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(54) Title: ON-WINDOW SOLAR-CELL HEAT-SPREADER

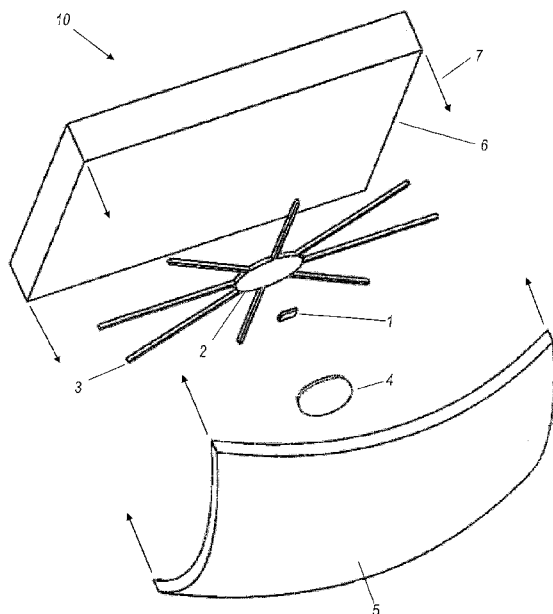


FIG. 1A

(57) Abstract: An optoelectrical device, which may be a luminaire or a photovoltaic concentrator, has a transparent cover plate. A target with an optoelectrical transducer that produces waste heat in operation is mounted at an inside face of the transparent cover plate. A primary mirror reflects light between being concentrated on the target and passing generally collimated through the cover plate. A heat spreader is in thermal contact with the target. The heat spreader has heat conductors that thermally connect the target with the inside surface of the cover plate. The heat conductors may be arms extending radially outwards, and may be straight, zigzag, or branching. An array of targets may be mounted on a common cover plate, and their heat spreaders may be continuous from target to target.

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TM), European (AL, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2010/057810**A. CLASSIFICATION OF SUBJECT MATTER***H01L 31/052(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)

H01L 31/052; F03G 6/00; F24J 2/00; H01L 31/042; H01L 31/00

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
Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: optoelectrical device, mirror, heat spreader, photovoltaic

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2005-217224 A (DAIDO STEEL CO., LTD.) 11 August 2005 See abstract, paragraphs [0022]-[0026], claims 1-2 and figure 2.	1-20
A	KR 10-2009-0095823 A (SEO, DAE HO et al.) 10 September 2009 See abstract, paragraphs [0027]-[0035], claim 1 and figures 1-2.	1-20
A	JP 08-233373 A (HISAO, IZUMI) 13 September 1996 See abstract, paragraphs [0011]-[0014],[0020]-[0023], claims 1-3 and figures 1,5.	1-20
A	US 2010-0051102 A1 (LIN, CHUNG-JYH) 04 March 2010 See abstract, claims 1-5,17 and figures 4,6.	1-20

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

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2005-217224 A	11.08.2005	None	
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