

Title (en)  
LED ILLUMINATION MODULE

Title (de)  
LED-BELEUCHTUNGSMODUL

Title (fr)  
MODULE D'ECLAIRAGE A LED

Publication  
**EP 1880139 B1 20090429 (DE)**

Application  
**EP 06722835 A 20060505**

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Abstract (en)  
[origin: WO2006119735A1] The invention relates to an LED illumination module having an LED (23) and a rotationally symmetrical, integral, light-transparent auxiliary optic (10) having an inner converging lens part (14) and an outer reflector part (16). The auxiliary optic (10) has an opening (11) in the form of a blind hole which is arranged at the rear and in which the LED (23) can be displaced longitudinally and axially along the optical axis (20) such that, owing to the displacement, a change in the cone of light from a cone of light having a cone angle  $< 12^\circ$  to a cone angle  $> 20^\circ$  can be produced and, in at least one LED position with respect to the opening (11) of the auxiliary optic (10), an inner region of the cone of light is illuminated homogeneously over a cross-sectional area at right angles to the optical axis (20).

IPC 8 full level  
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Cited by  
US9887324B2; US10274159B2; EP3165818B1

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