

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2023/0231089 A1 **Kreiner**

Jul. 20, 2023 (43) **Pub. Date:**

(54) RADIATION-EMITTING COMPONENT AND METHOD FOR PRODUCING A RADIATION-**EMITTING COMPONENT**

(71) Applicant: OSRAM OPTO SEMICONDUCTORS GMBH,

Regensburg (DE)

(72) Inventor: Laura Kreiner, Regensburg (DE)

(21) Appl. No.: 18/007,694

(22) PCT Filed: May 19, 2021

(86) PCT No.: PCT/EP2021/063303

§ 371 (c)(1),

(2) Date: Dec. 1, 2022

(30)Foreign Application Priority Data

Jun. 4, 2020 (DE) 10 2020 114 884.4

Publication Classification

(51) Int. Cl. H01L 33/60 (2006.01)(2006.01) H10K 50/856

H10K 71/00 (2006.01)

U.S. Cl.

CPC H01L 33/60 (2013.01); H10K 50/856 (2023.02); H10K 71/00 (2023.02);

H01L 2933/0058 (2013.01)

(57)**ABSTRACT**

In an embodiment a radiation-emitting component includes a radiation-emitting emitter having a front side, an optical element arranged on the front side and a dielectric filter arranged between the front side and the optical element, wherein the optical element comprises a plurality of reflection surfaces and a plurality of radiation exit surfaces, wherein each of the reflection surfaces has an angle of inclination of between 45° and 80°, inclusive, with respect to the front side, wherein a main emission direction of the radiation-emitting component includes an exit angle between 10° and 80°, inclusive, with the front side, and wherein the dielectric filter is configured to transmit radiation having an entrance angle within a first angular range and to reflect radiation having an entrance angle within a second angular range.

