

**SEL EXHIBIT NO. 2024**

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

**IPR2013-00068**

# SEMINAR M- 1

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## STATUS OF ELECTRONIC DISPLAYS

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### Summary

This seminar is intended to serve as an introduction to the more-detailed CRT and flat-panel topics which follow in the other seminars, short courses, application seminars, applications sessions, and symposium. It is intended to provide both the novice and serious display technologist with a snapshot in time as to the relative status, features, and limitations of each of the major direct-view display technologies. The technologies covered include conventional CRTs (including field-emission devices), electroluminescence, plasma, flat CRTs, and liquid-crystal displays. Current status, features, limitations, and an overview of the most recent developments in each technology will be presented. Technology trends and prospects for the future will also be reviewed.



SOCIETY FOR INFORMATION DISPLAY

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# NOTES

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# STATUS OF ELECTRONIC DISPLAYS

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## Introduction and Discussion

In recent years the status of the various advanced display technologies has been changing rapidly. Since this talk was last presented at the 1994 SID, significant progress has occurred. Continued research in the flat panel display area has resulted in the introduction of high information content products which challenge the CRT in many specialized applications, have replaced it some others and dominate in applications which require the many desirable potential flat panel attributes, including smaller form factor, lower weight, lower power, etc.. However the CRT has also advanced and continues to set the standard by which all other products are measured. Where large size, high performance (> 1000 lines) and/or low cost are paramount, the CRT still dominates in both direct view and projection applications. In addition to serving as a basic technology introduction for the more detailed Seminar and Symposium topics to follow, this talk will attempt to compare the current status of each technology, provide a list of representative "largest available" current products and identify technology trends.

The figures and tables which follow give the overview of each of the technologies and are intended to be self explanatory. During the presentation, additional color slides will be shown which provide examples of the current performance representative of each technology. It is hoped that this review and summarization will be useful to the attendees.

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