

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2023/0232669 A1

Jul. 20, 2023 (43) **Pub. Date:**

(54) DISPLAY DEVICE AND METHOD OF MANUFACTURING THE DISPLAY DEVICE

(71) Applicant: Samsung Display Co., Ltd., Yongin-si

Inventors: **Kyungmin Kim**, Yongin-si (KR); Junhyeong Park, Yongin-si (KR); Dongwon Kim, Yongin-si (KR)

(21) Appl. No.: 18/154,696

Filed: Jan. 13, 2023 (22)

(30)Foreign Application Priority Data

Jan. 14, 2022 (KR) 10-2022-0006173

Publication Classification

(51) Int. Cl. H10K 59/124 (2006.01)H10K 59/12 (2006.01)H10K 59/80 (2006.01) H10K 59/60 (2006.01)H01L 31/054 (2006.01)

(52) U.S. Cl.

CPC H10K 59/124 (2023.02); H10K 59/1201 (2023.02); H10K 59/8731 (2023.02); H10K 59/60 (2023.02); H01L 31/0547 (2014.12); H10K 59/8791 (2023.02); H10K 59/353 (2023.02)

(57)ABSTRACT

A display device and a method of manufacturing the display device are provided. The display device includes a substrate including a transmissive display area including a first pixel area, a second pixel area, and an opening area between the first pixel area and the second pixel area and defining a substrate opening portion, a light-emitting element layer above the substrate and including a first light-emitting element in the first pixel area and a second light-emitting element in the second pixel area, and a first inorganic encapsulation layer above the light-emitting element layer and extending from the first pixel area to the second pixel area across the substrate opening portion.

