

论文

侧光式LED背光源的导光板网点设计

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摘要:

导光板是背光模组的关键组件, 决定了出光效率以及出光均匀度。以2颗LED灯的侧背光为例, 建立其相应模型, 并运用光学理论推导出导光板网点排布规律, 得到一个形式简约的公式, 并将其进行扩展应用, 推出了多颗灯情况下的导光板排布规律; 另外将其进行等效应用, 得到了线光源情况下的导光板的排布规律。

关键词: 背光源 导光板 网点设计 LED

Design of scattering netted dots on light guide plate of edge-lighting LED backlight

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Abstract:

The light guide plate is a key component of backlight units, which determines efficiency and uniformity of light emission. Taking the edge-light from two LEDs as examples, a model was set up to derive the rule of scattering netted dot arrangement by the optical theory. A brief formula for dot arrangement was obtained. In order to achieve wider applications, the rule of the dot arrangement on the light guide plate was deduced for more LEDs. In order to achieve equivalent application, a rule of dot arrangement on the plate with linear light source was acquired.

Keywords: backlight light guide plate design of scattering netted dot LED

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