

Title (en)

AUTOMOTIVE HEADLIGHT HAVING OPTICS IN THE REFLECTOR

Publication

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Application

EP 83302633 A 19830510

Priority

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Abstract (en)

[origin: EP0125353A1] 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.

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