

Title (en)

LIGHT DISTRIBUTION ARRAY OPTICAL SYSTEM

Title (de)

LICHTVERTEILUNGSANORDNUNG EINS OPTISCHES SYSTEMS

Title (fr)

SYSTÈME OPTIQUE MATRICIEL DE DISTRIBUTION DE LUMIÈRE

Publication

EP 2475926 B1 20131113 (EN)

Application

EP 10724909 A 20100412

Priority

- PL 38899509 A 20090909
- PL 2010000027 W 20100412

Abstract (en)

[origin: WO2011031170A1] A light distribution array optical system provided with an array of LEDs (1) as sources of light and the internal (3) and external board panels, located in parallel and forming beams of light emitted by the LEDs (1), at least one of which features a surface limiting the volume of light penetrating the system. On the internal board panel input surface (3), on the side of the LEDs (1), there are focusing elements constituting convexities (2) located in the optical axis of each LED (1), having an aspherical shape and a radius of curvature increasing towards base, the vertical radius R of convexity (2) is from 0.3 to 0.5 of distance s between the optical axes of adjacent LEDs (1), and total thickness d of the internal board panel (3) is from 1.58 to 2.08 of distance s, and the external board panel has at least two breaking surfaces of common axis of symmetry and square outline, a concave surface (7, 7') and a spherical convex surface (8), where the breaking surfaces in frontal projection cover a square array of four adjacent convexities (2) on the internal board panel (3). The surface limiting the volume of light penetrating the system is the aperture surface (4, 4') being the internal board panel (3) external surface with circular windows (5) located in the optical axis of each LED (1).

IPC 8 full level

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IPC 8 main group level

F21V 5/00 (2015.01)

CPC (source: EP US)

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Cited by

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