

place of business at 100 Endicott Street, Danvers, Massachusetts 01923.

5. Defendant, OSRAM Opto Semiconductors GmbH, is a German corporation, having its principal place of business at Leibnizstr 4, 93055 Regensburg, Germany.

JURISDICTION AND VENUE

6. This is an action for patent infringement arising under the patent laws of the United States, Title 35, United States Code, specifically §§ 271 and 281-285. This Court has subject matter jurisdiction over this action under Title 28 United States Code §§ 1331 and 1338(a) since the matter in controversy arises under an act of Congress relating to patents (35 U.S.C. § 1 *et seq.*).

7. Venue is proper in this judicial district under Title 28 United States Code. §§ 1391(b) - (c) and 1400(b).

FACTUAL BACKGROUND

8. United States Patent No. 7,928,465 (“the ’465 patent”), titled “Method of Fabricating Vertical Structure LEDs,” issued on April 19, 2011, to inventors Jong-Lam Lee, In-Kwon Jeong, and Myung Cheol Yoo. LGE owns by assignment the entire right, title, and interest in and to the ’465 patent. A true and correct copy of the ’465 patent is attached to this Complaint as Exhibit A.

9. United States Patent No. 7,956,364 (“the ’364 patent”), titled “Thin Film Light Emitting Diode,” issued on June 7, 2011, to inventor Myung Cheol Yoo. LGE owns by assignment the entire right, title, and interest in and to the ’364 patent. A true and correct copy of the ’364 patent is attached to this Complaint as Exhibit B.

10. United States Patent No. 6,841,802 (“the ’802 patent”), titled “Thin Film Light Emitting Diode,” issued on January 11, 2005, to inventor Myung Cheol Yoo. LGE owns by

assignment the entire right, title, and interest in and to the '364 patent. A true and correct copy of the '802 patent is attached to this Complaint as Exhibit C.

11. United States Patent No. 7,649,210 (“the '210 patent”), titled “Thin Film Light Emitting Diode,” issued on January 19, 2010, to inventor Myung Cheol Yoo. LGE owns by assignment the entire right, title, and interest in and to the '210 patent. A true and correct copy of the '210 patent is attached to this Complaint as Exhibit D.

12. United States Patent No. 7,884,388 (“the '388 patent”), titled “Light Emitting Diode Having a First GaN Layer and a First Semiconductor Layer Each Having a Predetermined Thickness and Fabrication Method Thereof,” issued on February 8, 2011, to inventor Seong Jae Kim. LGIT owns by assignment the entire right, title, and interest in and to the '388 patent. A true and correct copy of the '388 patent is attached to this Complaint as Exhibit E.

13. United States Patent No. 7,821,024 (“the '024 patent”), titled “Semiconductor Light Emitting Device Having Roughness Layer,” issued on October 26, 2010, to inventor Hwan Hee Jeong. LGIT owns by assignment the entire right, title, and interest in and to the '024 patent. A true and correct copy of the '024 patent is attached to this Complaint as Exhibit F.

14. United States Patent No. 7,868,348 (“the '348 patent”), titled “Semiconductor Light Emitting Device Having Roughness Layer,” issued on January 11, 2011, to inventors Jun Ho Jang and Jun Seok Ha. LGE and LGIT own by assignment the entire right, title, and interest in and to the '348 patent. A true and correct copy of the '348 patent is attached to this Complaint as Exhibit G.

15. United States Patent No. 7,768,025 (“the '025 patent”), titled “Light Emitting Diode Having Vertical Topology and Method of Making the Same,” issued on August 3, 2010, to inventors Jun Ho Jang, Jae Wan Choi, Duk Kyu Bae, Hyun Kyong Cho, Jong Kook Park, Sun

Jung Kim, and Jeong Soo Lee. LGE and LGIT own by assignment the entire right, title, and interest in and to the '025 patent. A true and correct copy of the '025 patent is attached to this Complaint as Exhibit H.

**FIRST CAUSE OF ACTION
INFRINGEMENT OF U.S. PATENT NO. 7,928,465 (THE '465 PATENT)**

16. The '465 patent is presumed valid under 28 U.S.C. § 282 and remains enforceable.
17. On information and belief, OSRAM manufactures, uses, imports, offers for sale, and/or sells products in the United States that infringe the '465 patent and will continue to do so unless enjoined by this Court.
18. On information and belief, OSRAM manufactures, uses, imports, offers to sell, and/or sells in the United States at least the following light emitting diodes (“LEDs”) and components thereof that infringe the '465 patent: LED4PAR16/830/NFL20/RP, LED2PAR16/830/FL30RP, LED3MR16/830/NSP6/RP, LED1.5A15/F/W/RP, and the LED1A/F/RGB/RP. The identification of a specific model or type of product is not intended to limit the scope of the Complaint, and any remedy should extend to all infringing products.
19. OSRAM’s past and continuing infringement of the '465 patent has caused irreparable damage to LG and will continue to do so unless enjoined by this Court.

**SECOND CAUSE OF ACTION
INFRINGEMENT OF U.S. PATENT NO. 7,956,364 (THE '364 PATENT)**

20. The '364 patent is presumed valid under 28 U.S.C. § 282 and remains enforceable.
21. On information and belief, OSRAM manufactures, uses, imports, offers for sale, and/or sells products in the United States that infringe the '364 patent and will continue to do so unless enjoined by this Court.

22. On information and belief, OSRAM manufactures, uses, imports, offers to sell, and/or sells in the United States at least the following LEDs and components thereof that infringe the '364 patent: LED4PAR16/830/NFL20/RP, LED2PAR16/830/FL30RP, and LED3MR16/830/NSP6/RP. The identification of a specific model or type of product is not intended to limit the scope of the Complaint, and any remedy should extend to all infringing products.

23. OSRAM's past and continuing infringement of the '364 patent has caused irreparable damage to LG and will continue to do so unless enjoined by this Court.

**THIRD CAUSE OF ACTION
INFRINGEMENT OF U.S. PATENT NO. 6,841,802 (THE '802 PATENT)**

24. The '802 patent is presumed valid under 28 U.S.C. § 282 and remains enforceable.

25. On information and belief, OSRAM manufactures, uses, imports, offers for sale, and/or sells products in the United States that infringe the '802 patent and will continue to do so unless enjoined by this Court.

26. On information and belief, OSRAM manufactures, uses, imports, offers to sell, and/or sells in the United States at least the following light LEDs and components thereof that infringe the '802 patent: LED4PAR16/830/NFL20/RP, LED2PAR16/830/FL30RP, and LED3MR16/830/NSP6/RP. The identification of a specific model or type of product is not intended to limit the scope of the Complaint, and any remedy should extend to all infringing products.

27. OSRAM's past and continuing infringement of the '802 patent has caused irreparable damage to LG and will continue to do so unless enjoined by this Court.

**FOURTH CAUSE OF ACTION
INFRINGEMENT OF U.S. PATENT NO. 7,649,210 (THE '210 PATENT)**

28. The '210 patent is presumed valid under 28 U.S.C. § 282 and remains enforceable.

29. On information and belief, OSRAM manufactures, uses, imports, offers for sale, and/or sells products in the United States that infringe the '210 patent and will continue to do so unless enjoined by this Court.

30. On information and belief, OSRAM manufactures, uses, imports, offers to sell, and/or sells in the United States at least the following LEDs and components thereof that infringe the '210 patent: LED4PAR16/830/NFL20/RP, LED2PAR16/830/FL30RP, and LED3MR16/830/NSP6/RP. The identification of a specific model or type of product is not intended to limit the scope of the Complaint, and any remedy should extend to all infringing products.

31. OSRAM's past and continuing infringement of the '210 patent has caused irreparable damage to LG and will continue to do so unless enjoined by this Court.

**FIFTH CAUSE OF ACTION
INFRINGEMENT OF U.S. PATENT NO. 7,884,388 (THE '388 PATENT)**

32. The '388 patent is presumed valid under 28 U.S.C. § 282 and remains enforceable.

33. On information and belief, OSRAM manufactures, uses, imports, offers for sale, and/or sells products in the United States that infringe the '388 patent and will continue to do so unless enjoined by this Court.

34. On information and belief, OSRAM manufactures, uses, imports, offers to sell, and/or sells in the United States at least the following LEDs and components thereof that infringe the '388 patent: LED1.5A15/F/W/RP, LED2S14/627/RP, L1A19 lighting product, OSRON

PKG, LT-L8MR16 lighting product, LT-L2PAR20, and the LT-Dot-It lighting product. The identification of a specific model or type of product is not intended to limit the scope of the Complaint, and any remedy should extend to all infringing products.

35. OSRAM's past and continuing infringement of the '388 patent has caused irreparable damage to LG and will continue to do so unless enjoined by this Court.

**SIXTH CAUSE OF ACTION
INFRINGEMENT OF U.S. PATENT NO. 7,821,024 (THE '024 PATENT)**

36. The '024 patent is presumed valid under 28 U.S.C. § 282 and remains enforceable.

37. On information and belief, OSRAM manufactures, uses, imports, offers for sale, and/or sells products in the United States that infringe the '024 patent and will continue to do so unless enjoined by this Court.

38. On information and belief, OSRAM manufactures, uses, imports, offers to sell, and/or sells in the United States at least the following LEDs and components thereof that infringe the '024 patent: LED4PAR16/830/NFL20/RP, LED2PAR16/830/FL30RP, LED3MR16/830/NSP6/RP, LED1.5A15/F/W/RP, LED2S14/627/RP, L1A19 lighting product, LT-L8MR16 lighting product, LT-L2PAR20, and the LT-Dot-It lighting product. The identification of a specific model or type of product is not intended to limit the scope of the Complaint, and any remedy should extend to all infringing products.

39. OSRAM's past and continuing infringement of the '024 patent has caused irreparable damage to LG and will continue to do so unless enjoined by this Court.

**SEVENTH CAUSE OF ACTION
INFRINGEMENT OF U.S. PATENT NO. 7,868,348 (THE '348 PATENT)**

40. The '348 patent is presumed valid under 28 U.S.C. § 282 and remains enforceable.

41. On information and belief, OSRAM manufactures, uses, imports, offers for sale, and/or sells products in the United States that infringe the '348 patent and will continue to do so unless enjoined by this Court.

42. On information and belief, OSRAM manufactures, uses, imports, offers to sell, and/or sells in the United States at least the following LEDs and components thereof that infringe the '348 patent: LED4PAR16/830/NFL20/RP, LED2PAR16/830/FL30RP, LED3MR16/830/NSP6/RP, LED1.5A15/F/W/RP, and L1A19 lighting product. The identification of a specific model or type of product is not intended to limit the scope of the Complaint, and any remedy should extend to all infringing products.

43. OSRAM's past and continuing infringement of the '348 patent has caused irreparable damage to LG and will continue to do so unless enjoined by this Court.

**EIGHTH CAUSE OF ACTION
INFRINGEMENT OF U.S. PATENT NO. 7,768,025 (THE '025 PATENT)**

44. The '024 patent is presumed valid under 28 U.S.C. § 282 and remains enforceable.

45. On information and belief, OSRAM manufactures, uses, imports, offers for sale, and/or sells products in the United States that infringe the '025 patent and will continue to do so unless enjoined by this Court.

46. On information and belief, OSRAM manufactures, uses, imports, offers to sell, and/or sells in the United States at least the following LEDs and components thereof that infringe the '025 patent: LED4PAR16/830/NFL20/RP, LED2PAR16/830/FL30RP, LED3MR16/830/NSP6/RP, LED1.5A15/F/W/RP, L1A19 lighting product, and OSOLON PKG. The identification of a specific model or type of product is not intended to limit the scope of the Complaint, and any remedy should extend to all infringing products.

47. OSRAM's past and continuing infringement of the '025 patent has caused irreparable damage to LG and will continue to do so unless enjoined by this Court.

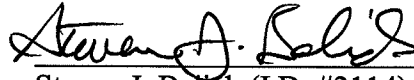
PRAYER FOR RELIEF

48. WHEREFORE, LG respectfully requests that this Court:
- (a) Find that each of the Defendants has infringed one or more claims of the '465, '364, '802, '210, '388, '024, '348, and '025 patents;
 - (b) Find that this is an exceptional case under 35 U.S.C. § 285;
 - (c) Permanently enjoin each of the Defendants from infringing one or more of the '465, '364, '802, '210, '388, '024, '348, and '025 patents under 35 U.S.C. § 283;
 - (d) Award LG an amount to be determined as compensatory damages for the infringement of one or more of the '465, '364, '802, '210, '388, '024, '348, and '025 patents and the costs of the action, as fixed by the Court, under 35 U.S.C. § 284;
 - (e) Award LG its costs, including expenses and reasonable attorneys' fees, incurred in bringing and prosecuting this action under 35 U.S.C. § 285;
 - (f) Award LG prejudgment and post-judgment interest on all amounts awarded; and
 - (g) Award LG any further relief that this Court deems just and proper.

JURY DEMAND

49. LG demands a jury trial as to all issues that are triable by a jury in this action.

ASHBY & GEDDES



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