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United States Patent No.: 8,309,375 Inventors: Yoshinori Shimizu, et al. Formerly Application No.: 12/942,792 Issue Date: Nov. 13, 2012 Filing Date: Nov. 9, 2010 Former Group Art Unit: 2812 Former Examiner: A. Mustapha

§ Attorney Docket No.: 1285100-0002§ Petitioner: VIZIO, Inc.

#### For: LIGHT EMITTING DEVICE AND DISPLAY

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# DECLARATION OF DR. PAUL R. PRUCNAL IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW OF UNITED STATES PATENT NO. 8,309,375

## *Inter Partes Review* United States Patent No. 8,309,375

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| 1. | C  | aim 147  |
|    | a. | Preamble: "A method for manufacturing a light emitting device comprising:"   |
|    | b. | Element [1.A.1]: "preparing a light emitting component having an active layer of a semiconductor"  |
|    | c. | Element [1.A.2]: "said active layer comprising a gallium<br>nitride based semiconductor containing indium and being<br>capable of emitting a blue color light having a spectrum<br>with a peak wavelength within the range from 420 to 490<br>nm;"   |
|    | d. | Element [1.B.1]: "preparing a phosphor capable of<br>absorbing a part of the blue color light emitted from said<br>light emitting component and emitting a yellow color light<br>having a broad emission spectrum comprising a peak<br>wavelength existing around the range from 510 to 600 nm<br>and a tail continuing beyond 700 nm" |
|    | e. | Element [1.B.2]: "wherein selection of said phosphor is<br>controlled based on an emission wavelength of said light<br>emitting component; and"74  |
|    | f. | Element [1.C.1]: "combining said light emitting component<br>and said phosphor so that the blue color light from said light<br>emitting component and the yellow color light from said<br>phosphor are mixed to make a white color light"  |
|    | g. | Element [1.C.2]: "wherein a chromaticity point of the white<br>color light is on a straight line connecting a point of<br>chromaticity of the blue color light and a point of<br>chromaticity of the yellow color light, and"  |
|    | h. | Element [1.D]: "wherein a content of said phosphor in said<br>light emitting device is selected to obtain a desired<br>chromaticity of the white color light"92  |
|    | i. | Baretz in view of Pinnow discloses "preparing" a light<br>emitting component and phosphor  |

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|    |                 | a. Preamble: "A method for manufacturing a light emitting device comprising:"   |
|    |                 | b. Element [1.A.1]: "preparing a light emitting component having an active layer of a semiconductor"101   |
|    |                 | c. Element [1.A.2]: "said active layer comprising a gallium nitride based semiconductor containing indium and being capable of emitting a blue color light having a spectrum with a peak wavelength within the range from 420 to 490 nm;"   |
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