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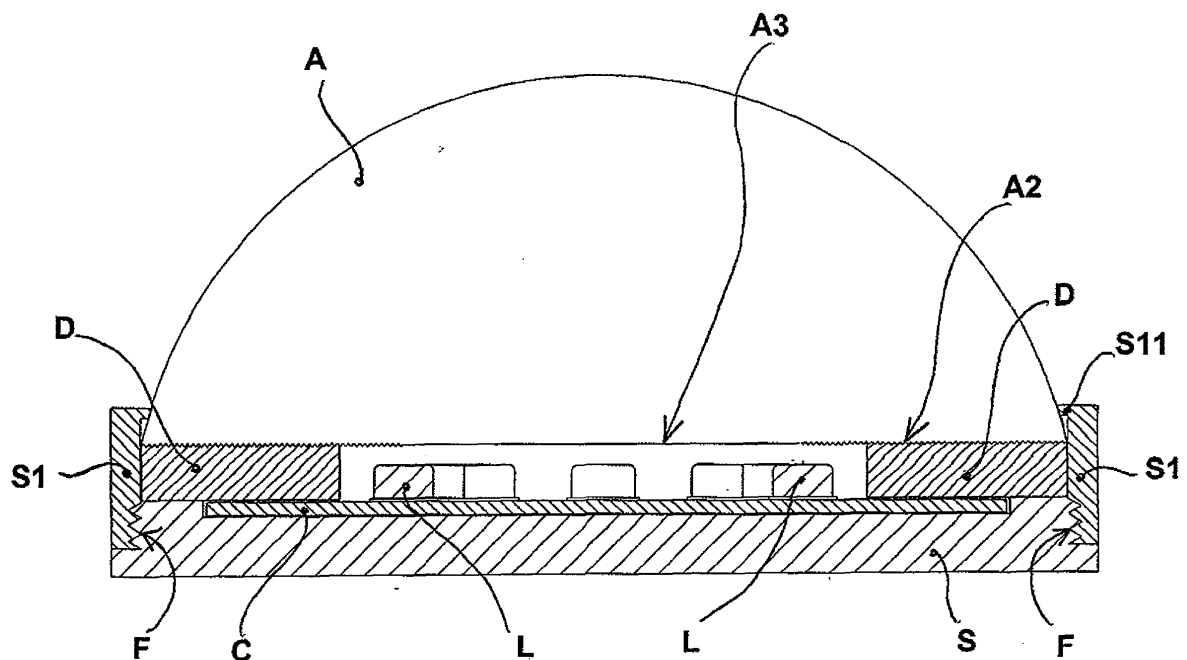
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**(54) Lighting body with lens**

(57) Lighting body, provided with support (S), for housing two or more LEDs (L), comprising at least one lens or a transparent element (A), positioned above said

support (S), provided with diffusing partly opacified lower surface (A2), so that the light emitted by each LED (L) crosses wholly or partly the diffusing opacified surface (A2) of said lens or transparent element (A).



**Fig.2**

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## EUROPEAN SEARCH REPORT

Application Number  
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| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                    |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                              |                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Category                                                                                                                                                                                                                                               | Citation of document with indication, where appropriate, of relevant passages                                                                                                                          | Relevant to claim                                                                                                                                                                                                                                                            | CLASSIFICATION OF THE APPLICATION (IPC)   |
| X                                                                                                                                                                                                                                                      | US 2005/201109 A1 (SHIMURA TAKASHI [JP])<br>15 September 2005 (2005-09-15)                                                                                                                             | 1,2,6,7                                                                                                                                                                                                                                                                      | INV.<br>F21V5/04<br>F21K7/00<br>F21V17/12 |
| Y                                                                                                                                                                                                                                                      | * paragraph [0003] *<br>* paragraph [0012] *<br>* paragraph [0029] *<br>* paragraph [0034] *<br>* paragraph [0038] *<br>* paragraph [0043] - paragraph [0046] *<br>* figures 7,8 *                     | 3,5,8                                                                                                                                                                                                                                                                        | ADD.<br>F21Y101/02                        |
| X                                                                                                                                                                                                                                                      | US 2002/105801 A1 (MARTINEAU PATRICK [CA])<br>8 August 2002 (2002-08-08)<br>* paragraph [0003] *<br>* paragraph [0011] *<br>* paragraph [0020] - paragraph [0023] *<br>* figures 2, 2C *               | 1,2                                                                                                                                                                                                                                                                          |                                           |
| X                                                                                                                                                                                                                                                      | US 6 502 956 B1 (WU CHEN H [US])<br>7 January 2003 (2003-01-07)<br>* column 1, line 6 - line 10 *<br>* column 3, line 36 - line 58 *<br>* column 5, line 4 - line 8 *<br>* figures 1A,9 *              | 1,2                                                                                                                                                                                                                                                                          |                                           |
| Y                                                                                                                                                                                                                                                      | US 2005/286145 A1 (SILHENGST FRANZ [AT] ET AL)<br>29 December 2005 (2005-12-29)<br>* paragraph [0001] *<br>* paragraph [0028] - paragraph [0033] *<br>* figure 3 *                                     | 3,5                                                                                                                                                                                                                                                                          |                                           |
| A                                                                                                                                                                                                                                                      | DE 198 31 004 A1 (VOLKSWAGEN AG [DE])<br>3 February 2000 (2000-02-03)<br>* column 1, line 3 - line 7 *<br>* column 2, line 32 - line 37 *<br>* column 2, line 55 - column 3, line 34 *<br>* figure 1 * | 1                                                                                                                                                                                                                                                                            |                                           |
| The present search report has been drawn up for all claims                                                                                                                                                                                             |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                              |                                           |
| Place of search<br>The Hague                                                                                                                                                                                                                           |                                                                                                                                                                                                        | Date of completion of the search<br>19 July 2010                                                                                                                                                                                                                             | Examiner<br>Schulz, Andreas               |
| CATEGORY OF CITED DOCUMENTS<br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |                                                                                                                                                                                                        | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding document |                                           |

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EPO FORM 1503 03.82 (P04C01)



## EUROPEAN SEARCH REPORT

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| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                               |                                                  |                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------|
| Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Citation of document with indication, where appropriate, of relevant passages                                                                                 | Relevant to claim                                | CLASSIFICATION OF THE APPLICATION (IPC) |
| Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | US 7 196 358 B1 (CHEN HSING [TW])<br>27 March 2007 (2007-03-27)<br>* column 1, line 6 - line 10 *<br>* column 3, line 22 - line 48 *<br>* figure 5 *<br>----- | 8                                                |                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                               |                                                  | TECHNICAL FIELDS SEARCHED (IPC)         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                               |                                                  |                                         |
| The present search report has been drawn up for all claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                               |                                                  |                                         |
| Place of search<br>The Hague                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                               | Date of completion of the search<br>19 July 2010 | Examiner<br>Schulz, Andreas             |
| CATEGORY OF CITED DOCUMENTS<br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document<br>T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding document |                                                                                                                                                               |                                                  |                                         |

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
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19-07-2010

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|-------------------------------------------|---------------------|----------------------------|---------------------|
| US 2005201109 A1                          | 15-09-2005          | CN 1667313 A               | 14-09-2005          |
|                                           |                     | DE 102005010730 A1         | 03-11-2005          |
|                                           |                     | JP 4360945 B2              | 11-11-2009          |
|                                           |                     | JP 2005259474 A            | 22-09-2005          |
| US 2002105801 A1                          | 08-08-2002          | NONE                       |                     |
| US 6502956 B1                             | 07-01-2003          | NONE                       |                     |
| US 2005286145 A1                          | 29-12-2005          | CA 2485669 A1              | 25-12-2005          |
| DE 19831004 A1                            | 03-02-2000          | NONE                       |                     |
| US 7196358 B1                             | 27-03-2007          | NONE                       |                     |