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(19) **United States**(12) **Patent Application Publication**
Hsieh et al.(10) **Pub. No.: US 2023/0231098 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **LIGHT-EMITTING DEVICE,
MANUFACTURING METHOD THEREOF
AND DISPLAY MODULE USING THE SAME**(71) Applicant: **EPISTAR CORPORATION**, Hsinchu
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Shao-You Deng, Hsinchu City (TW)(21) Appl. No.: **18/175,395**(22) Filed: **Feb. 27, 2023****Related U.S. Application Data**(63) Continuation of application No. 16/958,095, filed on
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20, 2018, provisional application No. 62/610,426,
filed on Dec. 26, 2017.**Publication Classification**(51) **Int. Cl.****H01L 33/62** (2006.01)**H01L 25/075** (2006.01)(52) **U.S. Cl.****CPC** **H01L 33/62** (2013.01); **H01L 25/0753**
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(57)

ABSTRACT

A light-emitting device includes a carrier, a light-emitting element and a connection structure. The carrier includes a first electrical conduction portion. The light-emitting element includes a first light-emitting layer capable of emitting first light and a first contact electrode formed under the light-emitting layer. The first contact electrode is corresponded to the first electrical conduction portion. The connection structure includes a first electrical connection portion and a protective portion surrounding the first contact electrode and the first electrical connection portion. The first electrical connection portion includes an upper portion, a lower portion and a neck portion arranged between the upper portion and the lower portion. An edge of the upper portion is protruded beyond the neck portion, and an edge of the lower portion is protruded beyond the upper portion.

