

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

|   |   |   |
|---|---|---|
| Applicant's or agent's file reference<br>CY-60623-PCT     | <b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.  |   |
| International application No.<br><b>PCT/KR2019/016290</b> | International filing date ( <i>day/month/year</i> )<br><b>25 November 2019 (25.11.2019)</b> | (Earliest) Priority Date ( <i>day/month/year</i> )<br>27 November 2018 (27.11.2018) |
| Applicant<br><b>CORNING PRECISION MATERIALS CO.,LTD.</b>  |   |   |

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

the international application in the language in which it was filed

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))

b.  This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c.  With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2.  **Certain claims were found unsearchable** (See Box No. II)

3.  **Unity of invention is lacking** (See Box No. III)

4. With regard to the **title**,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the **drawings** to be published with the abstract is Figure No. 14

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b.  none of the figures is to be published with the abstract.



**A. CLASSIFICATION OF SUBJECT MATTER****G02B 27/01(2006.01)i**

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)  
G02B 27/01; C03B 11/00; C03B 11/05; C03B 23/02; C03B 23/03; C03B 9/00; G02B 5/18Documentation 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 modelsElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
eKOMPASS(KIPO internal) & Keywords:HUD, mirror, concave, edge, form, reflect**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|-----------|---|-----------------------|
| X         | US 2016-0039705 A1 (JAPAN 3D DEVICES CO., LTD.) 11 February 2016 paragraphs [0003], [0013], [0027]-[0037], [0052] and figures 1-2 | 1-5,25-27             |
| A         | US 2012-0144866 A1 (SHYAN-JUH LIU et al.) 14 June 2012 paragraphs [0016]-[0018] and figures 1-4                                   | 1-5,25-27             |
| A         | US 2013-0081428 A1 (SHYAN-JUH LIU et al.) 04 April 2013 paragraphs [0017]-[0038] and figures 5-9                                  | 1-5,25-27             |
| A         | KR 10-2014-0111403 A (LG ELECTRONICS INC.) 19 September 2014 paragraphs [0018]-[0027] and figures 1-3                             | 1-5,25-27             |
| A         | US 2015-0370068 A1 (DENSO CORPORATION) 24 December 2015 paragraphs [0050]-[0054] and figures 1-3                                  | 1-5,25-27             |

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

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"D" document cited by the applicant in the international application

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

06 March 2020 (06.03.2020)

Date of mailing of the international search report

**09 March 2020 (09.03.2020)**

Name and mailing address of the ISA/KR

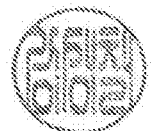
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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/KR2019/016290**

| Patent document cited in search report | Publication date | Patent family member(s)   | Publication date   |
|--|------------------|---|--|
| US 2016-0039705 A1                     | 11/02/2016       | JP 2016-037446 A<br>JP 6086954 B2<br>US 10252930 B2   | 22/03/2016<br>01/03/2017<br>09/04/2019   |
| US 2012-0144866 A1                     | 14/06/2012       | CN 102557402 A<br>CN 102557402 B<br>US 8448470 B2   | 11/07/2012<br>09/07/2014<br>28/05/2013   |
| US 2013-0081428 A1                     | 04/04/2013       | CN 103030262 A<br>TW 201313632 A<br>TW I447080 B<br>US 8893526 B2   | 10/04/2013<br>01/04/2013<br>01/08/2014<br>25/11/2014   |
| KR 10-2014-0111403 A                   | 19/09/2014       | None  |  |
| US 2015-0370068 A1                     | 24/12/2015       | CN 104969113 A<br>CN 104969113 B<br>DE 112014000691 T5<br>JP 2014-170213 A<br>JP 5949714 B2<br>KR 10-1746322 B1<br>KR 10-2015-0113189 A<br>US 9436008 B2<br>WO 2014-122912 A1 | 07/10/2015<br>08/08/2017<br>22/10/2015<br>18/09/2014<br>13/07/2016<br>12/06/2017<br>07/10/2015<br>06/09/2016<br>14/08/2014 |