US 20190097571A1

(19) United States

(12) Patent Application Publication

Lefevre et al.

(10) Pub. No.: US 2019/0097571 A1

(43) Pub. Date: Mar. 28, 2019

(54) **GLASS COVER WITH OPTICAL-FILTERING COATING FOR MANAGING COLOR OF A SOLAR ROOF TILE**

(71) Applicant: **TESLA, INC.**, Palo Alto, CA (US)

(72) Inventors: **Ollivier J. Lefevre**, Pleasanton, CA (US); **John Liu**, Fremont, CA (US)

(73) Assignee: **TESLA, INC.**, Palo Alto, CA (US)

(21) Appl. No.: **15/719,244**

(22) Filed: **Sep. 28, 2017**

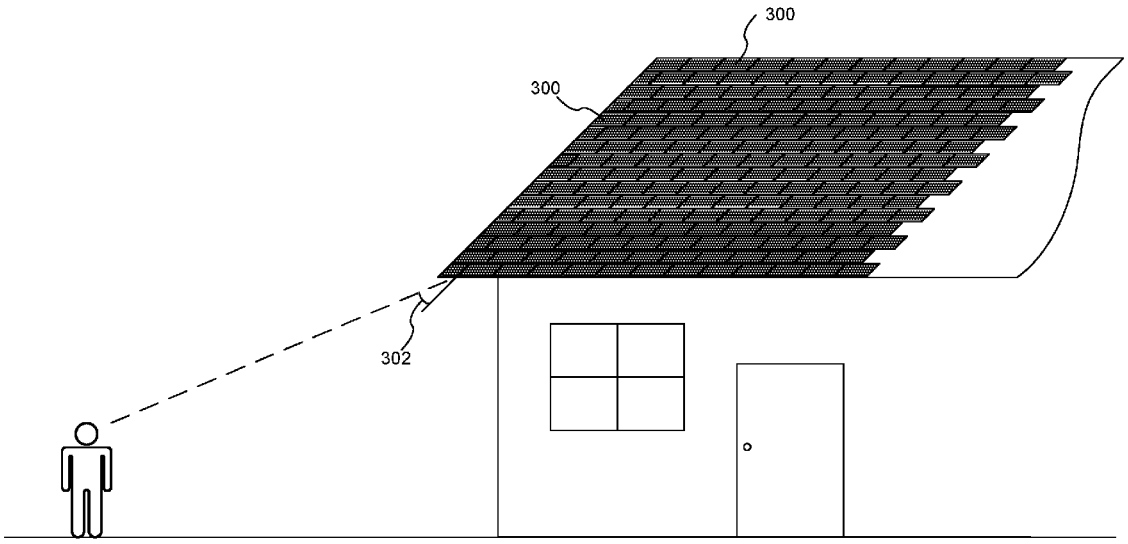
Publication Classification

(51) **Int. Cl.**

H02S 20/25	(2006.01)
H01L 31/049	(2006.01)
H01L 31/054	(2006.01)
G02B 5/22	(2006.01)
G02B 1/11	(2006.01)
H02S 40/36	(2006.01)
E04D 1/30	(2006.01)
E04D 1/28	(2006.01)
E04D 1/16	(2006.01)

(52) **U.S. Cl.**

CPC ***H02S 20/25*** (2014.12); ***H01L 31/049*** (2014.12); ***H01L 31/0549*** (2014.12); ***G02B 5/22*** (2013.01); ***G02B 1/11*** (2013.01); *E04D 1/265* (2013.01); ***E04D 1/30*** (2013.01); ***E04D 1/28*** (2013.01); ***E04D 1/16*** (2013.01); *E04D 2001/308* (2013.01); ***H02S 40/36*** (2014.12)

(57) **ABSTRACT**

One embodiment can provide a solar roof tile. The solar roof tile can include a front cover, a back cover, one or more photovoltaic structures positioned between the front cover and the back cover, and a band-stop optical filter positioned between the front cover and the photovoltaic structures. The band-stop optical filter is configured to block light within a predetermined spectral range, thereby preventing the light from reflecting off surfaces of the photovoltaic structures to exit the solar roof tile.