

Title (en)

Automotive headlight having optics in the reflector.

Title (de)

Kraftfahrzeugscheinwerfer mit Optik enthaltendem Reflektor.

Title (fr)

Projecteur de véhicule automobile avec réflecteur formant optique.

Publication

**EP 0125353 A1 19841121 (EN)**

Application

**EP 83302633 A 19830510**

Priority

EP 83302633 A 19830510

Abstract (en)

The invention concerns the reflector of an automotive headlight which has a clear unfluted front cover (12) and a reflector (13) which directs light from a source (11) through the front cover in a desired pattern. The reflective surface is smooth and continuous formed of two edge ellipsoids (15, 16) and a center ellipsoid (14) joined in smooth continuous junctions. The center ellipsoid is modified to include a smooth vertical bump (21) and the ellipsoids are tilted off the axis of the headlight. The headlight is formed by a digital computer aided process which includes tracing the paths of a plurality of light rays emanating from a digitally modeled light source, intersecting a reflector modeled by digital shape functions and projected onto a sphere surrounding the reflector. The light intensity across a path of the sphere is compared with the prescribed automotive headlight specifications. The parameters of the shape functions are changed and the process is performed iteratively to produce a light intensity best matching the specifications.

IPC 1-7

**F21M 3/08**

IPC 8 full level

**F21V 7/00** (2006.01)

CPC (source: EP)

**F21S 41/335** (2017.12)

Citation (search report)

[X] US 3492474 A 19700127 - YAMAGUCHI SEIICHI, et al

Cited by

FR2720478A1; EP0225313A3; EP0214595A3

Designated contracting state (EPC)

BE DE FR GB IT NL

DOCDB simple family (publication)

**EP 0125353 A1 19841121; EP 0125353 B1 19891011**; DE 3380703 D1 19891116

DOCDB simple family (application)

**EP 83302633 A 19830510**; DE 3380703 T 19830510