

Title (en)

LED traffic signal and optical element therefor

Title (de)

LED-Verkehrssignal und optisches Element dafür

Title (fr)

Feu de signalisation à DEL et élément optique correspondant

Publication

**EP 2495489 A2 20120905 (EN)**

Application

**EP 12157934 A 20120302**

Priority

US 201113040874 A 20110304

Abstract (en)

A lighting device includes a housing (28,68) having an open end and a geometrical axis and at least one light source (12,52) disposed along an optical axis. The lighting device further includes an outer optical element (10,50) having a focal point and closing the open end of the housing, the optical element comprising a converging outer surface and a diverging inner surface that cooperates with the light coming from the inner optical element. Additionally, the lighting device includes an inner optical element between the light source and the outer optical element, the inner optical element redirecting light from a light source that is offset from the focal point toward the outer optical element.

IPC 8 full level

**F21V 5/04** (2006.01); **G08G 1/095** (2006.01)

CPC (source: CN EP US)

**F21V 5/008** (2013.01 - EP US); **F21V 5/04** (2013.01 - CN); **F21V 5/045** (2013.01 - EP US); **F21V 7/00** (2013.01 - CN); **F21W 2111/02** (2013.01 - EP); **F21Y 2115/10** (2016.07 - EP US)

Citation (applicant)

US 5947587 A 19990907 - KEUPER MATTHIJS H [NL], et al

Designated contracting state (EPC)

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Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 2495489 A2 20120905**; **EP 2495489 A3 20140604**; CN 102679207 A 20120919; CN 105757469 A 20160713; EP 2881654 A2 20150610; EP 2881654 A3 20150715

DOCDB simple family (application)

**EP 12157934 A 20120302**; CN 201210066223 A 20120305; CN 201610136271 A 20120305; EP 14196410 A 20120302