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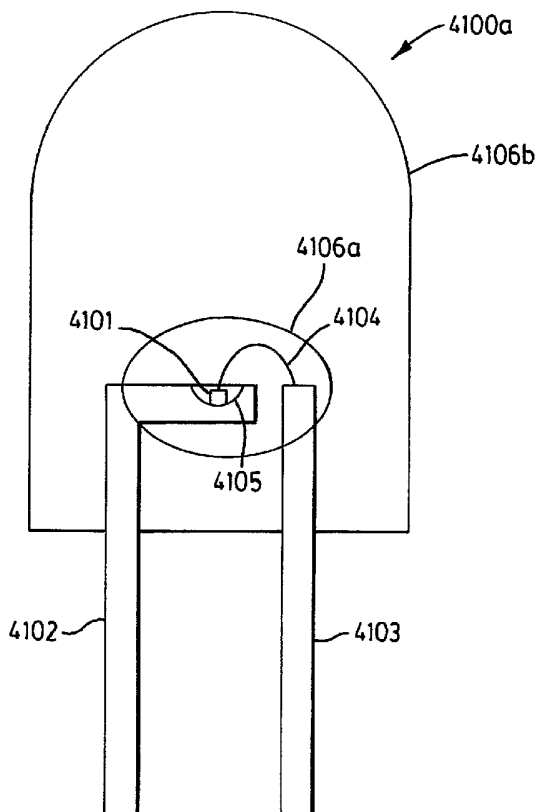
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[Continued on next page]

(54) Title: LED INSPECTION LAMP, CLUSTER LED, AND LED WITH STABILIZING AGENTS



(57) Abstract: LED inspection lamps and spot lights have a plu-
rality of LED sources. For some, radiation passing through lenses
is superimposed in target area at target distance. The LED sources
may be a cluster LED having more than one semiconductor die.
The LED package may have a domed forward surface forward of
each semiconductor die for optical purposes. The domed surface
may be designed to work either with or without additional optics.
The LED package may be made of epoxy having additives to resist
degradation of the epoxy by ultraviolet or visible violet radiation
from the LED sources. The package may be made of a material
other than epoxy, such as acrylic or another thermoplastic, or a
casting resin. The package may have a first, ultraviolet-resistant
material that surrounds the LED chip and that is surrounded by a
second material which may be epoxy.

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INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01L25/075 H01L33/00 F21V7/00

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)
IPC 7 H01L F21V

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 practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 4 935 665 A (MURATA ET AL) 19 June 1990 (1990-06-19) column 9, line 21 - line 29; figure 18	1,2 3,44-46, 62-64, 73,74, 87-89, 91-93
Y	----- EP 1 285 938 A (GENERAL ELECTRIC COMPANY) 26 February 2003 (2003-02-26) paragraphs [0043], [0048]; figure 3 ----- -/--	3,44-46, 62-64, 73,74, 87-89, 91-93

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

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- "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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INTERNATIONAL SEARCH REPORT

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-3, 44-46, 62-64, 73, 74, 87-89, 91-93

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-3,44-46,62-64,73,74,87-89,91-93

LED lamp with a plurality of LED chips encapsulated within a single encapsulant package, and a collimation lens for each LED chip

2. claims: 4-51,57-64,80,83-93

LED lamp with a plurality of LED chips encapsulated within a single encapsulant package, wherein the encapsulant comprises an stabilizing agent so that the encapsulant resists degradation by radiation produced from the LEDs

3. claims: claims 52-56,65-79,81,82

LED having a one or more LED chips sealed in a single encapsulant package, characterized by their peak wavelength

INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA2004/000791

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 2 373 368 A (* ARIMA OPTOELECTRONICS CORPORATION) 18 September 2002 (2002-09-18) page 6, lines 4-15 page 7, line 6 - line 33; figures 3a,3b	3,44-46, 62,63
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