

Title (en)

An improved optical package and a torch having the optical package

Title (de)

Verbessertes optisches Paket und Stablampe mit dem optischen Paket

Title (fr)

Unité optique améliorée et torche dotée d'une telle unité

Publication

EP 2573452 A2 20130327 (EN)

Application

EP 12156444 A 20120222

Priority

CN 201120364535 U 20110926

Abstract (en)

An improved optical package is disclosed which includes a light source (2), an installation socket (1), a mirror (3) and a convex lens (4), wherein at least one part of the projection of the reflection surface of the mirror (3) on its axial section is in a parabolic shape, and the axes of the mirror (3) and the convex lens (4) share the same line. The installation socket (1) can move along the axial direction of the convex lens (4) and an installation depression (11) is set at the front end of the installation socket (1), wherein the light source (2) is configured in the installation depression (11), the emitting point of the light source (2) is on the axis of the convex lens (4) and the circumference of the installation depression (11) is formed to be a reflection surface capable of reflecting the light emitting from the bottom of the light source (2). Also disclosed is a torch applying the optical package above. The optical package effectively reduces light loss and can realize long-distance illumination. Moreover, a torch installed with the disclosed optical package can realize rapid shadow conversion and avoid moving the originally-set best luminous efficiency position due to extrusion of external forces effectively.

IPC 8 full level

F21L 4/02 (2006.01); **F21V 13/04** (2006.01); **F21V 14/02** (2006.01); **F21V 14/06** (2006.01); **F21V 5/04** (2006.01); **F21V 7/06** (2006.01); **F21V 14/04** (2006.01); **F21Y 115/10** (2016.01)

CPC (source: EP US)

F21L 4/027 (2013.01 - EP); **F21V 5/045** (2013.01 - EP US); **F21V 7/0066** (2013.01 - EP); **F21V 7/06** (2013.01 - EP); **F21V 13/04** (2013.01 - EP); **F21V 13/045** (2013.01 - EP US); **F21V 14/02** (2013.01 - EP); **F21V 14/025** (2013.01 - EP); **F21V 14/06** (2013.01 - EP); **F21V 14/065** (2013.01 - EP); **F21V 14/04** (2013.01 - EP); **F21Y 2115/10** (2016.07 - EP US)

Cited by

DE112013000160B4; CN114026363A; US9435515B2

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 2573452 A2 20130327; **EP 2573452 A3 20131030**; **EP 2573452 B1 20161228**

DOCDB simple family (application)

EP 12156444 A 20120222