

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0244892 A1 LEE et al.

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

(54) **DISPLAY DEVICE**

Applicant: Samsung Display Co., LTD., Yongin-si

(72) Inventors: Song Ee LEE, Yongin-si (KR); Sang Ji PARK, Yongin-si (KR); Cheol SHIN, Yongin-si (KR); Keun Chan OH,

> Yongin-si (KR); DOKYUNG YOUN, Yongin-si (KR); Sun-Kyu JOO, Yongin-si (KR); Woo-Man JI, Yongin-si (KR); You Young JIN, Yongin-si (KR); Tae Hyung HWANG,

Yongin-si (KR)

Assignee: Samsung Display Co., LTD., Yongin-si (73)

(21) Appl. No.: 18/512,316

Filed: Nov. 17, 2023 (22)

(30)Foreign Application Priority Data

Jan. 18, 2023 (KR) 10-2023-0007349

Publication Classification

(51) Int. Cl. H10K 59/122 (2006.01)H10K 59/38 (2006.01)H10K 59/80 (2006.01)

(52)U.S. Cl. CPC H10K 59/122 (2023.02); H10K 59/38 (2023.02); H10K 59/873 (2023.02)

(57)ABSTRACT

A display device includes multiple light emitting devices disposed on a substrate, each including a first electrode, an emission layer, and a second electrode, a pixel defining layer including multiple openings overlapping the first electrode in a plan view, an encapsulation layer covering the light emitting devices and including multiple first openings overlapping the pixel defining layer in a plan view, a bank disposed on the encapsulation layer, overlapping the first openings in a plan view, and including multiple second openings overlapping the light emitting devices in a plan view, a first color conversion layer, a second color conversion layer, and a transmission layer, each disposed inside the second openings, and a spacer disposed on the bank and including a colored material.

