

Title (en)  
PHOTOVOLTAIC MODULE WITH COOLING DEVICE

Title (de)  
PHOTOVOLTAIK-MODUL MIT KÜHLVORRICHTUNG

Title (fr)  
MODULE PHOTOVOLTAÏQUE DOTÉ D'UN DISPOSITIF REFROIDISSEUR

Publication  
**EP 2831924 A1 20150204 (DE)**

Application  
**EP 13708145 A 20130307**

Priority

- EP 12162418 A 20120330
- EP 2013054578 W 20130307
- EP 13708145 A 20130307

Abstract (en)  
[origin: WO2013143821A1] The present invention relates to a photovoltaic module (100) with cooling device, at least comprising: a laminated composite (101) composed of rear sheet (2), photovoltaic layer system (3) and front sheet (1) arranged one above another, and a structural plate (5) arranged on the rear side (IV) of the rear sheet (2), wherein at least one channel (6) running between a coolant inlet (19) and a coolant outlet (20) is introduced into the structural plate (5), at least two contact areas (7, 7') are formed on the surface of the structural plate (5), said contact areas being separated from one another by the channel (6) and the structural plate (5) being connected to the rear side (IV) via said contact areas, and the channel (6) is at least partly filled with a liquid coolant.

IPC 8 full level  
**H01L 31/052** (2014.01)

CPC (source: EP US)  
**H01L 31/048** (2013.01 - EP US); **H01L 31/0521** (2013.01 - US); **H02S 40/425** (2014.12 - EP US); **Y02E 10/50** (2013.01 - EP US); **Y02E 10/541** (2013.01 - EP); **Y10T 29/49826** (2015.01 - EP US)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2013143821 A1 20131003**; CN 104205622 A 20141210; EP 2831924 A1 20150204; JP 2015511810 A 20150420; JP 5992600 B2 20160914; KR 101768298 B1 20170814; KR 20140132744 A 20141118; US 2015020866 A1 20150122

DOCDB simple family (application)  
**EP 2013054578 W 20130307**; CN 201380018322 A 20130307; EP 13708145 A 20130307; JP 2015502180 A 20130307; KR 20147026926 A 20130307; US 201314371172 A 20130307