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Declarations under Rule 4.17:

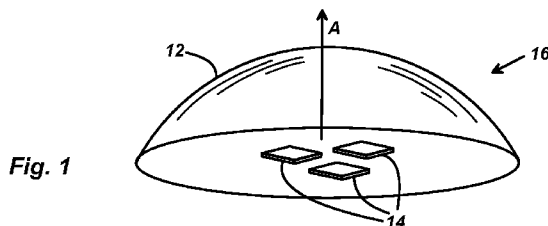
- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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(54) Title: LED LIGHT ENGINE AND METHOD OF MANUFACTURE THEREOF



(57) Abstract: A light emitting diode (LED) light engine includes a solid transparent dome mounted on one or more LED dies to form a base module, a flexible sheath having embedded therein a phosphor that converts light of a first wavelength range to light of a second wavelength range, the sheath being attached to the base module so that the sheath conforms to a light emitting surface of the dome. The sheath emits light of the second wavelength range when the LED is emitting light of the first wavelength range. Further sheaths may be formed each with different phosphors or phosphor blends, and one of the sheaths may be selected to cover the base module depending on the color of light to be produced by the light engine.



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A. CLASSIFICATION OF SUBJECT MATTER*F21V 9/10(2006.01)i, F21V 3/00(2006.01)i, F21Y 101/02(2006.01)n*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

F21V 9/10; H01L 29/22; H01J 1/62; H01L 33/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: LED, phosphor, wavelength, convert

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 2009-0001399 A1 (FREDERIC S. DIANA et al.) 01 January 2009 See abstract; paragraphs [76]-[79] and [100]; claims 1-10; figure 19.	1-4,7-10 5-6,11-13
X A	JP 2009-088235 A (PANASONIC ELECTRIC WORKS CO. LTD.) 23 April 2009 See abstract; paragraphs [37]-[49]; figure 1.	1-4,7-10 5-6,11-13
X A	US 2008-0246044 A1 (SIEW IT PANG) 09 October 2008 See abstract; paragraphs [28]-[29]; claims 1, 5, 7-8; figure 6.	1-3,7-9 4-6,10-13
X A	US 2008-0211386 A1 (HYUCK JUNG CHOI et al.) 04 September 2008 See abstract; paragraphs [63]; figure 4.	1-3,7-9 4-6,10-13

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2009-0001399 A1	01.01.2009	None	
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