



US 20240215414A1

(19) **United States**(12) **Patent Application Publication**
JOO et al.(10) **Pub. No.: US 2024/0215414 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **DISPLAY APPARATUS AND METHOD OF
MANUFACTURING THE SAME****Publication Classification**(51) **Int. Cl.****H10K 59/80** (2006.01)**H10K 59/12** (2006.01)**H10K 59/122** (2006.01)**H10K 59/38** (2006.01)(52) **U.S. Cl.****CPC** **H10K 59/8792** (2023.02); **H10K 59/1201**(2023.02); **H10K 59/122** (2023.02); **H10K****59/38** (2023.02)(71) Applicant: **SAMSUNG DISPLAY CO., LTD.**,
Yongin-si (KR)(72) Inventors: **Sunkyu JOO**, Yongin-si (KR);
Sunyoung KWON, Yongin-si (KR);
Sangji PARK, Yongin-si (KR);
Jaechoul PARK, Yongin-si (KR);
Keunchan OH, Yongin-si (KR);
Dokyung YOUN, Yongin-si (KR);
Songee LEE, Yongin-si (KR); **Wooman**
JI, Yongin-si (KR); **Youyoung JIN**,
Yongin-si (KR); **Taehyung HWANG**,
Yongin-si (KR)(21) Appl. No.: **18/229,529**(22) Filed: **Aug. 2, 2023**(30) **Foreign Application Priority Data**

Dec. 23, 2022 (KR) 10-2022-0183074

(57)

ABSTRACT

A display apparatus includes a first substrate, first to third light-emitting elements disposed over the first substrate and each including a first-color emission layer and a second-color emission layer, a second substrate disposed over the first substrate, a bank disposed on a lower surface of the second substrate facing the first substrate, where first to third bank openings is defined through the bank to overlap the first to third light-emitting elements, a first to third color filter layers disposed between the bank and the second substrate and overlapping the first to third light-emitting elements, a quantum-dot layer disposed in the third bank opening to overlap the third light-emitting element, and a spacer disposed on a lower surface of the bank facing the first substrate and including a same material as a material of the quantum-dot layer.

