

Title (en)  
SOLAR-CELL MODULE

Title (de)  
SOLARZELLENMODUL

Title (fr)  
MODULE DE CELLULE SOLAIRE

Publication  
**EP 4342076 A1 20240327 (DE)**

Application  
**EP 22728389 A 20220506**

Priority  
• DE 102021112981 A 20210519  
• EP 2022062328 W 20220506

Abstract (en)  
[origin: WO2022243069A1] The invention relates to a solar-cell module having at least a first, a second and a third module segment, wherein each of the module segments has a plurality of photovoltaic solar cells interconnected in series. The invention is characterized in that the solar cells of the module segments are arranged on or in a curved, flat carrier element, wherein each solar cell is assigned a solar-cell normal vector, the solar-cell module is assigned a solar-cell-module normal vector, which corresponds to the vectorial mean value of the solar-cell normal vectors, each solar cell is assigned a tilting angle, which corresponds to the angle between the solar-cell normal vector of the solar cell and the solar-cell-module normal vector, and each module segment is assigned a tilting-angle range, the limits of which are determined by the minimum and maximum tilting angles of the solar cells of the module segment, in that the tilting-angle ranges of at least two module segments are disjunct, in that the module segments are interconnected in parallel, in that each module segment has the same number of solar cells, and in that each solar cell of a module segment is arranged directly adjacent to at least one further solar cell of the same module segment.

IPC 8 full level  
**H02S 20/22** (2014.01); **B60K 16/00** (2020.01); **B60L 8/00** (2006.01); **H01L 31/05** (2014.01); **H02S 20/30** (2014.01)

CPC (source: EP KR)  
**B60K 16/00** (2013.01 - EP); **B60L 8/003** (2013.01 - EP); **H01L 31/0504** (2013.01 - EP KR); **H02S 20/22** (2014.12 - EP KR); **H02S 20/30** (2014.12 - EP); **B60K 2016/003** (2013.01 - EP); **Y02E 10/50** (2013.01 - EP)

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

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**DE 102021112981 A1 20221124**; CN 117397164 A 20240112; EP 4342076 A1 20240327; KR 20240008938 A 20240119; WO 2022243069 A1 20221124

DOCDB simple family (application)  
**DE 102021112981 A 20210519**; CN 202280036416 A 20220506; EP 2022062328 W 20220506; EP 22728389 A 20220506; KR 20237043518 A 20220506