

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SAMSUNG ELECTRONICS CO., LTD.; AND  
SAMSUNG ELECTRONICS AMERICA, INC.,  
Petitioners,

v.

NEODRON LTD.,  
Patent Owner.

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Case No. IPR2020-00267  
U.S. Patent No. 8,432,173

**DECLARATION OF RICHARD A. FLASCK**

Neodron Ltd.

## **I. INTRODUCTION**

1. I have been retained as an expert in this case by Neodron Ltd. (“Neodron”). I have been asked to consider and opine on issues of validity regarding U.S. Patent No. 8,432,173 (“173 Patent”).
2. In forming my opinions, I have reviewed, considered, and had access to the patent specifications and claims, their prosecution histories, the parties’ proposed claim constructions, and the extrinsic evidence cited by the parties in connection with those proposed constructions. I have also relied on my professional and academic experience in the fields of thin film devices, flat panel displays, active matrix, LED, OLED, touchscreens, and touch panels. I reserve the right to consider additional materials as I become aware of them and to revise my opinions accordingly.

## **II. QUALIFICATIONS**

3. My qualifications for forming the opinions set forth in this Declaration are summarized here and explained in more detail in my curriculum vitae, which is attached as Exhibit 2002.
4. I received a Bachelor of Science degree in Physics from the University of Michigan, Ann Arbor, in 1970. I thereafter received a Master of Science degree in Physics from Oakland University in Rochester, Michigan, in 1976. I am the founder and CEO of RAF Electronics Corp., where I developed and

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patented Liquid Crystal on Silicon (LCOS) microdisplay projection technology using active matrix transistor arrays as well as developed proprietary LED-based Solid State Lighting (SSL) products.

5. After receiving my bachelor's degree, I was employed as a scientist and a manager by Energy Conversion Devices, Inc., from 1970 through 1982. My work at Energy Conversion Devices concerned the development of electroluminescent displays, thin film photovoltaics, ablative imaging films, non-volatile memory, multi-chip modules, and superconducting materials. After leaving Energy Conversion Devices, I founded and served as CEO of Alphasil, Inc., where I developed amorphous silicon thin film transistor (TFT) active matrix liquid crystal displays (AMLCDs). My work at Alphasil included thin film transistor array substrate process and circuit design, data driver and gate driver design, scalars, video circuits, gamma correction circuits, backlighting, and inverter design. At Alphasil I also designed and incorporated touch panel screens into active matrix display devices. The touch panel technologies included surface acoustic wave and capacitive sensing. I worked at Alphasil from 1982 through 1989.
6. After leaving Alphasil, I founded RAF Electronics Corp., described above. I have served as CEO of RAF Electronics since that time. At RAF I developed HDTV projection technology including transistor array substrates for LCOS

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devices and the associated optical systems. My activities at RAF have included developments in lighting systems using both traditional LED and OLED (Organic Light Emitting Diode) technologies. In 2016 I was granted US Patent 9,328,898 which includes OLED and LED technology and lighting systems. In 2019 RAF received a CalSEED grant from the California Energy Commission to develop ultra-efficient lighting products and explore establishing a Central Valley manufacturing facility.

7. In 1997, I took the position of President and COO at Alien Technology Corporation, where I was responsible for completing a Defense Advanced Research Projects Agency (DARPA) contract, and for implementing MEM fluidic self-assembly (FSA) technology. I left that position in 1999.
8. In 2002, I co-founded and served as COO of Diablo Optics, Inc., where I developed, produced, and commercialized key optical components for HDTV projectors, such as polarization optics, condenser lenses, projection lenses, and ultra-high performance optical interference filters using thin film stacks in conjunction with LED and thin film transistor arrays and devices. I left Diablo in 2007.
9. I am listed as an inventor on twenty-six patents issued in the United States and foreign countries, including one United States design patent. My inventions concern technologies including LED devices, semiconductor materials, glass

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materials, non-volatile memory cells, thin film transistors, flat panel backplanes and displays, and wafer based active matrices, and various transistor array substrates.

10. I have authored or co-authored twenty-five articles or conference presentations, including numerous papers and presentations concerning lighting and display technologies. My curriculum vitae (Exhibit A) lists these articles, conference presentations, and patents.
11. I am also a member of several professional organizations, including the OSA, SPIE, AES, SID, and the IEEE.
12. In summary, I have almost 50 years of experience in the field of high tech product development including flat panel displays, transistor array substrates, touchscreens and touch panels, and OLED and LED devices.
13. In the past twelve years, I have served as an expert witness for patent infringement litigation (or arbitrations) or PTAB proceedings in the following cases:
  - *Nichia Corporation v. Seoul Semiconductor*, 3:06-cv-0162 (NDCA), on behalf of Seoul Semiconductor Company, Inc.
  - *Hewlett Packard v. Acer Incorporated et al.*, U.S. ITC Investigation No. 337-TA-606, on behalf of Acer Incorporated et al.

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