

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)	0 5 . 1 2 . 2 0 1 7
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Applicant's or agent's file reference 1 6 P 4 0 4 W 0 0 1	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/JP2017/033769	International filing date (day/month/year) 19.09.2017	Priority date (day/month/year) 28.09.2016
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International Patent Classification (IPC) or both national classification and IPC
G02B5/28 (2006.01) i, G02B5/22 (2006.01) i, G02B5/26 (2006.01) i, G03B11/00 (2006.01) i, H01L27/146 (2006.01) i, H04N5/225 (2006.01) i

Applicant
NIPPON ELECTRIC GLASS 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.

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

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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
 - 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)).
2. 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))
3. 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:
 - a. forming part of the international application as filed:
 - in the form of an Annex C/ST.25 text file.
 - on paper or in the form of an image file.
 - b. furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. furnished subsequent to the international filing date for the purposes of international search only:
 - in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4. 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 forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

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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: 2px;">Novelty (N)</td> <td style="padding: 2px;">Claims <u>3, 5</u></td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td></td> <td style="padding: 2px;">Claims <u>1-2, 4, 6-8</u></td> <td style="width: 10%; text-align: right; padding: 2px;">NO</td> </tr> <tr> <td style="padding: 2px;">Inventive step (IS)</td> <td style="padding: 2px;">Claims _____</td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td></td> <td style="padding: 2px;">Claims <u>1-8</u></td> <td style="width: 10%; text-align: right; padding: 2px;">NO</td> </tr> <tr> <td style="padding: 2px;">Industrial applicability (IA)</td> <td style="padding: 2px;">Claims <u>1-8</u></td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td></td> <td style="padding: 2px;">Claims _____</td> <td style="width: 10%; text-align: right; padding: 2px;">NO</td> </tr> </table>	Novelty (N)	Claims <u>3, 5</u>	YES		Claims <u>1-2, 4, 6-8</u>	NO	Inventive step (IS)	Claims _____	YES		Claims <u>1-8</u>	NO	Industrial applicability (IA)	Claims <u>1-8</u>	YES		Claims _____	NO	
Novelty (N)	Claims <u>3, 5</u>	YES																	
	Claims <u>1-2, 4, 6-8</u>	NO																	
Inventive step (IS)	Claims _____	YES																	
	Claims <u>1-8</u>	NO																	
Industrial applicability (IA)	Claims <u>1-8</u>	YES																	
	Claims _____	NO																	
2. Citations and explanations:																			
<p>Document 1: JP 2013-041141 A (ASAHI GLASS CO., LTD.) 28 February 2013, paragraphs [0032]-[0046], [0065]-[0070], [0087], [0108], [0159]-[0179], fig. 2, 8, 9 (Family: none)</p> <p>Document 2: WO 2014/030628 A1 (ASAHI GLASS CO., LTD.) 27 February 2014, paragraph [0201], fig. 4 & US 2015/0146057 A1, paragraph [0199], fig. 4 & JP 2014-59550 A & KR 10-2015-0046016 A & CN 104755969 A</p> <p>Document 3: JP 2004-126530 A (HOYA CORPORATION) 22 April 2004, paragraph [0007] & US 2004/0071889 A1, paragraphs [0056]-[0063] & CN 1484045 A</p> <p>Document 4: JP 2004-306025 A (ASAHI GLASS CO., LTD.) 04 November 2004, paragraph [0041] (Family: none)</p> <p>Claims 1-2, 4 and 6-8</p> <p>The invention as in claims 1-2, 4 and 7-8 lacks novelty and does not involve an inventive step in the light of document 1 cited in the ISR.</p>																			

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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

Embodiment 7 in document 1 (see fig. 9) discloses a cover glass 54 for a solid-state imaging element (transparent cover member for a device) in which an antireflection layer 30 is provided on a first main surface 11 of an optical member 10 (transparent base material) and a near infrared absorption layer 40 is provided on a second main surface 12. It is also indicated that that the antireflection layer 30 is an infrared reflection function layer (infrared light transmission suppression layer) formed of a dielectric alternating multilayer film having high refractive index layers and low refractive index layers, and that an infrared ray shielding layer 20 (second infrared light transmission suppression layer) is provided on the second main surface 12. Furthermore, it is indicated that the near infrared absorption layer 40 is configured to be an antistatic layer, and thus the near infrared absorption layer 40 is considered to have a transparent conductive layer and an electrode function for electrical connection (Certification 1).

The invention as in claims 1-2 and 6-8 lacks novelty and does not involve an inventive step in the light of document 1.

Modification example 5 of embodiment 2 in document 1 (see fig. 3B) discloses a cover glass 54 for a solid-state imaging element (transparent cover member for a device) in which a near infrared absorption layer 40 (infrared light transmission suppression layer) is provided on a second main surface 12 (corresponding to the first main surface) of an optical member 10 (transparent base material), an infrared ray shielding layer antireflection layer 30 (second infrared light transmission suppression

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

layer) is provided on a first main surface 11 (corresponding to the second main surface), and an antireflection layer 30 with a conductive layer is provided. It is also indicated that the antireflection layer 30 is an infrared reflection function layer (infrared light transmission suppression layer) formed of a dielectric alternating multilayer film having high refractive index layers and low refractive index layers, and that an infrared ray shielding layer 20 (second infrared light transmission suppression layer) is provided on the second main surface 12. Furthermore, it is considered that the conductive layer on the antireflection layer has an electrode function for electrical connection (Certification 2).

Claim 3

The invention as in claim 3 does not involve an inventive step in the light of documents 1 and 2 cited in the ISR. Document 2 discloses an NIR filter 10B (transparent cover member for a device) in which a first dielectric layer film 3 is provided on a first main surface 11 of an optical member 10 (transparent base material), and a second dielectric multilayer film 4 is provided on a second main surface 12. Fig. 4 shows that the reflectance in the visible light range of the NIR filter is 2% or less.

The features disclosed in documents 1 and 2 are the same in being the features of improving an infrared ray shielding function in the technical field of transparent cover members for devices, and thus a person skilled in the art could have easily conceived of obtaining the visible light region reflectance of 2% or less disclosed

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in document 2 in the invention disclosed in document 1 (Certification 1) with the infrared ray shielding layer 20.

Claim 5

The invention as in claim 5 does not involve an inventive step in the light of documents 1, 3 and 4 cited in the ISR.

Indium oxide and tin oxide are well-known materials as the material for an alternating multilayer film structure for a solid-state imaging element or a transparent conductive film with an electrode in which infrared reflection layers are alternately interposed in the layer film (see documents 3 and 4).

(Notes)

Claim 7 sets forth "the transparent cover glass for the device set forth in any one of claims 1-6, wherein a second infrared light transmission suppression layer which absorbs or reflects infrared light is formed on the second main surface," but claims 1-6 do not set forth a transparent cover glass for a device. In the present international search, examination was performed assuming that the above is an error for "a transparent cover member for a device."