

Title (en)

METALLIZATION OF BURIED CONTACT SOLAR CELLS

Title (de)

METALLISIERUNG VON SOLARZELLEN MIT VERGRABENEM KONTAKT

Title (fr)

METALLISATION DE PHOTOPILES A CONTACT ENTERRE

Publication

EP 0958597 A1 19991124 (EN)

Application

EP 96933268 A 19961014

Priority

- AU 9600647 W 19961014
- AU PN606395 A 19951019

Abstract (en)

[origin: WO9715075A1] The present invention makes use of the geometry of the grooves (51) formed in a substrate, to allow a dielectric layer (27) to be deposited with some regions (54) of the grooves having a substantially thinner layer deposited than the top surface of the substrate. These regions (54) of reduced thickness dielectric within the grooves are then prematurely etched by an appropriate chemical (or other) etchant capable of controllably etching away the dielectric layer (27), with the result that in these regions the silicon surface can be exposed and able to be plated by a metallization while the top surface remains protected by the dielectric material. The remaining dielectric material can optionally be required to act as an anti-reflective coating. The invention can be used in making buried contact solar cells.

IPC 1-7

H01L 21/31; H01L 21/302; H01L 21/283; H01L 31/18; H01L 31/042; H01L 31/0224; H01L 21/762

IPC 8 full level

H01L 21/28 (2006.01); H01L 21/288 (2006.01); H01L 31/0224 (2006.01); H01L 31/04 (2006.01); H01L 31/18 (2006.01)

CPC (source: EP)

H01L 31/022425 (2013.01); H01L 31/18 (2013.01); H01L 31/1804 (2013.01); Y02E 10/547 (2013.01); Y02P 70/50 (2015.11)

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

WO 9715075 A1 19970424; AU PN606395 A0 19951109; EP 0958597 A1 19991124; EP 0958597 A4 199911207; JP H11514498 A 19991207

DOCDB simple family (application)

AU 9600647 W 19961014; AU PN606395 A 19951019; EP 96933268 A 19961014; JP 51535097 A 19961014