

(19) World Intellectual Property Organization
International Bureau



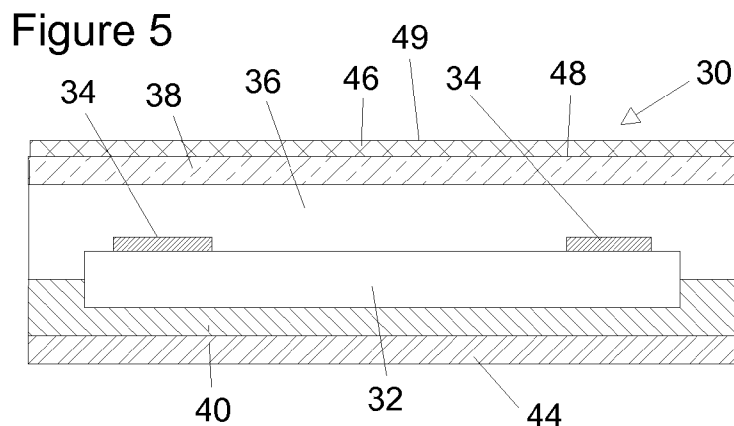
(43) International Publication Date
16 July 2009 (16.07.2009)

PCT

(10) International Publication Number
WO 2009/089236 A3

- (51) International Patent Classification:
H01L 31/042 (2006.01)
- (21) International Application Number:
PCT/US2009/030253
- (22) International Filing Date:
7 January 2009 (07.01.2009)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/019,740 8 January 2008 (08.01.2008) US
- (71) Applicant (for all designated States except US): **CERTAINTEED CORPORATION** [US/US]; CertainTeed Corporation, 750 E. Swedesford Road, Valley Forge, PA 19482 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **KALKANOGLU, Husnu M.** [US/US]; Husnu M. Kalkanoglu, 307 Yale Avenue, Swarthmore, PA 19081 (US). **JACOBS, Gregory F.** [US/US]; Gregory F. Jacobs, 5 Park Avenue, Orelan, PA 19075 (US). **SHIAO, Ming Liang** [US/US]; Ming Liang Shiao, 4021 Greenes Way Circle, Collegeville, PA 19426 (US).
- (74) Agents: **SLUZAS, Alex R.** et al.; Paul and Paul, 2000 Market Street, Suite 2900, Philadelphia, PA 19103 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
- 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))
- (88) Date of publication of the international search report:
1 October 2009

(54) Title: PHOTOVOLTAIC MODULE



(57) Abstract: A photovoltaic module includes an encapsulated photovoltaic element and an infrared transmissive decorative overlay simulating conventional roofing.

WO 2009/089236 A3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/030253**A. CLASSIFICATION OF SUBJECT MATTER****H01L 31/042(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)

IPC : H01L 31

Documentation 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 since 1975.
Japanese utility models and applications for utility models since 1975.

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

eKOMPASS(KIPO internal)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
PX	US 2008/0006323 A1(HUSNU M. KALKANOGLU et al.) 10 January 2008 See whole document.	1-36
A	JP 06-045628 A(KANEGAFUCHI CHEMI IND. CO., LTD.) 18 February 1994 See abstract and figs 4~8.	1-36
A	US 5700332 A(EDWARD J. BROWN et al.) 23 December 1997 See abstract.	1-36
A	JP 08-139347 A(CANON INC.) 31 May 1996 See abstract and figs 1 and 4.	1-36

 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 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 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

27 JULY 2009 (27.07.2009)

Date of mailing of the international search report

27 JULY 2009 (27.07.2009)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-
gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

KOH, JAE HYUN

Telephone No. 82-42-481-5687



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2009/030253

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2008-0006323 A1	10.01.2008	EP 2044634 A2 WO 2008-008624 A2 WO 2008-008624 A3	08.04.2009 17.01.2008 17.01.2008
JP 06-045628 A	18.02.1994	None	
US 5700332 A	23.12.1997	None	
JP 08-139347 A	31.05.1996	None	