

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0237476 A1 HONG et al.

Jul. 11, 2024 (43) **Pub. Date:**

(54) **DISPLAY DEVICE**

- (71) Applicant: Samsung Display Co., LTD., Yongin-si
- (72) Inventors: **Jongbeom HONG**, Seongnam-si (KR); Yongsub SHIM, Gwangmyeong-si (KR); Reehyang KIM, Hwaseong-si (KR); Youngjun YOO, Goyang-si (KR)
- (21) Appl. No.: 18/443,537
- (22) Filed: Feb. 16, 2024

Related U.S. Application Data

- (63) Continuation of application No. 17/528,477, filed on Nov. 17, 2021, now Pat. No. 11,943,992.
- (30)Foreign Application Priority Data

(KR) 10-2021-0024787 Feb. 24, 2021

Publication Classification

(51) Int. Cl. H10K 59/65 (2006.01)H10K 50/80 (2006.01)H10K 50/86 (2006.01)

(52) U.S. Cl. CPC H10K 59/65 (2023.02); H10K 50/865 (2023.02); H10K 50/868 (2023.02)

ABSTRACT (57)

A display device includes an optical module, a light emitting structure, a lower substrate including a display area, and in order within the display area a first area corresponding to the optical module, second area adjacent to the optical module, and a third area including the light emitting structure, a light-transmitting filling layer in the first area and corresponding to the optical module, a light blocking layer in the second area and defining an opening corresponding to the light-transmitting filling layer in the first area, and an upper substrate facing the lower substrate with the light emitting structure and the light blocking layer therebetween.

