

Title (en)
OPTICAL ELEMENT OF VEHICLE LIGHT

Title (de)
OPTISCHES ELEMENT FÜR FAHRZEUGLEUCHTE

Title (fr)
ÉLÉMENT OPTIQUE DE LUMIÈRE DE VÉHICULE

Publication
EP 4027052 A1 20220713 (EN)

Application
EP 20878309 A 20201020

Priority
• CN 201921809883 U 20191025
• CN 2020122164 W 20201020

Abstract (en)
Disclosed is an optical element of a vehicle light, the optical element comprising two optical parts, each of which is bent and comprising a light-condensing channel(13) and a light guide channel(14) connected to each other, with a junction therebetween being provided with a reflecting surface(15), wherein one end of the light-condensing channel(13) is provided with a plurality of light-condensing structures(11), and a front end of the light guide channel(14) is provided with an emergent light surface; and the two optical parts are arranged vertically, and the two light guide channels(14) are connected at the top and the bottom. The optical element of a vehicle light has the benefits of: 1, reducing the size of the optical element of a vehicle light in a fore-and-aft direction to reduce the space required for installation; 2, forming a primary optical element and a secondary optical element in the prior art as an integrated member; 3, providing a separation slot to achieve secondary light distribution so as to improve the flexibility of light distribution, and providing a sharp slot to achieve a passing light cut-off line and also simplify the structure of a vehicle light module; and 4, providing a groove so as to achieve both high beam and low beam functions in the integrated optical element of a vehicle light, such that the optical element of a vehicle light has diversified functions.

IPC 8 full level
F21S 41/20 (2018.01); **F21W 102/13** (2018.01); **F21W 107/10** (2018.01)

CPC (source: EP)
F21S 41/148 (2017.12); **F21S 41/24** (2017.12); **F21S 41/26** (2017.12); **F21S 41/27** (2017.12); **F21S 41/285** (2017.12); **F21S 41/322** (2017.12); **F21S 41/365** (2017.12); **F21S 41/43** (2017.12); **F21S 41/151** (2017.12); **F21W 2102/13** (2017.12); **F21W 2102/155** (2017.12)

Cited by
EP4102129A4; FR3144252A1; FR3144249A1; WO2024133408A1; WO2024133261A1

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)
BA ME

DOCDB simple family (publication)
EP 4027052 A1 20220713; **EP 4027052 A4 20220727**; CN 210740266 U 20200612; JP 2022548750 A 20221121; JP 7322286 B2 20230807; WO 2021078115 A1 20210429

DOCDB simple family (application)
EP 20878309 A 20201020; CN 201921809883 U 20191025; CN 2020122164 W 20201020; JP 2022517909 A 20201020