

Title (en)

LIGHTING DEVICE FOR A FREE VIEWING MODE AND A RESTRICTED VIEWING MODE

Title (de)

BELEUCHTUNGSEINRICHTUNG FÜR EINEN FREIEN UND EINEN EINGESCHRÄNKTEN SICHTMODUS

Title (fr)

DISPOSITIF D'ÉCLAIRAGE POUR UN MODE DE VISUALISATION LIBRE ET UN MODE DE VISUALISATION RESTREINTE

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Application

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Abstract (en)

[origin: WO2022207639A1] The invention relates to a lighting device (1a) for a screen (1), which can be operated in at least two operating modes, B1 for a free viewing mode and B2 for a restricted viewing mode, in which light is radiated from the lighting device in a restricted angular range compared to the free viewing mode. Said lighting device comprises a planar backlight (2) radiating light in the restricted angular range, and a flat light guide (3) that is, in a viewing direction, arranged in front of the backlight (2) and has two large surfaces and narrow sides which join the large surfaces along their edges, wherein the light guide (3) has outcoupling elements (6) on at least one of the large surfaces and/or within its volume. The light guide (3) is transparent to at least 50% of the light emitted by the backlight (2), and each outcoupling element (6) has at least one functional surface for the defined outcoupling of light, at which functional surface light is outcoupled from the light guide (3). The lighting device also comprises illuminants (4) arranged laterally on narrow sides of the light guide (3). In operating mode B2, the backlight (2) is switched on and the illuminants (4) are switched off and in operating mode B1, at least the illuminants (4) are switched on. According to the invention, at least some of the outcoupling elements (6) have a special structure which results in the light guide (3) having, in a specified preferred direction, a scattering behaviour that is stronger by at least a factor of 1.2 than in a direction perpendicular to said preferred direction; overall, the scattering behaviour is thus anisotropic.

IPC 8 full level

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