

Title (en)  
PRIMARY LENS, LIGHT-EMITTING ASSEMBLY, LIGHT-EMITTING SYSTEM, AND HEADLIGHT

Title (de)  
PRIMÄRLINSE, LICHTEMITTIERENDE ANORDNUNG, LICHTEMITTIERENDES SYSTEM UND SCHEINWERFER

Title (fr)  
LENTILLE PRIMAIRE, ENSEMBLE ÉLECTROLUMINESCENT, SYSTÈME ÉLECTROLUMINESCENT ET PHARE

Publication  
**EP 3677829 A4 20201014 (EN)**

Application  
**EP 18866727 A 20181009**

Priority

- CN 201710936611 A 20171010
- CN 201710935527 A 20171010
- CN 201710936654 A 20171010
- CN 2018109506 W 20181009

Abstract (en)  
[origin: EP3677829A1] Disclosed are a primary lens (100), a light-emitting assembly, a light-emitting system, and a headlight, which relate to the technical field of optical components. The primary lens (100) comprises a main body portion (110), and the main body portion (110) comprises a first optical surface (111) and a second optical surface (112), wherein a linear focus line (113) is formed on the first optical surface (111), and the height of the first optical surface (111) is gradually reduced from the focus line (113) towards two sides; and the second optical surface (112) comprises a plurality of ridges (114) arranged in parallel, with an extension direction of the ridges (114) being perpendicular to the focus line (113), and the ridges (114) have arc-shaped convex faces. Under the conditions where the focus line (113) extends horizontally and the ridges (114) extend vertically, the primary lens (100) can converge light that is incident on the first optical surface (111) in a vertical direction and diffuse the light in a horizontal direction, thereby satisfying the illumination characteristics of a headlight of a vehicle.

IPC 8 full level  
**F21S 41/25** (2018.01); **F21S 41/141** (2018.01); **F21S 41/143** (2018.01); **F21S 41/151** (2018.01); **F21S 41/20** (2018.01); **F21S 41/255** (2018.01); **F21S 41/29** (2018.01); **F21S 45/47** (2018.01); **F21W 102/13** (2018.01); **F21W 107/10** (2018.01)

CPC (source: EP RU)  
**F21S 41/143** (2018.01 - EP); **F21S 41/151** (2018.01 - EP); **F21S 41/255** (2018.01 - EP); **F21S 41/26** (2018.01 - RU); **F21S 41/275** (2018.01 - RU); **F21S 41/285** (2018.01 - EP); **F21S 41/295** (2018.01 - EP); **F21S 45/47** (2018.01 - EP)

Citation (search report)

- [X1] US 5813743 A 19980929 - NAKA YOJI [JP]
- [X1] JP 5304363 B2 20131002
- [X1] US 2007030688 A1 20070208 - AMANO YASUYUKI [JP], et al
- [X1] US 5692827 A 19971202 - CHINNIAH JEYACHANDRABOSE [US], et al
- [X1] US 2016169468 A1 20160616 - BJÖRN DRESSLER [DE], et al
- [A] US 2013242589 A1 20130919 - ABE TOSHIYA [JP], et al
- [A] WO 2017100812 A1 20170622 - ZKW GROUP GMBH [AT]
- [A] DE 202017102970 U1 20170626 - HYUNDAI MOBIS CO LTD [KR]
- See also references of WO 2019072174A1

Cited by  
EP4290127A4; FR3124846A1; WO2023275055A1

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 3677829 A1 20200708**; **EP 3677829 A4 20201014**; **EP 3677829 B1 20230809**; RU 2737848 C1 20201203; WO 2019072174 A1 20190418

DOCDB simple family (application)  
**EP 18866727 A 20181009**; CN 2018109506 W 20181009; RU 2020115085 A 20181009