

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INNOLUX CORPORATION  
Petitioner,

v.

SEMICONDUCTOR ENERGY LABORATORY CO., LTD.  
Patent Owner.

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Case IPR2013-00028

U.S. Patent 6,404,480

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**PETITIONER'S REPLY TO RESPONSE OF THE PATENT OWNER**

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## **EXHIBIT LIST**

### **Previously Filed**

- |              |   |
|--------------|---|
| Exhibit 1001 | U.S. Patent No. 6,404,480 to Hirakata                               |
| Exhibit 1004 | Unexamined Patent Application Publication H5-243333<br>("Moriyama") |
| Exhibit 1007 | Declaration of Miltiadis Hatalis, Ph.D.                             |
| Exhibit 1005 | U.S. Patent No. 4,600,273 to Ohno                                   |

### **Currently Filed**

- |              |   |
|--------------|---|
| Exhibit 1009 | Deposition transcript of Miltiadis Hatalis, Ph.D. dated May 20, 2013                                    |
| Exhibit 1010 | Deposition transcript of Paul A. Kohl, Ph.D. dated August 14, 2013                                      |
| Exhibit 1011 | Declaration of Miltiadis Hatalis, Ph.D. in support of Innolux Corp.'s Opposition to Amendment and Reply |

Petitioner Innolux Corporation ("Innolux") hereby provides its reply to Patent Owner Semiconductor Energy Laboratory Co., Ltd.'s ("SEL" or "Patent Owner") response to the Decision to Initiate Trial for Inter Partes Review of claims 1, 2, 5-7, 10-12 and 15 of United States Patent No. 6,404,480 ("the '480 Patent").

The '480 patent specification provides a detailed description of the prior art LCD structure upon which the '480 patent purports to improve, *i.e.*, the Admitted Prior Art ("APA") shown in Figures 12 and 13. The APA discloses the structure recited in the independent claims of the '480 patent with a single exception of the placement of the conductive spacers over the second interlayer insulating film.

SEL's expert, Dr. Kohl, confirmed that the features shown in Figure 13 of the Admitted Prior Art were known prior to the invention claimed in the '480 patent. Deposition transcript of Paul A. Kohl, Ph.D. dated August 14, 2013 ("Ex. 1010") at 76:23-77:5. That feature, however, also was well known in the prior art as the Moriyama reference makes clear. For this reason, claims 1, 2, 5-7, 10-12 and 15 are rendered obvious over the APA in view of Moriyama.

**I. CLAIMS 1, 5, 6, 10, 11, AND 15 OF THE '480 PATENT ARE OBVIOUS OVER THE APA IN VIEW OF MORIYAMA**

**A. The claims are not restricted to a single common contact portion**

In an attempt to distinguish the claims from the APA, SEL initially responds that the claims should be limited to a single common contact portion of the active matrix display device described in the '480 patent. Resp. at 36. That is, according

to SEL's interpretation of the claims, the claimed "at least two openings" and "a plurality of conductive spacers" must all be present in a single common contact portion, and that the other common contact portions on the substrate should not be considered. SEL relies on specific embodiments in the specification as support for its narrow interpretation of the claims, but the specification does not support SEL's position. In fact, other figures show that there are, in fact, multiple common contact portions on the substrate. Ex. 1001, Figs. 3-4 (contact holes 16a-d). And, contrary to SEL's assertion, the portions of the specification upon which it relies also do not state that the "openings" refer to a *single common contact portion*. Indeed, the specification repeatedly refers to the entire substrate. *See e.g.*, Ex. 1001, col. 6, ll. 1-8 ("In the present embodiment, as shown in FIG. 1, a first conducting film 103 is formed on a first substrate 101. A dielectric film 104 is deposited on the first conducting film 103. The dielectric film 104 is selectively left to form openings 111 [on the substrate] that expose parts of the first conducting film 103.") (emphasis added). As the Board recognized, "much of the Specification is directed to contact structures for electrically connecting together conducting lines formed on two opposite substrates generally." *See* Decision on Request for Rehearing [Paper No. 27] at 9. Thus, SEL's construction improperly attempts to import limitations shown in some of the figures into the claims. Decision at 13; Decision on Request for Rehearing at 10.

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