

Title (en)
PHOTOVOLTAIC DEVICE WITH HOLOGRAPHIC STRUCTURE FOR DEFLECTING INCIDENT SOLAR RADIATION, AND METHOD FOR PRODUCING IT

Title (de)
PHOTOVOLTAIK-VORRICHTUNG MIT HOLOGRAFISCHER STRUKTUR ZUM UMLENKEN EINFALLENDER SONNENSTRAHLUNG, SOWIE HERSTELLVERFAHREN HIERFÜR

Title (fr)
DISPOSITIF PHOTOVOLTAÏQUE AVEC STRUCTURE HOLOGRAPHIQUE POUR LA DÉVIATION DE RAYONNEMENT SOLAIRE ENTRANT, ET SON PROCÉDÉ DE FABRICATION

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Application
EP 07856105 A 20071213

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• DE 102006059417 A 20061215

Abstract (en)
[origin: WO2008071180A2] The invention relates to a photovoltaic device (10) for directly converting solar energy into electrical energy, comprising a light entrance body (1) having a multiplicity of holographic elements (3) which each have a hologram structure (30) with a plurality of superimposed hologram layers (32, 34) having different spectral sensitivities, which concentrate the short-wave solar radiation that is incident at a specific angle in each case onto the same region of an opposite solar cell (5) having an area smaller than the light entrance area of a corresponding holographic element (3), wherein each holographic element (3) has at least one topmost hologram layer (32) which transmits the short-wave incident radiation and deflects the incident long-wave solar radiation at an obtuse angle or directs it away from the opposite solar cell (5) in a region present between the opposite solar cell (5) and an adjacent solar cell (5) on that side of the solar cells (5) which is remote from the light.

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