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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: BRIGHTNESS ENHANCING FILM AND FILM BASED DIFFUSER FOR IMPROVED ILLUMINATION UNIFORMITY OF DISPLAYS

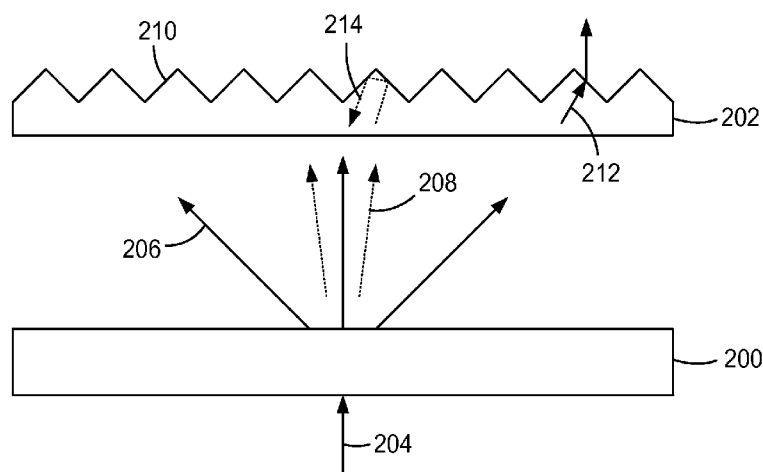


FIG. 2A

(57) Abstract: An optical device has a first film (200) that has a first side and a second side. When illuminated by light (204) at the first side, the first film is characterized by a first fraction of broadly diffused transmitted light (206) and a second fraction of narrowly diffused transmitted light (208). A second film (202) is disposed to the second side of the first film. The second film has at least one free surface that diverts light. In some embodiments, the first film has a diffuse scattering optical density between 0.5 and 3. The device finds use in spreading and making light uniform in a backlight in a display such as a liquid crystal display.

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17 December 2009

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/034047

A. CLASSIFICATION OF SUBJECT MATTER
INV. G02F1/13357 G02B5/02

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)
G02F G02B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	WO 2007/002317 A (FUSION OPTIX INC [US]; COLEMAN ZANE A [US]; YEO TERRENCE E [US]; KELLY) 4 January 2007 (2007-01-04) page 3, line 1 - page 4, line 7 page 7, line 17 - page 13, line 18 page 16, line 3 - line 12 page 18, line 31 - page 22, line 9 page 30, line 11 - page 32, line 17; figures 1-21 ----- -/--	1-14, 19-31, 33-39 13,15

☒ 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
- *E* earlier document 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.
- *&* document member of the same patent family

Date of the actual completion of the international search

9 October 2009

Date of mailing of the international search report

29/10/2009

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2009/034047

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/019131 A1 (CHOI JIN-SUNG [KR] ET AL) 25 January 2007 (2007-01-25)	1-5, 7-8, 11-14, 18, 20-22, 24, 27-30, 34, 36-37
Y	paragraphs [0008], [0011], [0012], [0016] paragraphs [0020], [0061], [0066] - [0069] paragraphs [0051] - [0058], [0087] - [0092] paragraphs [0131] - [0134]; figures 1, 2, 5-10, 12-14	15
X	JP 2004 258105 A (TOMOEGAWA PAPER CO LTD) 16 September 2004 (2004-09-16)	1, 10-11, 21-22, 26-27, 36-37
Y	abstract; figures 1-3	13, 15
Y	JP 2007 265783 A (NIPPON ZEON CO) 11 October 2007 (2007-10-11) abstract; figures 3-8, 13, 14	13, 15
A	WO 2008/011497 A (DOBIN ANDREA [US]; LU ZHIJIAN [US] LU ZHIJIAN [US]) 24 January 2008 (2008-01-24) page 8, line 24 - page 9, line 25 page 10, line 32 - page 11, line 8; examples 2, 3, 6; compounds 2-5, 20, 21	1-39
X, P	WO 2008/102762 A (OYAMA NOBUO [JP]) 28 August 2008 (2008-08-28) abstract; figures 1-4, 10-15, 19-25	1, 37
A	US 2005/018431 A1 (SHIANG JOSEPH JOHN [US]) 27 January 2005 (2005-01-27) paragraphs [0040], [0045], [0047] paragraph [0053] - paragraph [0057] paragraphs [0085], [0092], [0093] paragraphs [0132], [0133] paragraph [0157] - paragraph [0160]; figures 1, 8	22-36

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/034047

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-21, 37-39

An optical device comprising a first layer transmitting a narrowly and a broadly diffused fraction of light, and a second film having a light-diverting surface.

2. claims: 22-36

An optical device comprising a first film having a diffuse scattering optical density between 0.5 and 3, and a second film having a light diverting surface.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2009/034047

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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