

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0244928 A1

Jul. 18, 2024 (43) **Pub. Date:**

(54) DISPLAY APPARATUS AND METHOD OF MANUFACTURING THE SAME

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

Inventors: **Seongwon KIM**, Yongin-si (KR); Dongchul SHIN, Yongin-si (KR); Jangyeol YOON, Yongin-si (KR)

Appl. No.: 18/407,041

Filed: Jan. 8, 2024 (22)

(30)Foreign Application Priority Data

Jan. 13, 2023 (KR) 10-2023-0005637

Publication Classification

(51) Int. Cl. H10K 59/80 (2023.01)H10K 59/12 (2023.01) H10K 59/131 (2023.01)H10K 59/88 (2023.01)H10K 77/10 (2023.01)H10K 102/00 (2023.01)

(52) U.S. Cl.

CPC H10K 59/873 (2023.02); H10K 59/1201 (2023.02); H10K 59/131 (2023.02); H10K 59/88 (2023.02); H10K 77/111 (2023.02); H10K 2102/311 (2023.02); H10K 2102/351 (2023.02)

(57)ABSTRACT

A display apparatus including a display panel in which a penetration-opening portion is defined includes: a substrate layer including a first display portion, a second display portion, and a connection portion connecting the first display portion to the second display portion; a side-wall groove defined in the substrate layer and recessed from a lower surface of the substrate layer; a pixel arranged on the first display portion; and a line arranged on the connection portion and configured to transfer an electrical signal.

