

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

E. FRED SCHUBERT,)	
)	
Plaintiff,)	Civ. No. _____
)	
v.)	JURY TRIAL DEMANDED
)	
OSRAM AG, OSRAM OPTO)	
SEMICONDUCTORS GmbH, OSRAM)	
OPTO SEMICONDUCTORS, INC., and)	
OSRAM SYLVANIA INC.,)	
)	
Defendants.)	

COMPLAINT FOR PATENT INFRINGEMENT

Professor E. Fred Schubert (“Professor Schubert” or “Plaintiff”) for his Complaint against OSRAM AG, OSRAM Opto Semiconductors GmbH, OSRAM Opto Semiconductors, Inc., and OSRAM Sylvania Inc. (collectively “OSRAM”) alleges as follows:

NATURE OF THE ACTION

1. Professor Schubert brings this action under the patent laws of the United States to remedy OSRAM’s unlawful infringement of Professor Schubert’s patent rights relating to light-emitting diode (“LED”) technology.
2. Professor Schubert is a leading researcher and educator in the field of gallium nitride (“GaN”) optoelectronic semiconductor devices such as LEDs. GaN-based LEDs emit green, blue, violet, or ultraviolet light. GaN-based LEDs, particularly high-brightness blue GaN-based LEDs, can also be used to generate white light and are revolutionizing the lighting industry.
3. On information and belief, in many of today’s high-brightness GaN-based LEDs, including those made by OSRAM, crystallographic etching is used to roughen or texture one or

more surfaces of the LED, significantly increasing light extraction and thus brightness. Such crystallographic etching is the subject of the patent-in-suit, which Professor Schubert owns and of which he is an inventor.

4. On information and belief, OSRAM uses wet chemical crystallographic etching as part of its manufacturing process for its high-brightness GaN-based LEDs and thereby infringes one or more claims of the patent-in-suit.

PARTIES

5. Plaintiff Professor Schubert is an individual residing at 17 Eaton Road, Troy, New York. Professor Schubert is the Wellfleet Senior Constellation Professor, Future Chips at Rensselaer Polytechnic Institute (“RPI”) in Troy, New York. In addition, he is the Founding Director of the Smart Lighting Engineering Research Center at RPI that is funded by the National Science Foundation. He is also a Professor of Electrical Engineering at RPI.

6. Professor Schubert has made numerous significant contributions to the field of compound semiconductors, such as in regard to alloy broadening, delta-doping, resonant-cavity light emitting diodes, enhanced spontaneous emission in Er-doped Si/SiO₂ microcavities, photonic crystal light-emitting diodes, elimination of heterojunction band discontinuities, p-type superlattice doping in AlGaN, polarization-enhanced ohmic contacts, omni-directional reflectors for LEDs, perfect anti-reflection coatings, and crystallographic etching of GaN. He is an inventor or co-inventor of more than 30 U.S. patents and coauthored more than 300 publications. He authored the textbooks *Doping in III–V Semiconductors* (1992), *Delta Doping of Semiconductors* (1996), and *Light-Emitting Diodes* (1st edition 2003 and 2nd edition 2006). He is a Fellow of the APS, IEEE, OSA, and SPIE scientific societies and has received numerous awards.

7. On information and belief, OSRAM AG is a corporation organized under the laws of Germany with its principal place of business at Hellabrunner Strasse 1, 81543 Munich, Germany.

8. On information and belief, OSRAM Opto Semiconductors GmbH is a corporation organized under the laws of Germany with its principal place of business at Leibnizstrasse 4, 93055 Regensburg, Germany.

9. On information and belief, OSRAM Opto Semiconductors, Inc. is a corporation organized under the laws of the state of Delaware, with its principal place of business at 1150 Kifer Road, Suite 100, Sunnyvale, California 94086.

10. On information and belief, OSRAM Sylvania Inc. is a corporation organized under the laws of the state of Delaware, with its principal place of business at 100 Endicott Street, Danvers, Massachusetts 01923.

JURISDICTION AND VENUE

11. This is an action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

12. This Court has personal jurisdiction over each Defendant because each Defendant has, directly or through intermediaries, committed acts within Delaware giving rise to this action and/or has established minimum contacts with Delaware such that the exercise of jurisdiction would not offend traditional notions of fair play and justice. Furthermore, OSRAM has availed itself of this forum for purposes of litigating its patent disputes. For instance, OSRAM has submitted to the jurisdiction of this Court by filing and litigating the patent infringement actions styled *Osram Sylvania Inc. v. Durel Corp.*, Civ. No. 00-501-GMS (D. Del.), *OSRAM GMBH v.*

Citizen Watch Co., LTD., Civ. No. 06-710-SLR (D. Del.), and *OSRAM GmbH v. Samsung Elecs. Co., LTD.*, Civ. No. 11-496-SLR (D. Del.).

13. Venue is proper in this district under 28 U.S.C. §§ 1391 and 1400.

PATENT-IN-SUIT

14. On September 25, 2001, United States Patent No. 6,294,475 (“the ’475 patent”), entitled “Crystallographic Wet Chemical Etching of III-Nitride Material,” was duly and legally issued. Plaintiff is the owner by assignment of the ’475 patent.

15. A true copy of the ’475 patent is attached hereto as Exhibit A.

COUNT I

INFRINGEMENT OF U.S. PATENT NO. 6,294,475

16. Plaintiff incorporates by reference each and every allegation of paragraphs 1-15 of this Complaint, as though set forth here in their entirety.

17. Plaintiff is the sole owner of the entire right, title, and interest in and to the ’475 patent, including the right to sue and recover for any and all infringement thereof.

18. OSRAM makes, uses, offers to sell, sells, and/or imports products in the United States that infringe the ’475 patent. For example, OSRAM is manufacturing, marketing, distributing, using, selling, and/or offering to sell infringing high-brightness GaN-based LEDs, including, without limitation, LEDs incorporating technology known as “ThinGaN.” Accused ThinGaN technology LEDs include, but are not limited to, products in the following representative product lines:

TOPLED Standard
TOPLED Reverse Gullwing
TOPLED Black Series
Power TOPLED without Lens
Advanced Power TOPLED
Golden DRAGON
Platinum DRAGON

Golden DRAGON Plus
Golden DRAGON Oval Plus
OSTAR Headlamp
OSTAR Projection
OSTAR SMT
OSTAR Compact
CERAMOS
OSLON Black Series
OSLON SX
OSLON MX
OSLON LX
OSLON SSL 80
OSLON SSL 150
OSLON Square
OSLUX
MULTILED
Multi-CHIPLED
Multi-CERAMOS
Mini TOPLED Standard
PointLED
SmartLED 0603
CHIPLED with Lens
SIDELED
Micro SIDELED

19. As a result of the infringement of the '475 patent, Plaintiff has been damaged, will be further damaged, and is entitled to be compensated for such damages, pursuant to 35 U.S.C. § 284, in an amount to be determined at trial, but no less than a reasonable royalty.

WILLFUL INFRINGEMENT

20. OSRAM has had knowledge of the '475 patent since no later than on or about May 4, 2010, when the U.S. Patent and Trademark Office cited the '475 patent as prior art which rendered unpatentable certain claims of OSRAM's Patent Application No. 11/579,194. OSRAM also has had knowledge of the '475 patent no later than on or about February 18, 2011, when OSRAM was specifically notified of the patent. On information and belief, OSRAM purposefully continued its infringing activity despite knowledge of the '475 patent and despite an objectively high likelihood that its actions constituted infringement of one or more valid claims

of the '475 patent (as OSRAM knew or should have known), warranting an award of increased damages and a finding that this case is "exceptional" pursuant to 35 U.S.C. §§ 284 and 285.

JURY TRIAL DEMAND

21. Professor Schubert demands a jury trial on all appropriate issues.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Professor Schubert respectfully requests that this Court enter:

1. A judgment in favor of Plaintiff that OSRAM has infringed the '475 patent;
2. A preliminary and a permanent injunction enjoining OSRAM and its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert therewith from infringement of the '475 patent;
3. A judgment and order requiring OSRAM to pay Plaintiff his damages, costs, expenses, and prejudgment and post-judgment interest for OSRAM's infringement of the '475 patent as provided under 35 U.S.C. § 284;
4. An award to Plaintiff of treble damages resulting from the knowing, deliberate, and willful nature of OSRAM's prohibited conduct, as provided under 35 U.S.C. § 284;
5. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to Plaintiff his reasonable attorneys' fees; and
6. Any and all other relief as the Court deems just and proper.

Dated: July 18, 2012

Respectfully submitted,

FARNAN LLP

/s/Michael J. Farnan

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