

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 666189	FOR FURTHER ACTION	See item 4 below
International application No. PCT/JP2005/017467	International filing date (<i>day/month/year</i>) 22 September 2005 (22.09.2005)	Priority date (<i>day/month/year</i>) 27 September 2004 (27.09.2004)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i> .1(a).																								
2.	This REPORT consists of a total of 6 sheets, including this cover sheet.																								
In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																									
3.	This report contains indications relating to the following items: <table style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;">☒</td> <td style="width: 30%;">Box No. I</td> <td style="width: 80%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☐	Box No. VII	Certain defects in the international application	☒	Box No. VIII	Certain observations on the international application
☒	Box No. I	Basis of the report																							
☐	Box No. II	Priority																							
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability																							
☐	Box No. IV	Lack of unity of invention																							
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																							
☐	Box No. VI	Certain documents cited																							
☐	Box No. VII	Certain defects in the international application																							
☒	Box No. VIII	Certain observations on the international application																							
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Date of issuance of this report 27 March 2007 (27.03.2007)
Facsimile No. +41 22 338 82 70	Authorized officer Masashi Honda
	e-mail: pt08.pct@wipo.int

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference
666189

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2005/017467

International filing date (day/month/year)
22.09.2005

Priority date (day/month/year)
27.09.2004

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

Applicant
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| ☒ | Box No. I | Basis of the opinion |
| ☐ | Box No. II | Priority |
| ☐ | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| ☐ | Box No. IV | Lack of unity of invention |
| ☒ | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| ☐ | Box No. VI | Certain documents cited |
| ☐ | Box No. VII | Certain defects in the international application |
| ☒ | Box No. VIII | Certain observations on the international application |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/017467

Box No. I	Basis of this opinion
1.	With regard to the language, this opinion has been established on the basis of: ☒ the international application in the language in which it was filed ☐ the translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rule 12.3(a) and 23.1(b)).
2.	With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of: a. type of material ☐ a sequence listing ☐ table(s) related to the sequence listing b. format of material ☐ on paper ☐ in electronic form c. time of filing/furnishing ☐ contained in the international application as filed ☐ filed together with the international application in electronic form ☐ furnished subsequently to this Authority for the purposes of search
3.	☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4.	Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/017467

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-13	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-13	NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims		NO
2. Citations and explanations:			
Document 1: JP 2000-114595 A (Matsushita Electronic Corporation), 21 April 2000 Document 2: JP 2004-103975 A (Citizen Watch Co., Ltd.), 02 April 2004, Document 3: JP 2002-151739 A (Showa Denko K.K.), 24 May 2002 The inventions of claims 1, 2, 9, and 10 do not appear to involve an inventive step based on the descriptions of documents 1 and 2. The difference between the inventions of claims 1, 2, 9, and 10 and the invention described in document 1 (figs. 3 and 5) is that the former is provided with a first n-type electrode and a second n-type electrode, and the latter is provided with only one n-type electrode. However, providing a second n-type electrode over the first insulating film placed over the first n-type electrode is described in document 2 (figs. 1 and 4), and applying this to the invention of document 1 is not found to pose any extraordinary difficulty. The invention of claim 3 does not appear to involve an inventive step based on the descriptions of documents 1 and 2. Providing a second insulating film and a conductive layer over the second p-type electrode in the invention of document 1 is simply an engineering matter to determine. The inventions of claim 4 and 5 do not appear to involve an inventive step based on the descriptions of documents 1-3. The uniform provision of openings for p-type electrodes so that the operating current will spread throughout the element, is described in document 3 (column 0030). Because the invention described in document 3 provides the openings for the p-type electrode uniformly so that the operating current will spread throughout the element, each electrode appears nearly equal in size. The inventions of claims 6-8 do not appear to involve an inventive step based on the descriptions of documents 1 and 2. It is public knowledge that one can create a light-emitting device, using a light emitting element, a wiring board, and a conductive adhesive material. Also, as described in document 2, it is a common practice to use a solder, a silver paste, or an anisotropic conductive resin as the conductive, adhesive material. (Continued)			

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/017467

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 6 cites either one of claims 1-3. However, while claim 6 contains the phrase “the layer of conductive adhesive material,” claims 1-3 do not mention the same, making it unclear what the phrase means.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/017467

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V-2

The inventions of claims 11-13 do not appear to involve an inventive step based on the descriptions of documents 1 and 2. Forming the insulating layer through sputtering, forming the electrode through sputtering or plating, and reflowing solder are all described in document 2.