

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
06 December 2018 (06.12.2018)



(10) International Publication Number
WO 2018/220593 A1

(51) International Patent Classification:
H02S 30/10 (2014.01)

(21) International Application Number:

PCT/IB2018/053933

(22) International Filing Date:

01 June 2018 (01.06.2018)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
1708735.4 01 June 2017 (01.06.2017) GB

(71) Applicant: REC SOLAR PTE. LTD. [SG/SG]; 20 Tuas
South Avenue 14, Singapore 637312 (SG).

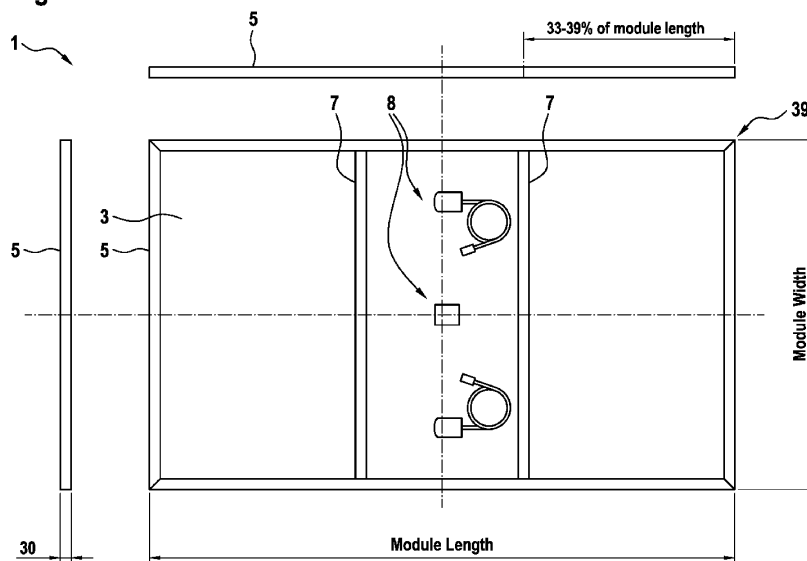
(72) Inventors: **DIESTA, Noel Gonzales**; 467 08-190 Segar
Road, Singapore 670467 (SG). **SRIDHARA, Shankar**
Gauri; 221 Queensway, #08-08, Singapore 276750 (SG).

(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, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA,
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,

(54) Title: COST EFFECTIVE FRAME DESIGN FOR THINNER WAFERS

Fig. 1



(57) Abstract: A slim solar module (1) is proposed. It comprises a solar laminate (3) comprising plural solar cells (9) interposed between front and rear cover sheets (13, 15), a frame (5) enclosing the solar laminate (3) and at least one reinforcement strut (7) arranged at a rear surface of the solar laminate (3). A ratio between a frame surface and a frame thickness shall be between 45000 and 70000. For example, the frame may have a thickness of less than 35 mm. Specifically, the frame may have a length of 1665 mm, a width of 991 mm and a thickness of 30 mm. Due to the reduced thickness, the solar module has a reduced volume being beneficial during transport to a destination location. However, the thickness has been optimized to, with the reinforcement struts, still providing for sufficient mechanical stability for the solar module.

[Continued on next page]

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, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))