UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

EVERLIGHT ELECTRONICS CO., LTD., and EMCORE CORPORATION,

Plaintiffs,

vs.

NICHIA CORPORATION, and NICHIA AMERICA CORPORATION,

Defendants.

NICHIA CORPORATION and NICHIA AMERICA CORPORATION,

Counter-Plaintiffs,

vs.

EVERLIGHT ELECTRONICS CO., LTD., and EMCORE CORPORATION,

Counter-Defendants.

and

EVERLIGHT AMERICAS, INC.,

Defendant.

Case No. 4:12-cv-11758-GAD-MKM
Hon. Gershwin A. Drain

INDEX OF EXHIBITS

A. Expert Report of Martin C. Wilding (dated Dec. 20, 2013) (*Filed Under Seal*)

B. Excerpts from Dr. Martin Wilding's Deposition Transcript (taken on Apr. 15, 2014) (*Filed Under Seal*)

C. Excerpts from Yasunobu Noguchi's Lab Notebook (NICH0083148-157) (*Filed Under Seal*)

D. Excerpts from Dr. Eric C. Bretschneider's Deposition Transcript (taken on Apr. 30, 2014) (*Filed Under Seal*)

E. Excerpts from Yasunobu Noguchi's Deposition Transcript (taken on Sept. 18-19, 2013) (*Filed Under Seal*)

F. Prof. Uwe Happek's Declaration (dated July 11, 2014)

F-1. Exhibit A - Prof. Uwe Happek's CV

F-2. Exhibit B - Rebuttal Expert Report of Uwe Happek, Ph.D. (dated Mar. 28, 2014) (*Filed Under Seal*)

F-3. Exhibit 16 - A. Mayolet et al., *Investigation in the VUV range of the excitation efficiency* of *the* Tb^{3+} *ion luminescence in* $Y_3(Al_x,Ga_y)_5O_{12}$ *host lattices*, 4 Optical Materials, 757-769 (Oct. 1995)

F-4. Exhibit 17 - M. Raukas et al., *Luminescence in nano-size* Y_2O_3*:Ce*, 122-123 J. Luminescence, 773-775 (2007)

F-5. Exhibit 18 - M. Kawata *et al.*, *Growth of gadolinium indium gallium garnet (GInGG) single crystal by the floating zone method*, 128 J. Crystal Growth, Issues 1-4, Part 2, 1011-1015 (Mar. 1, 1993)

F-6. Exhibit 19 - W. Zhang et al., *Co-precipitation synthesis and luminescent properties of indium-substituted YAG: Ce* $^{3+}$, 24 Advanced Powder Technology 21-25 (2013)

F-7. Exhibit 20 - T. P. Srinivasan et al., *On the Third-Order Elastic Constants of Polycrystalline Media*, 24 J. Appl. Crystals 175-177 (1991)

F-8. Exhibit 21 - P. Gerard, *Implantation of bubble garnets*, 114 Thin Solid Films 3-31 (1984)

F-9. Exhibit 22 - R. Allan, *New measurement capabilities – The '74 designer's arsenal bristles with smart 'scopes, multipurpose meters, and high-speed digital analyzers*, IEEE Spectrum 83-87 (Nov. 1974)

F-10. Exhibit 23 - P. P. Kirichok et al., *K Absorption spectrum of Iron in Yttrium-Indium Garnet*, 20 Soviet Physics J., Issue 1, pp. 120-122 (1977)

F-11. Exhibit 24 - U.S. Patent No. 4,559,280 (dated Dec. 17, 1985)

F-12. Exhibit 25 - C. Chiang et al., *Preparation of Cerium-Activated GAG Phosphor Powders – Influence of Co-Doping on Crystallinity and Luminescent Properties*, 154 (10) J. Electrochemical Soc'y J326-J329 (2007)

F-13. Exhibit 26 - T. Manabe et al., *Crystal Growth and Optical Properties of Gadolinium Aluminum Garnet*, 6 Mat. Res. Bull. 1167-1174 (1971)

F-14. Exhibit 27 - L. Muresan et al., *Studies on the synthesis of europium activated yttrium oxide by wet-chemical method*, 471 J. Alloys and Compounds 421-427 (2009)

F-15. Exhibit 28 - J. Li et al., *Co-precipitation synthesis and sintering of yttrium aluminum garnet (YAG) powders: the effect of precipitant*, 20 J. European Ceramic Society 2395-2404 (2000)

F-16. Exhibit 29 - S. Ye et al., *Phosphors in phosphor-converted white light-emitting diodes: Recent advances in materials, techniques and properties*, 71 Materials and Science Engineering R 1-34 (2010)

F-17. Exhibit 30 - L. E. Muresan et al., *Investigation of thermal decomposition of yttrium–aluminum-based precursors for YAG phosphors*, 110 J. Thermal Analysis & Calorimetry 341-348 (2012)

F-18. Exhibit 31 - Y. Pan et al., *Comparative investigation on synthesis and photoluminescence of YAG:Ce phosphor*, 106 Materials Science & Engineering B, Issue 3, 251-256 (2004)

F-19. Exhibit 32 - J. Lin et al., *Multiform Oxide Optical Materials via the Versatile Pechini-Type Sol-Gel Process: Synthesis and Characteristics*, 111 J. Physical Chemistry 5835-5845 (2007)

F-20. Exhibit 33 - L. G. Van Uitert et al., *Growth of Large Optical-Quality Yttrium and Rare-Earth Aluminum Garnets*, 48 J. Am. Ceramic Society No. 2, 105-108 (1965)

F-21. Exhibit 34 - B. Cockayne et al., *The Growth and Laser Characteristics of Yttrium-Gadolinium-Aluminum Garnet Single Crystals*, 29 J. Physical Chemical Solids 905-910 (1968)

F-22. Exhibit 35 - U.S. Patent No. 4,013,501 (dated Mar. 22, 1977)

F-23. Exhibit 36 - J. Li et al., *Development of Eu^{3+} activated monoclinic, perovskite, and garnet compounds in the Gd_2O_3-Al_2O_3 phase diagram as efficient red-emitting phosphors*, 206 J. Solid State Chemistry 104-112 (2013)

F-24. Exhibit 37 - J. Li et al., *The development of Ce^{3+}-activated (Gd, Lu)$_3Al_5O_{12}$ garnet solid solutions as efficient yellow-emitting phosphors*, 14 Science & Technology of Advanced Materials 1-9 (2013)

F-25. Exhibit 38 - J. Ogieglo et al., *Luminescence and Luminescence Quenching in $Gd_3(Ga,Al)_5O_{12}$ Scintillators Doped with Ce^{3+}*, 117 J. Physical Chemistry 2479-2484 (2013)

F-26. Exhibit 39 - P. Dorenbos, *Electronic structure and optical properties of the lanthanide activated $RE_3(Al_{1-x}Ga_x)_5O_{12}$ (RE=Gd, Y, Lu) garnet compounds*, 134 J. Luminescence 310-318 (2013)

F-27. Exhibit 40 - List of Materials Considered

F-28. Exhibit 41 - U.S. Patent No. 5,998,925 (dated Dec. 7, 1999)

F-29. Exhibit 42 - U.S. Patent No. 7,351,960 (dated May 12, 2009)

F-30. Exhibit 43 - Opinion and Order Regarding Claim Construction (Dkt. # 129) (dated Aug. 21, 2013)

F-31. Exhibit 44 - Product Sample Evaluation Sheet (NICH0224245-NICH0224248) (*Filed Under Seal*)

G. Excerpts from Kanji Bando's Deposition Transcript (taken on Nov. 13, 2013) (*Filed Under Seal*)

H. *Beloit Corp. v. Valmet Corp*., 1997 U.S. Dist. LEXIS 21329 (W.D. Wis. July 15, 1997)

I. *Novartis Pharmas Corp. v. Roxan Labs. Inc*., 2011 U.S. Dist. LEXIS 35545 (D.N.J. Mar. 31, 2011)

J. *SPX Corp. v. Bartec USA, LLC*, 2008 U.S. Dist. LEXIS 29235 (E.D. Mich. Apr. 10, 2008)

K. Excerpts from Prof. E. Fred Schubert's Deposition Transcript (taken on May 9, 2014) (*Filed Under Seal*)

L. Excerpts from Kensho Sakano's Deposition Transcript (taken on Sept. 18, 2013) (*Filed Under Seal*)

M. U.S. Patent No. 5,998,925 (dated Dec. 7, 1999) Certificates of Correction