

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0215373 A1 **KANG**

Jun. 27, 2024 (43) **Pub. Date:**

(54) LIGHT EMITTING DIODE DISPLAY DEVICE

(71) Applicant: LG Display Co., Ltd, Seoul (KR)

(72) Inventor: Yeon-Suk KANG, Paju-si (KR)

Assignee: LG Display Co., Ltd, Seoul (KR)

Appl. No.: 18/467,867 (21)

(22)Filed: Sep. 15, 2023

Foreign Application Priority Data (30)

(KR) 10-2022-0184569

Publication Classification

(51) Int. Cl. H10K 59/38 (2006.01)H10K 59/80 (2006.01) (52) U.S. Cl.

CPC H10K 59/38 (2023.02); H10K 59/879 (2023.02); H10K 59/8792 (2023.02)

ABSTRACT (57)

An organic light emitting diode display device includes a substrate having first, second and third subpixels; a light emitting diode in each of the first, second and third subpixels on the substrate; a black matrix in a border region between the first, second and third subpixels on the light emitting diode; first, second and third color filters in the first, second and third subpixels, respectively, on the light emitting diode, a thickness of each of the first, second and third color filters smaller than a thickness of the black matrix; and a microlens on each of the first, second and third color filters.

135

