

Title (en)

Electrodeless HID lamp with microwave power coupler.

Title (de)

Elektrodenlose Entladungslampe höherer Intensität mit Koppler für ihren Anschluss an einen Mikrowellengenerator.

Title (fr)

Lampe de décharge à haute intensité sans électrode avec coupleur à raccorder à un générateur à micro-ondes.

Publication

**EP 0457242 B1 19950830 (EN)**

Application

**EP 91107718 A 19910513**

Priority

- US 52376190 A 19900515
- US 52426590 A 19900515

Abstract (en)

[origin: EP0457242A1] An electrodeless lamp (10) may be formed with a capsule (20) having a radiant energy transmissive material defining an approximately cylindrical enclosed volume (22) having an external length less than 20.0 millimeters, and an outer diameter less than 8.0 millimeters. The enclosed volume (22) is filled with a lamp fill (24) excitable by a high frequency electromagnetic field to produce radiant energy. The small size capsule produces a particularly efficient, orientation tolerant arc discharge. The arc is then highly stable as to position, yielding a good optical source to design for. The temperature gradient is small, thereby yielding little thermal stress on the capsule. An electrodeless HID headlamp system may be formed with the efficient capsule from a radio frequency source operating from a the power supply of a typical automobile. The headlamp system includes a high frequency power source (12), a transmission line (14), a coupler (18, 44), an excitable lamp fill (24) captured in a lamp capsule (20), a reflector (30) and a lens (32). <IMAGE>

IPC 1-7

**H05B 41/24**; **H01J 61/16**; **H01J 7/46**

IPC 8 full level

**F21S 8/10** (2006.01); **F21S 2/00** (2006.01); **H01J 65/04** (2006.01); **H05B 41/24** (2006.01)

CPC (source: EP)

**H05B 41/24** (2013.01)

Cited by

CN104201090A; FR2750892A1; EP0604935A1; EP0749152A1; EP0604924A1; US6137237A; EP0817240A3; EP0940842A3; EP0684629A1; US5498928A; AU749932B2; CN114183734A; EP0897191A3; EP1353359A3; WO9801700A3; US6333509B1; US8247988B2; US6949887B2; US6313587B1; WO9936940A3; US6225756B1; US6252346B1; US6310443B1; US6326739B1

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