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(54) **LED CHIP HAVING MICRO-LENS STRUCTURE**

**Publication Classification**

(75) Inventors: **Tien-Fu Huang**, Hsinchu (TW);  
**Shih-Hao Hua**, Hsinchu (TW);  
**Kuo-Chang Hu**, Hsinchu (TW)

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Correspondence Address:  
**RABIN & Berdo, PC**  
**1101 14TH STREET, NW, SUITE 500**  
**WASHINGTON, DC 20005**

(57) **ABSTRACT**

A light-emitting diode (LED) chip having a micro-lens structure includes a light-emitting structure and a light guide lens. The light-emitting structure emits a light from a light-emitting surface upon being applied with a current, and the light guide lens is stacked on the light-emitting surface and used for emitting the light from a light guide surface of the light guide lens. The light guide surface has an annular ridge portion and a scatter region, such that the lights close to the central optical axis of the light-emitting surface (the region having the maximum light-emitting intensity) are deflected in a direction away from the central optical axis, and the lights far away from the central optical axis are deflected towards the central optical axis, so as to obtain a light with a uniform overall optical intensity.

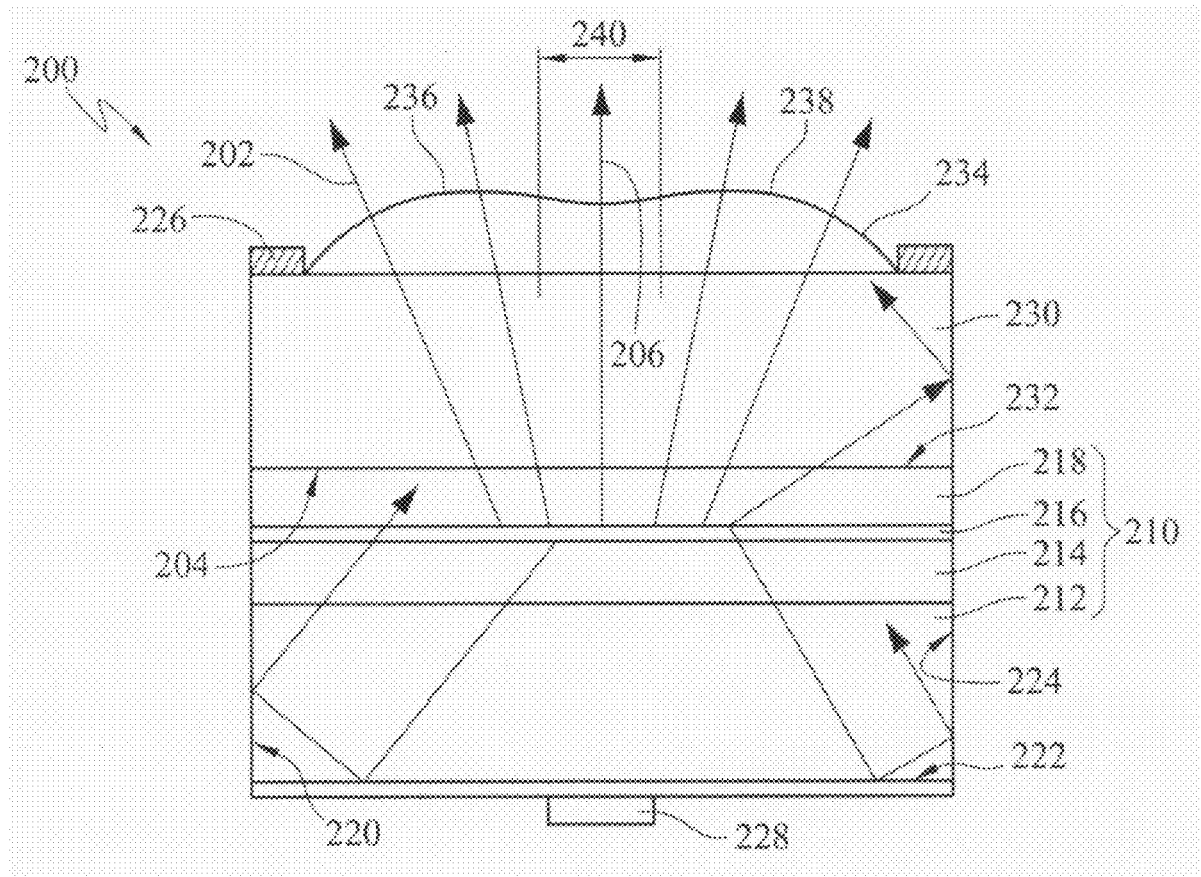
(73) Assignee: **Industrial Technology Research Institute**, Hsinchu (TW)

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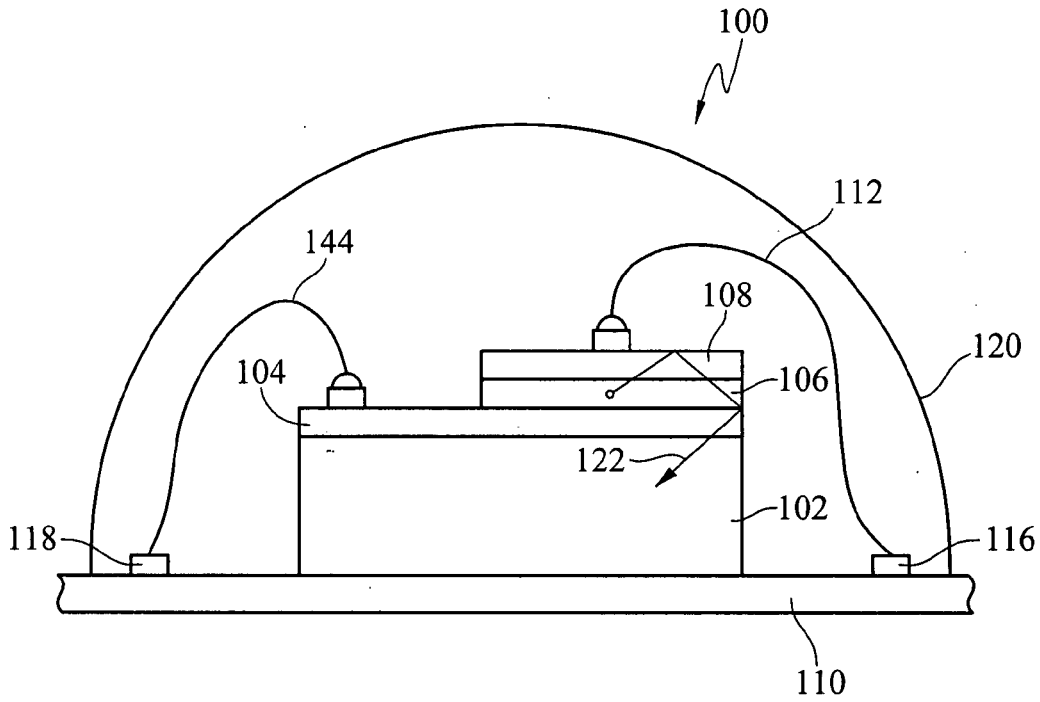


FIG. 1 (PRIOR ART)

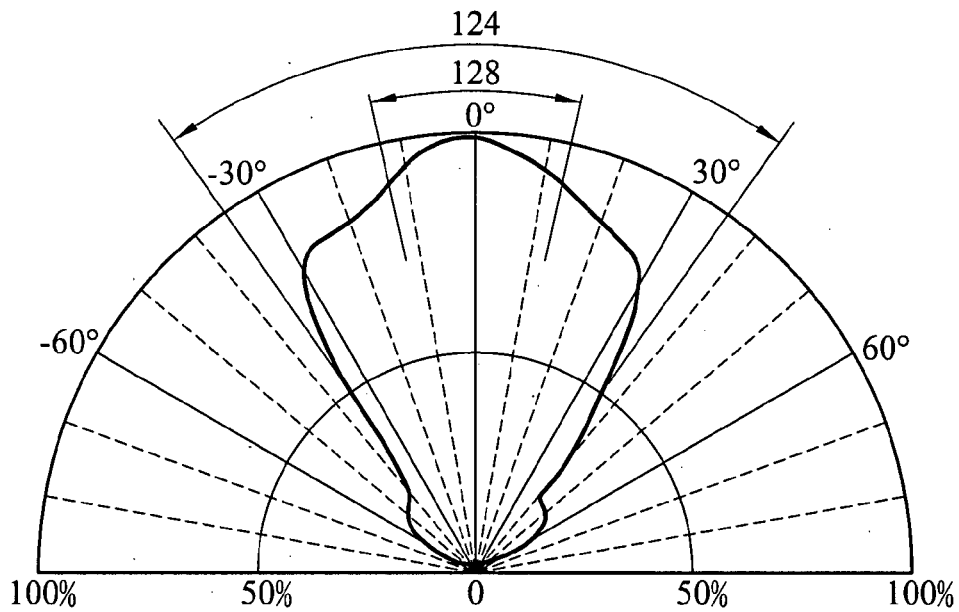


FIG. 2 (PRIOR ART)

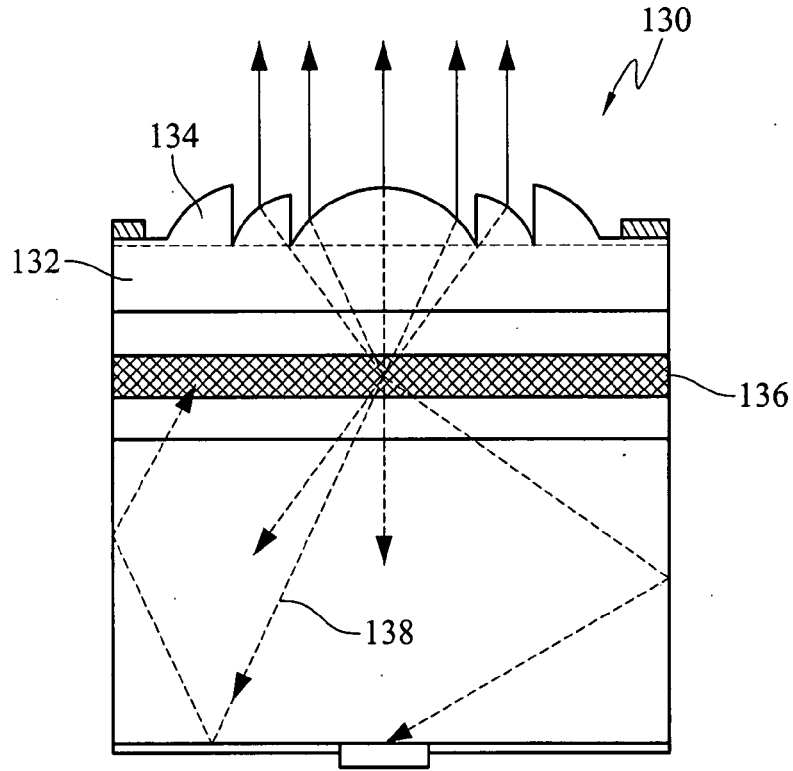


FIG. 3 (PRIOR ART)

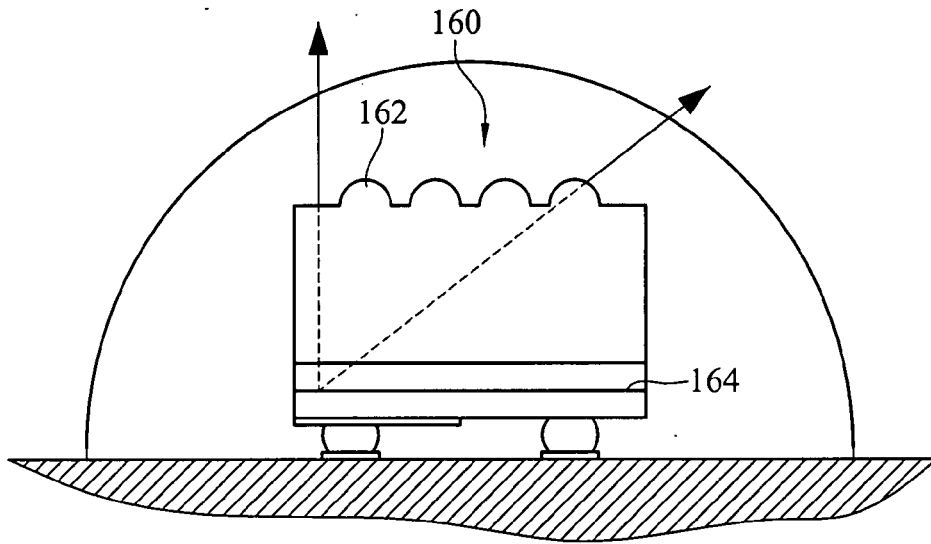


FIG. 4 (PRIOR ART)

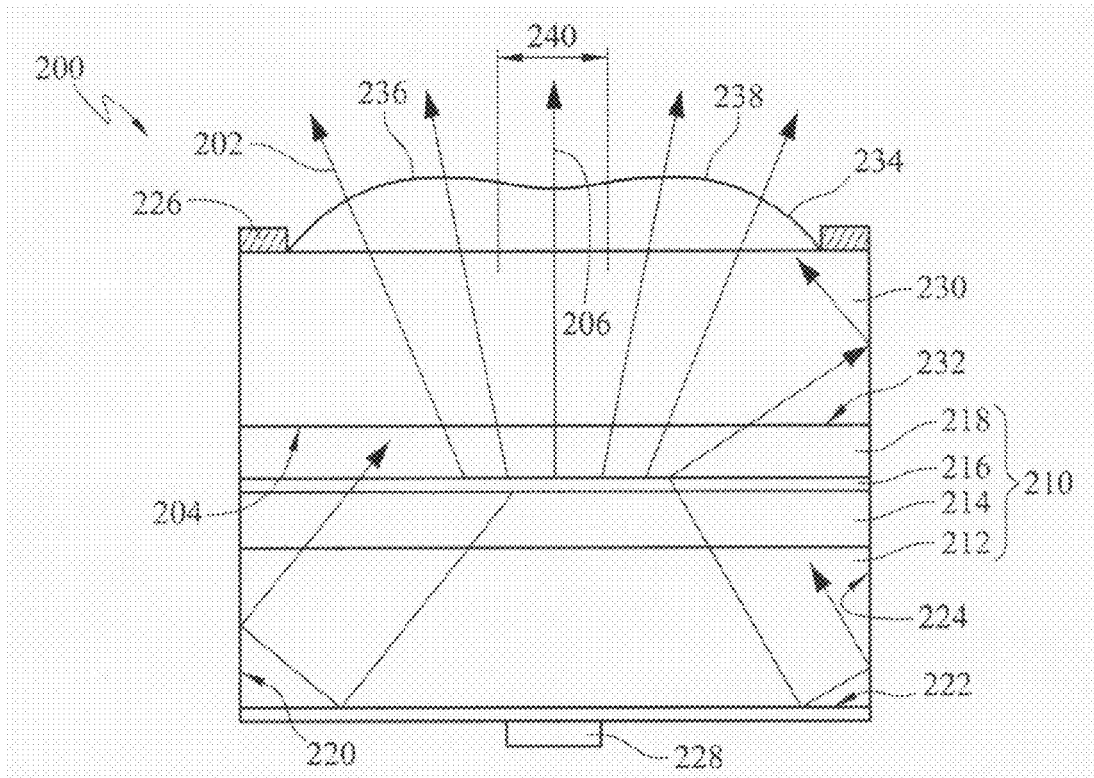


FIG. 5

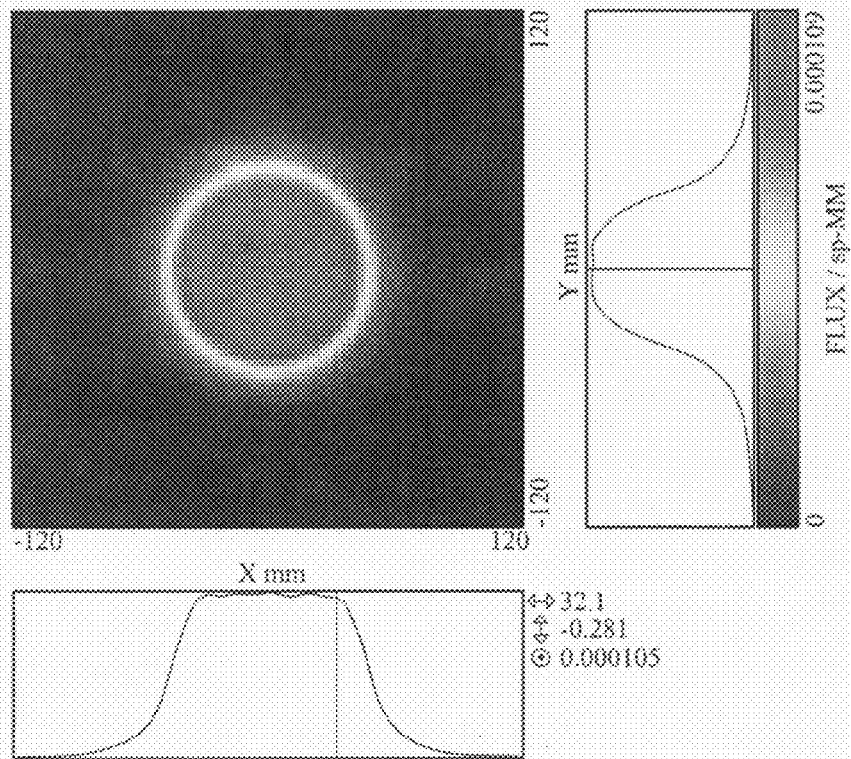


FIG. 6

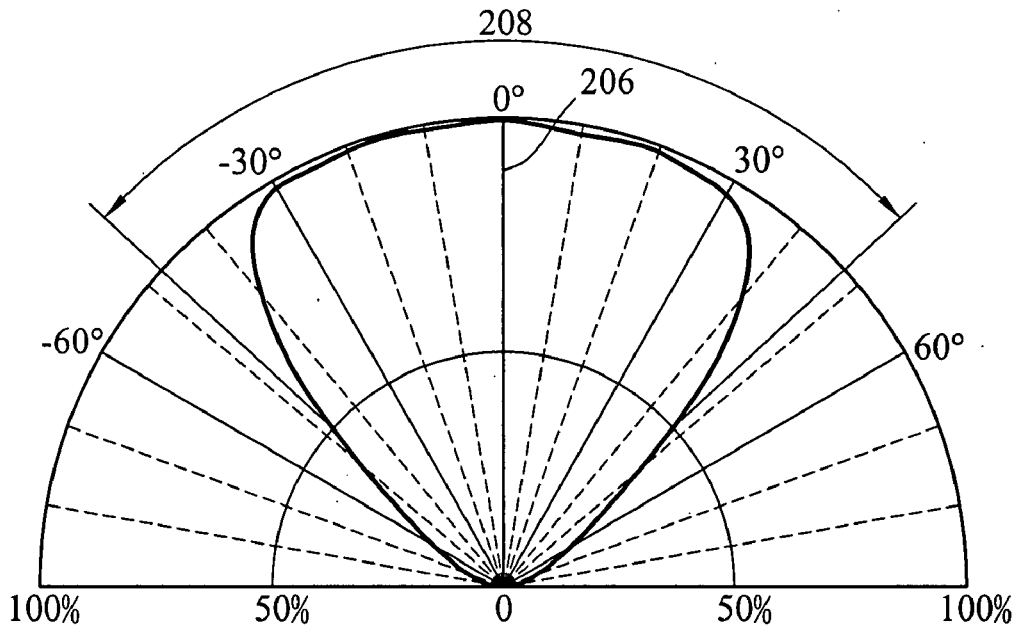


FIG. 7

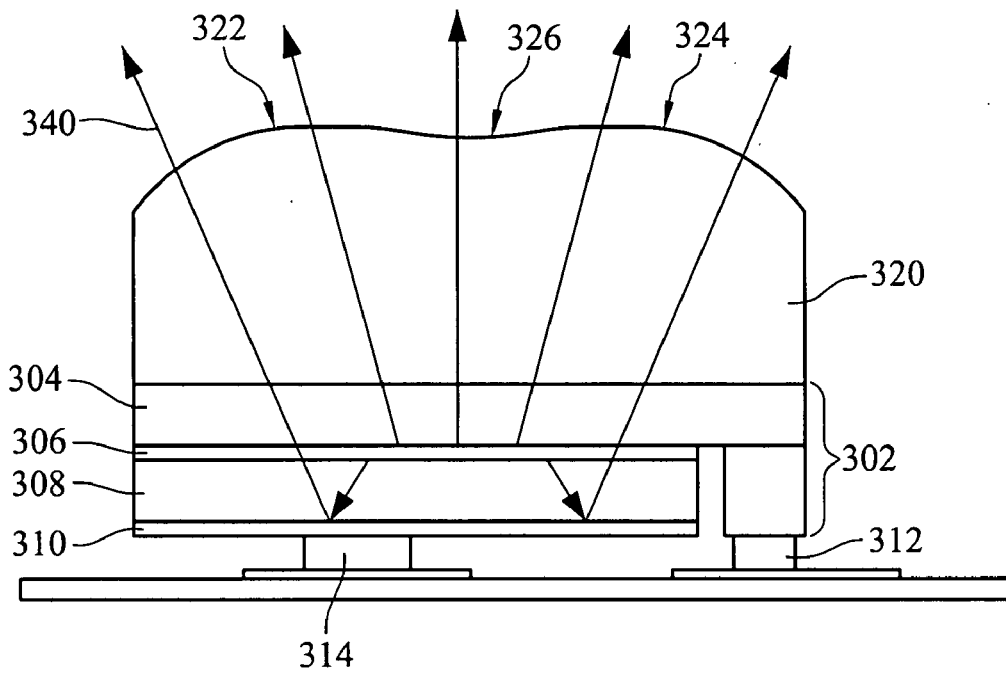


FIG. 8

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