

Title (en)

LIGHT MODULE FOR A VEHICLE HEADLAMP HAVING LED LIGHT SOURCE AND VEHICLE HEAD LAMP

Title (de)

LICHTMODUL FÜR KFZ-SCHNWERFER MIT LED-LICHTQUELLE UND FAHRZEUGSCHNWERFER

Title (fr)

MODULE LUMINEUX POUR PHARE DE VÉHICULE DOTÉ D'UNE SOURCE LUMINEUSE À DEL ET PHARE DE VÉHICULE

Publication

**EP 3855067 A1 20210728 (EN)**

Application

**EP 20153785 A 20200127**

Priority

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Abstract (en)

The invention describes a light module (1) for a vehicle head lamp (14), comprising an LED light source (2) for generating light, the LED light source (2) comprising an LED array (3) having a plurality of LEDs (4), a collimating optic (5, 21, 26, 31), and an imaging optic (6). The collimating optic (5, 21, 26, 31) is arranged in a light path (7) between the LED light source (2) and the imaging optic (6) such that the collimating optic (5, 21, 26, 31) collects the light generated by the LED light source (2) and collimates it to the imaging optic (6). The imaging optic (6) is configured to generate an image of the plurality of LEDs (4) in a far field of the light generated by the LED light source (2). The collimating optic (5, 21, 26, 31) comprises a light entry surface (8) and a light exit surface (9), at least one of which having, with respect to a first spatial direction (y), a curvature comprising at least two inflection points (10). The curvature of a first surface section (11) extending between the two inflection points (10) of the respective one or more of the light entry and exit surfaces (8, 9) is concave. The invention further describes a vehicle head lamp (14) comprising such a light module (1).

IPC 8 full level

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Citation (applicant)

US 8764259 B2 20140701 - SCHUG JOSEF J [DE]

Citation (search report)

- [X] US 2013208493 A1 20130815 - KLOOS GERHARD [DE]
- [X] DE 102018010139 A1 20190704 - SL CORP [KR]
- [I] EP 3228926 A1 20171011 - LG ELECTRONICS INC [KR]
- [I] EP 3096074 A1 20161123 - STANLEY ELECTRIC CO LTD [JP]
- [X] DE 102015209194 A1 20151126 - KOITO MFG CO LTD [JP]
- [X] FR 3060712 A1 20180622 - VALEO VISION [FR]
- [A] TW I662224 B 20190611 - EXCELLENCE OPTOELECTRONICS INC [TW]

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