

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

EVERLIGHT ELECTRONICS CO. LTD
Petitioner

v.

DOCUMENT SECURITY SYSTEMS, INC.,
Patent Owner

U.S. Patent No. 7,919,787

**DECLARATION OF ERIC BRETSCHNEIDER, Ph.D IN SUPPORT OF
PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 7,919,787**

I. INTRODUCTION

1. I, Eric Bretschneider, of 2622 Westwind Drive, Corinth, TX 76210 have been retained by Sughrue Mion, PLLC on behalf of Everlight Electronics Co. Ltd. to analyze U.S. Patent No. 7,919,787 (“the ’787 patent,” Exhibit 1001), as well as certain prior art references, and what a person of ordinary skill in the art related to packaging for semiconductor based light emitting devices would have understood at the time the earliest application underlying the ’787 Patent was filed.

2. I was asked to review and opine on the documents filed and positions taken in IPR2018-00965 filed by Nichia Corp., (“the Nichia IPR”), including the Declaration of James Richard Shealy Ph.D. and the exhibits cited therein.

3. This report summarizes the opinions I have formed to date. In general, as set forth below, I agree with the analysis and conclusions of Dr. Shealy.

4. For the sake of efficiency, I have incorporated parts of Dr. Shealy analysis with which I agree, into this Declaration.

5. I reserve the right to modify my opinions, if necessary, based on further review and analysis of information that I receive subsequent to the filing of this report, including in response to positions taken by Document Security

Systems, Inc. or its experts that I have not yet seen.

II. MY EXPERIENCE AND QUALIFICATIONS

6. I have over 25 years of experience with lighting and LEDs, including a comprehensive background on the full range of LED production technologies including MOCVD hardware/process design, LED chip fabrication, optical/thermal/mechanical design of LED packages, phosphor conversion, and testing/reliability of LED packages and LED fixtures.

7. I am currently the Chief Technology Officer at EB Designs & Technology. I am also current a member and Chair of the University of Florida Department of Chemical Engineering Advisory Board.

8. Prior to EB Designs & Technology, I served as the Director of Engineering at HeathCo, LLC. In that capacity, I was responsible for advanced technology/product development related to solid-state lighting, sensors, notifications and control products.

9. Prior to HeathCo, I was positioned at the Elec-Tech International Co., Ltd. There I held the concurrent positions of Chief Engineer, ETi Lighting Research Institute and VP of Research and Development, ETi Solid State Lighting. In this capacity, I led and trained a staff of over 100 engineers, technicians and designers in the methods and

procedures for designing solid-state lighting products. This included determining spectral content, LED package reliability, thermal management, optical design, control integration and electrical drive circuits. I also had technical responsibility for LED die, package and light engine design for products intended for the domestic Chinese market as well as markets in Japan, North America and Europe.

10. Between 2004 and 2008, I was positioned at Toyoda Gosei North America, where I was the sole technical support for Toyoda Gosei LED die and packages in the Western Hemisphere.

11. Between 2003 and 2004, I was positioned at Beeman Lighting, where I was Director of Solid State Lighting Engineering, and my responsibilities included leading development of solid state lighting systems and materials.

12. Between 1998 and 2003 I held a position at Uniroyal Optoelectronics, where I was Team Leader for the Epitaxial Growth and Materials Characterization areas. I later held the position of Director of Intellectual Property, University Relations and Government contracts. From 1999 through 2003 I had a concurrent assignment as a Senior Epi Scientist. Throughout these roles I supported all sales efforts for LED die and package sales.

13. While at Uniroyal Optoelectronics, I had primary responsibility for thermal and optical design of LED die and packages. A part of my responsibility in supporting sales of LED die and packages included thermal and optical design of packages for LED die customers and thermal and optical modeling of LED modules and fixtures for LED package customers.

14. I have also authored and presented more than a total of 30 publications, presentations, and seminars, and I am a named inventor on over 30 issued patents and over 25 pending patents.

15. I received a BSE in Chemical Engineering from Tulane University in 1989 and a Ph.D. in Chemical Engineering from the University of Florida in 1997.

II. MATERIALS CONSIDERED

16. In forming my opinions, I read and considered the '787 patent and its prosecution history, the exhibits listed in the Exhibit List filed with the petition for *inter partes* review of the '787 patent, as well as any other material referenced herein.

17. For any future testimony I may give in this matter, I may use some or all of the documents and information cited to, referred to, and identified in this declaration, as well as any additional materials that are entered into evidence in this matter.

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.