



US 20220377921A1

(19) **United States**(12) **Patent Application Publication**

Lee et al.

(10) **Pub. No.: US 2022/0377921 A1**(43) **Pub. Date: Nov. 24, 2022**

(54) **COVER WINDOW, METHOD OF PROVIDING COVER WINDOW, AND DISPLAY DEVICE INCLUDING COVER WINDOW**

B32B 27/36 (2006.01)*B32B 27/08* (2006.01)*B32B 27/34* (2006.01)*B32B 27/28* (2006.01)

(71) Applicant: **Samsung Display Co., LTD.**, Yongin-si (KR)

(52) **U.S. Cl.**CPC *H05K 5/03* (2013.01); *B32B 3/30*(2013.01); *B32B 7/12* (2013.01); *B32B 27/36*(2013.01); *B32B 27/08* (2013.01); *B32B 27/34*(2013.01); *B32B 27/281* (2013.01); *H05K**5/0017* (2013.01)

(72) Inventors: **Joo Hyeon Lee**, Suwon-si (KR); **Ji Eun Nam**, Seoul (KR); **Heon Jung Shin**, Hwaseong-si (KR)

(21) Appl. No.: **17/515,744**(22) Filed: **Nov. 1, 2021**(30) **Foreign Application Priority Data**

May 24, 2021 (KR) 10-2021-0066230

Publication Classification(51) **Int. Cl.***H05K 5/03* (2006.01)*B32B 3/30* (2006.01)*B32B 7/12* (2006.01)

(57)

ABSTRACT

A cover window includes a first film, an adhesive layer below the first film, and a second film below the adhesive layer. The second film includes a base substrate and a pattern layer which is on the base substrate and includes a plurality of protrusions. The pattern layer includes a plurality of protrusions that become narrower in a direction towards the first film. A modulus of the base substrate is about 500 megapascals (MPa) to about 1.5 gigapascals (GPa) when a modulus of the pattern layer is about 5 MPa to about 20 MPa, or the modulus of the base substrate is about 3.5 GPa or more when the modulus of the pattern layer is about 30 MPa to about 50 MPa.

