

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0213819 A1 Ho et al.

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

(54) WIRELESS CHARGING DEVICE **DETECTION WITH PHOTOSENSORS**

(71) Applicant: Hewlett-Packard Development Company, L.P., Spring, TX (US)

(72) Inventors: Ken Ho, Taipei City (TW); Chien-Hao

Lu, Taipei City (TW); Po Cheng Liao, Taipei City (TW); Chia Ching Lu,

Taipei City (TW)

(73) Assignee: Hewlett-Packard Development

Company, L.P., Spring, TX (US)

(21) Appl. No.: 18/555,684

(22) PCT Filed: Apr. 19, 2021

(86) PCT No.: PCT/US2021/027965

§ 371 (c)(1),

Oct. 16, 2023 (2) Date:

Publication Classification

(51) Int. Cl. H02J 50/90 (2006.01)G01J 1/16 (2006.01) H02J 50/10 (2006.01)H02J 50/80 (2006.01)

(52) U.S. Cl.

CPC H02J 50/90 (2016.02); G01J 1/1626 (2013.01); H02J 50/10 (2016.02); H02J 50/80 (2016.02)

(57)ABSTRACT

An example device includes a wireless charging circuit to wirelessly charge a portable electronic device. The device further includes a first photosensor positioned within an effective charging range of the wireless charging circuit, the first photosensor to output a first signal, and a second photosensor positioned outside the effective charging range, the second photosensor to output a second signal. The device further includes a control circuit connected to the wireless charging circuit, the first photosensor, and the second photosensor. The control circuit detects the portable electronic device positioned within the effective charging range of the wireless charging circuit by detecting a difference between the first signal and the second signal. The control circuit turns on the wireless charging circuit in response to detecting the difference. The control circuit turns off the wireless charging circuit in response to detecting that the first signal matches the second signal.

