

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0237411 A1 YANG et al.

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

(54) OLED DISPLAY SUBSTRATE AND DISPLAY DEVICE

(71) Applicants: Yunnan Invensight Optoelectronics Technology Co., Ltd., Kunming,

Yunnan (CN); BOE Technology Group

Co., Ltd., Beijing (CN)

(72) Inventors: Zongshun YANG, Beijing (CN);

Hongtao YU, Beijing (CN); Kuanta

HUANG, Beijing (CN)

17/914,242 (21) Appl. No.:

PCT Filed: Nov. 15, 2021 (22)

(86) PCT No.: PCT/CN2021/130564

§ 371 (c)(1),

(2) Date: Sep. 23, 2022

(30)Foreign Application Priority Data

(CN) 202110340902.X Mar. 30, 2021

Publication Classification

Int. Cl. (51)H10K 59/122

(2006.01)

H10K 59/35

(2006.01)

U.S. Cl.

CPC H10K 59/122 (2023.02); H10K 59/353

(2023.02)

(57)ABSTRACT

This invention provides an OLED display substrate and a display device. The OLED display substrate includes a base substrate including a drive circuit layer; a first electrode layer including multiple independent first electrodes; and a pixel definition layer. A sub-pixel includes a first electrode and a light-emitting element. The sub-pixel includes a first-color sub-pixel, a second-color sub-pixel and a thirdcolor sub-pixel. An orthographic projection of the first electrode of the first-color sub-pixel and the pixel definition layer onto the base substrate have a first overlap. An orthographic projection of the first electrode of the secondcolor sub-pixel and the pixel definition layer onto the base substrate have a second overlap. An orthographic projection of the first electrode of the third-color sub-pixel and the pixel definition layer onto the base substrate have a third overlap. The area of the first overlap is different from that of the second or third overlap.

