

Title (en)
Vehicle lamp unit

Title (de)
Fahrzeuglampeneinheit

Title (fr)
Unité de lampe de véhicule

Publication
EP 2159479 B1 20170111 (EN)

Application
EP 09010831 A 20090824

Priority
JP 2008218478 A 20080827

Abstract (en)
[origin: EP2159479A2] A vehicle lamp unit is provided. The vehicle lamp unit includes a projection lens which is disposed on an optical axis extending in a vehicle longitudinal direction; a first semiconductor light emitting element which is disposed on the optical axis behind a rear focal point of the projection lens; a center reflector which comprises a reflection surface which reflects light emitted from the first semiconductor light emitting element in a forward direction toward the optical axis; a plurality of second semiconductor light emitting elements which are disposed, respectively, on a pair of reference axes and behind the rear focal point of the projection lens, the pair of reference axes each extending in a direction tilted with respect to the optical axis; and a plurality of side reflector reflectors, which correspond to respective ones of the plurality of second semiconductor light emitting elements. Each of the side reflectors comprises a reflection surface which reflects light emitted from the corresponding second semiconductor light emitting elements element in the forward direction toward the corresponding reference axis. The reflection surface of each of the side reflectors comprises an inner reflection surface and an outer reflection surface. The inner reflection surface on a side of the corresponding reference axis closest to the optical axis of the reflection surface of the side reflector on the side of the optical axis is formed as a connection reflection region having light collecting power smaller than that of the reflection surface of the center reflector. The outer reflection surface on a side of the corresponding reference axis opposite from the optical axis of the reflection surface of the side reflector on the opposite side of the optical axis is formed as a diffusion reflection region having light collecting power smaller than that of the connection reflection region.

IPC 8 full level
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CPC (source: EP US)
F21S 41/148 (2017.12 - EP US); **F21S 41/151** (2017.12 - EP US); **F21S 41/155** (2017.12 - US); **F21S 41/255** (2017.12 - EP); **F21S 41/338** (2017.12 - EP); **F21S 41/36** (2017.12 - EP US); **F21S 41/365** (2017.12 - EP US); **F21S 41/43** (2017.12 - EP); **F21S 41/663** (2017.12 - EP US); **F21S 41/321** (2017.12 - EP); **F21W 2102/135** (2017.12 - EP); **F21W 2102/19** (2017.12 - EP); **F21W 2102/30** (2017.12 - EP); **F21Y 2115/10** (2016.07 - EP US)

Citation (examination)
• JP 2007324002 A 20071213 - ICHIKOH INDUSTRIES LTD
• DE 102006061637 A1 20070705 - KOITO MFG CO LTD [JP]

Citation (opposition)
Opponent : Valeo Vision
• US 2007147055 A1 20070628 - KOMATSU MOTOHIRO [JP]
• JP 2005317226 A 20051110 - KOITO MFG CO LTD
• JP 2007324002 A 20071213 - ICHIKOH INDUSTRIES LTD

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