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(71) Applicant (for all designated States except US):  
**BRIDGELUX, INC.** [US/US]; c/o Albert Harnois, 101 Portola Avenue, Livermore, California 94551 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HELBING, Rene** [DE/US]; 848 Sycamore Dr, Palo Alto, California 94303 (US). **XU, Tao** [US/US]; 101 Portola Avenue, Livermore, California 94551 (US).

(74) Agent: **KALOUSEK, Pavel**; 22262 Crestline Road, P.O. Box 245, Palomar Mountain, California 92060-0245 (US).

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(54) Title: LIGHT-EMITTING DEVICE ARRAY WITH INDIVIDUAL CELLS

(57) Abstract: A light-emitting device and a method for manufacturing the light-emitting device is disclosed. Such a light-emitting device comprises a substrate, a plurality of cells disposed on the substrate, and a plurality of semiconductor dice, wherein each of the plurality of cells accommodates at least one of the plurality of dice. Each of the plurality of cells may be filled with an encapsulant, phosphor or a mixture of an encapsulant with phosphor to control light characteristics of the light-emitting device. In an alternative aspect, cells may be filled with an encapsulant, and comprise a transparent cover coated with or filled with phosphors to control light characteristics of the light-emitting device.



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<b>INTERNATIONAL SEARCH REPORT</b>		International application No. PCT/US11/49656																	
<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC: <b>H01L 33/50( 2010.01);H01L 21/56( 2006.01)</b>  USPC: 257/89;438/27;257/E33056,E21502 According to International Patent Classification (IPC) or to both national classification and IPC																			
<b>B. FIELDS SEARCHED</b>  Minimum documentation searched (classification system followed by classification symbols) U.S. : 257/89; 438/27; 257/E33056, E21502  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST: substrate water and chip die and resin epoxy with phosphor and lid																			
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Category *</th> <th style="width: 70%;">Citation of document, with indication, where appropriate, of the relevant passages</th> <th style="width: 20%;">Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">X</td> <td rowspan="2">US 2009/0303694 A1 (ROTH et al) 10 December 2009(12.10.2009), see entire document.</td> <td style="text-align: center;">1-4 and 11-14</td> </tr> <tr> <td style="text-align: center;">---</td> <td style="text-align: center;">-----</td> </tr> <tr> <td style="text-align: center;">Y</td> <td></td> <td style="text-align: center;">5-10 and 15-20</td> </tr> <tr> <td style="text-align: center;">Y</td> <td>US 2010/0025700 A1 (JUNG et al) 04 February 2010(02.04.2010), see entire document.</td> <td style="text-align: center;">5-6, 10, 15-16, 20</td> </tr> <tr> <td style="text-align: center;">Y</td> <td>US 2010/0155755 A1 (DONG) 24 June 2010(06.24.2010), see entire document.</td> <td style="text-align: center;">7-10 and 17-20</td> </tr> </tbody> </table>			Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	US 2009/0303694 A1 (ROTH et al) 10 December 2009(12.10.2009), see entire document.	1-4 and 11-14	---	-----	Y		5-10 and 15-20	Y	US 2010/0025700 A1 (JUNG et al) 04 February 2010(02.04.2010), see entire document.	5-6, 10, 15-16, 20	Y	US 2010/0155755 A1 (DONG) 24 June 2010(06.24.2010), see entire document.	7-10 and 17-20
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<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.																			
<table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <b>* Special categories of cited documents:</b>             "A" document defining the general state of the art which is not considered to be of particular relevance             "E" earlier application or patent published on or after the international filing date             "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)             "O" document referring to an oral disclosure, use, exhibition or other means             "P" document published prior to the international filing date but later than the priority date claimed         </td> <td style="width: 50%; vertical-align: top;">           "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention             "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone             "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art             "&amp;" document member of the same patent family         </td> </tr> </table>			<b>* Special categories of cited documents:</b>  "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier application or patent published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  "&" document member of the same patent family															
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201		Authorized officer LEE YOUNG Telephone No. (571) 272.4549																	