

Title (en)
Vehicle headlamp

Title (de)
Fahrzeugscheinwerfer

Title (fr)
Phare de véhicule

Publication
EP 2570715 A3 20150513 (EN)

Application
EP 12006319 A 20120907

Priority
JP 2011199844 A 20110913

Abstract (en)
[origin: EP2570715A2] A vehicle lighting unit capable of achieving a plurality of functions of lamps such as a low-beam headlamp and a daytime running lamp at the same time is provided. The vehicle lighting unit (10) can include: a projection lens (11) disposed on an optical axis (AX) extending along a front-to-rear direction of a vehicle and having a rear focal point (F 11); a first lamp constituent member (12, 13, 14) to constitute a first lamp together with the projection lens (11); and a second lamp constituent member (15, 16) to constitute a second lamp together with the projection lens (11). The first lamp constituent member (12, 13, 14) can include: a first semiconductor light emitting device (12) disposed on or near the optical axis (AX) and behind the rear focal point (F 11) of the projection lens (11) so as to emit light substantially upward; a first reflecting surface (13) of a revolved ellipsoid having a first focal point (F1 13) set at or near the first semiconductor light emitting device (12) and a second focal point (F2 13) at or near the rear focal point (F 11) of the projection lens (11), the first reflecting surface (13) being disposed above the first semiconductor light emitting device (12) so that light emitted from the first semiconductor light emitting device (12) can be incident thereon; and a first light-shielding member (14) disposed in between the projection lens (11) and the first semiconductor light emitting device (12) so as to shield part of light emitted from the first semiconductor light emitting device (12). The second lamp constituent member (15, 16) can include: a second semiconductor light emitting device (15) disposed in a space (S) between the first light-shielding member (14) and a light path of light from the first semiconductor light emitting device (12) to pass through the projection lens (11), so as not to shield light passing through the projection lens (11), the second semiconductor light emitting device (15) being disposed so as to emit light substantially upward; and a second reflecting surface (16) disposed in the space (S) and above the second semiconductor light emitting device (15) so as to receive the light emitted from the second semiconductor light emitting device (15) and reflect the light toward the projection lens (11) to allow the light to pass through the projection lens (11) forward.

IPC 8 full level
F21S 8/12 (2006.01); **F21S 8/10** (2006.01); **F21Y 101/02** (2006.01)

CPC (source: EP US)
F21S 41/147 (2017.12 - EP US); **F21S 41/148** (2017.12 - EP US); **F21S 41/151** (2017.12 - EP US); **F21S 41/255** (2017.12 - EP); **F21S 41/265** (2017.12 - EP US); **F21S 41/19** (2017.12 - EP); **F21Y 2115/10** (2016.07 - EP US)

Citation (search report)
• [XII] US 2008062709 A1 20080313 - MOCHIZUKI KAZUHISA [JP], et al
• [XII] US 2007201241 A1 20070830 - KOMATSU MOTOHIRO [JP]
• [XII] EP 2194312 A2 20100609 - KOITO MFG CO LTD [JP]
• [XII] US 2006120094 A1 20060608 - TSUKAMOTO MICHIO [JP], et al

Cited by
CN108302449A; FR3125861A1; CN108302483A; EP2796773A3

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
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DOCDB simple family (application)
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