposing substrates. The uneven gap ultimately results in deteriorated LCD image quality. (*See* Ex. 1001, Fig. 14A; col. 1, ll. 34-49; col. 2, ll. 53-63.) The uneven seal and consequent gap occur because peripheral drive circuits and conducting lines extend under the sealing region in a non-uniform manner, for example, only in some locations or

[2] *Petition for Inter Partes Review of U.S. Patent No. 8,068,204 Under 35 U.S.C. §§ 311-319 and 37 C.F.R. § 42.100 Et Seq.* (Nov. 30, 2012).
[3] *Patent Owner Preliminary Response Under 37 C.F.R. § 42.107* (Mar. 6, 2013).

with varying width and density. (*Id*. at Fig. 14A; col. 1, ll. 46-49; col. 2, l. 25 – col. 3, l. 3.) The `204 patent discloses a solution to the seal problem which includes employing adjustment wiring lines that have the same thickness, width, and spacing as external conducting lines and auxiliary lines. The lines extend under the sealant relatively uniformly in one or more of thickness, width, and spacing in order to render the seal and consequent gap between opposing substrates more uniform. (*Id*. at col. 3, ll. 52-57; col. 4, ll. 65-67; col. 6, ll. 24-40; and Figs. 4A, 4B.)

The `204 patent also describes connecting, through contact holes in a first insulating film, two conducting lines in parallel to minimize the total resistance of the lines. (*Id*. at col. 3, ll. 57-63; col. 8, ll. 42-51.) To accommodate for such lines extending under the sealant, the `204 patent describes using overlapping adjustment layers adjacent the conducting lines under the sealant. (*Id*. at col. 3, ll. 52-63; col. 9, ll. 20-46; Figs. 4A; 4B.)

Figures 4A and 4B, which follow, illustrate the parallel connected auxiliary and connection lines, and the adjustment layers:

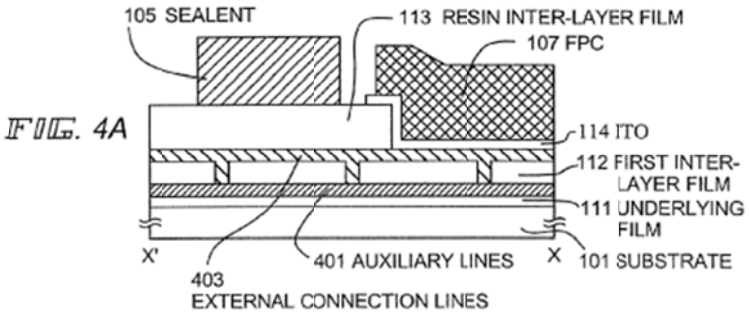


FIG. 4A

Figure 4A depicts external connection 403 and auxiliary 401 lines electrically connected together. As the figure shows, the lines extend under sealant 105. Figure 4A also depicts the flexible printed circuit 107 (FPC) electrically connected to an indium tin oxide (ITO) transparent conductive film 114 which is

connected through contact holes in insulating film layer 113 to external connection lines 403. (*Id*. at col. 8, ll. 52-60.)

Figure 4B, below, depicts first and second adjustment layers 402 and 404 employed to render the sealant height and consequent substrate-to-substrate gap more uniform as explained *supra*.

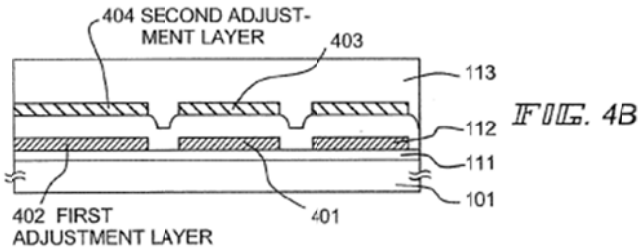
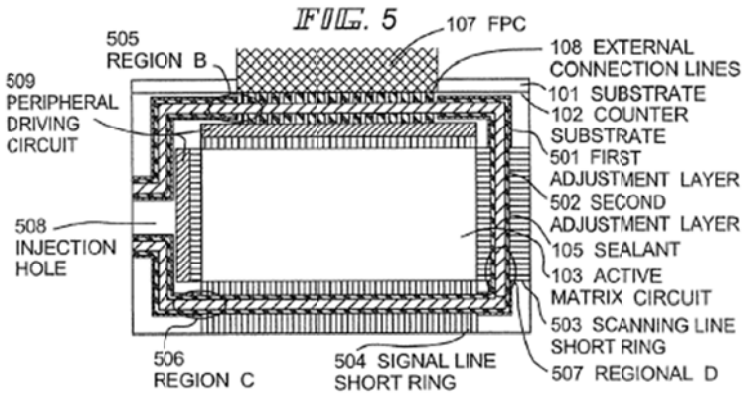


FIG. 4B

The adjustment layers 402 and 404 may be electrically isolated from the electrically connected auxiliary 401 and external connection 403 lines. (*Id*. at col. 4, ll. 45-48.)

Figure 5 represents another view which employs the same connection scheme represented in Figures 1, 4A, and 4B and depicts the FPC 107 connected to external connection lines 108 which extend under the sealant 105 and connect to the peripheral driving circuit 509 and active matrix circuit 103. (*See id*. at col. 9, ll.55-65.)

FIG. 5



B. Illustrative Claim

Claim 31 follows:

31. A liquid crystal display device comprising:

a substrate having thin film transistors;

pixel electrodes each electrically connected to one of the thin film transistors;

a counter substrate facing the substrate;

a liquid crystal material provided between the substrate and the counter substrate;

a sealant provided between the substrate and the counter substrate, and surrounding the liquid crystal material;

an auxiliary line;

an external connection line overlapping the auxiliary line with a first insulating film interposed therebetween, at least part of the external connection line and at least part of the auxiliary line extending under the sealant;

an adjustment layer, at least part of the adjustment layer extending under the sealant;

a second insulating film interposed between the sealant and the external connection line;

and a flexible printed circuit over and in electrical contact with the external connection line through a transparent conductive film;

wherein the sealant is in direct contact with the second insulating film;

wherein the external connection line is electrically connected to the auxiliary line;

DOCKET ALARM

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.