

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 PCTOP014	FOR FURTHER ACTION		See item 4 below
International application No. PCT/JP2010/062033	International filing date (<i>day/month/year</i>) 16 July 2010 (16.07.2010)	Priority date (<i>day/month/year</i>) 17 July 2009 (17.07.2009)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant OPTEX Co., Ltd.			

<p>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 bis.1(a).</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>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.</p>																								
<p>3. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></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><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>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).</p>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
<input checked="" type="checkbox"/>	Box No. I	Basis of the report																						
<input type="checkbox"/>	Box No. II	Priority																						
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability																						
<input type="checkbox"/>	Box No. IV	Lack of unity of invention																						
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																						
<input type="checkbox"/>	Box No. VI	Certain documents cited																						
<input type="checkbox"/>	Box No. VII	Certain defects in the international application																						
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application																						

	Date of issuance of this report 07 February 2012 (07.02.2012)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Yukari Nakamura
Facsimile No. +41 22 338 82 70	e-mail: pt07.pct@wipo.int

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) **26.10.2010**

Applicant's or agent's file reference
PCTOP014

FOR FURTHER ACTION
See paragraph 2 below

International application No. PCT/JP2010/062033	International filing date (day/month/year) 16.07.2010	Priority date (day/month/year) 17.07.2009
---	---	---

International Patent Classification (IPC) or both national classification and IPC
G01S17/42 (2006.01) i, G01S7/48 (2006.01) i, G08B13/181 (2006.01) i

Applicant
OPTEX 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/JP2010/062033

Box No. I	Basis of this opinion
1.	<p>With regard to the language, this opinion has been established on the basis of:</p> <p><input checked="" type="checkbox"/> the international application in the language in which it was filed</p> <p><input type="checkbox"/> a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).</p>
2.	<p><input type="checkbox"/> This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))</p>
3.	<p>With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:</p> <p>a. (means)</p> <p><input type="checkbox"/> on paper</p> <p><input type="checkbox"/> in electronic form</p> <p>b. (time)</p> <p><input type="checkbox"/> in the international application as filed</p> <p><input type="checkbox"/> together with the international application in electronic form</p> <p><input type="checkbox"/> subsequently to this Authority for the purposes of search</p>
4.	<p><input type="checkbox"/> In addition, in the case that more than one version or copy of a sequence listing 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.</p>
5.	<p>Additional comments:</p>

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/JP2010/062033
--

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	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; padding: 5px;">Novelty (N)</td> <td style="width: 60%; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">Claims</td> <td style="width: 50%; padding: 5px;"><u>1-2</u></td> <td style="width: 40%; padding: 5px;">YES</td> </tr> <tr> <td style="padding: 5px;">Claims</td> <td style="padding: 5px;">_____</td> <td style="padding: 5px;">NO</td> </tr> </table> </td> </tr> <tr> <td style="padding: 5px;">Inventive step (IS)</td> <td style="padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">Claims</td> <td style="width: 50%; padding: 5px;"><u>1-2</u></td> <td style="width: 40%; padding: 5px;">YES</td> </tr> <tr> <td style="padding: 5px;">Claims</td> <td style="padding: 5px;">_____</td> <td style="padding: 5px;">NO</td> </tr> </table> </td> </tr> <tr> <td style="padding: 5px;">Industrial applicability (IA)</td> <td style="padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">Claims</td> <td style="width: 50%; padding: 5px;"><u>1-2</u></td> <td style="width: 40%; padding: 5px;">YES</td> </tr> <tr> <td style="padding: 5px;">Claims</td> <td style="padding: 5px;">_____</td> <td style="padding: 5px;">NO</td> </tr> </table> </td> </tr> </table>	Novelty (N)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">Claims</td> <td style="width: 50%; padding: 5px;"><u>1-2</u></td> <td style="width: 40%; padding: 5px;">YES</td> </tr> <tr> <td style="padding: 5px;">Claims</td> <td style="padding: 5px;">_____</td> <td style="padding: 5px;">NO</td> </tr> </table>	Claims	<u>1-2</u>	YES	Claims	_____	NO	Inventive step (IS)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">Claims</td> <td style="width: 50%; padding: 5px;"><u>1-2</u></td> <td style="width: 40%; padding: 5px;">YES</td> </tr> <tr> <td style="padding: 5px;">Claims</td> <td style="padding: 5px;">_____</td> <td style="padding: 5px;">NO</td> </tr> </table>	Claims	<u>1-2</u>	YES	Claims	_____	NO	Industrial applicability (IA)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">Claims</td> <td style="width: 50%; padding: 5px;"><u>1-2</u></td> <td style="width: 40%; padding: 5px;">YES</td> </tr> <tr> <td style="padding: 5px;">Claims</td> <td style="padding: 5px;">_____</td> <td style="padding: 5px;">NO</td> </tr> </table>	Claims	<u>1-2</u>	YES	Claims	_____	NO
Novelty (N)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">Claims</td> <td style="width: 50%; padding: 5px;"><u>1-2</u></td> <td style="width: 40%; padding: 5px;">YES</td> </tr> <tr> <td style="padding: 5px;">Claims</td> <td style="padding: 5px;">_____</td> <td style="padding: 5px;">NO</td> </tr> </table>	Claims	<u>1-2</u>	YES	Claims	_____	NO																		
Claims	<u>1-2</u>	YES																							
Claims	_____	NO																							
Inventive step (IS)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">Claims</td> <td style="width: 50%; padding: 5px;"><u>1-2</u></td> <td style="width: 40%; padding: 5px;">YES</td> </tr> <tr> <td style="padding: 5px;">Claims</td> <td style="padding: 5px;">_____</td> <td style="padding: 5px;">NO</td> </tr> </table>	Claims	<u>1-2</u>	YES	Claims	_____	NO																		
Claims	<u>1-2</u>	YES																							
Claims	_____	NO																							
Industrial applicability (IA)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">Claims</td> <td style="width: 50%; padding: 5px;"><u>1-2</u></td> <td style="width: 40%; padding: 5px;">YES</td> </tr> <tr> <td style="padding: 5px;">Claims</td> <td style="padding: 5px;">_____</td> <td style="padding: 5px;">NO</td> </tr> </table>	Claims	<u>1-2</u>	YES	Claims	_____	NO																		
Claims	<u>1-2</u>	YES																							
Claims	_____	NO																							
2. Citations and explanations:	<p>Document 1: JP 2009-110069 A (Optex Co., Ltd.), 21 May 2009, claim 1; fig. 1 to 3 & US 2009/0109421 A1 & EP 2053427 A1</p> <p>Document 2: JP 2003-114277 A (Nissan Motor Co., Ltd.), 18 April 2003, paragraphs [0011] to [0015] and [0019]; fig. 1 to 4 (Family: none)</p> <p>Document 3: JP 2003-57345 A (Nissan Motor Co., Ltd.), 26 February 2003, paragraphs [0026] and [0027] (Family: none)</p> <p>Document 4: JP 4-278487 A (Toyota Motor Corp.), 05 October 1992, paragraph [0008] (Family: none)</p> <p style="margin-top: 20px;">The invention as in claim 1 is novel and involves an inventive step in relation to documents 1 to 4 cited in the ISR.</p> <p style="margin-top: 10px;">Document 1 discloses a laser area sensor provided with a laser range finder, a scan mechanism, and a means for acquiring received light level information in a time series.</p> <p style="margin-top: 10px;">Document 2 discloses making notification that a</p>																								

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2010/062033

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

front cover is contaminated when the intensity of scattered light in a scattered light region in close proximity exceeds a threshold value.

Document 3 discloses storing the threshold value for each outgoing angle in a table.

Document 4 discloses setting a low threshold to detect at a far range.

However, documents 1 to 4 do not disclose providing a storage section for storing range information corresponding to the furthest range side for each measurement direction, and changing a predetermined threshold value for comparing the size of the received light level in a determination section on the basis of the aforementioned range information of each measurement direction stored in the aforementioned storage section. Even a person skilled in the art could not easily conceive of such feature.