

Title (en)
LIGHT SOURCE WITH ELECTRON CYCLOTRON RESONANCE

Title (de)
LICHTQUELLE MIT ELEKTRONEN-CYCLOTRON-RESONANZ

Title (fr)
SOURCE LUMINEUSE À RÉSONANCE CYCLOTRONIQUE D'ÉLECTRONS

Publication
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Application
EP 05763741 A 20050428

Priority

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Abstract (en)
[origin: WO2005117069A1] The invention relates to a light source comprising an emitter (4) which, by means of at least one antenna (3), creates a high-frequency electromagnetic wave in a sealed chamber (1) and which powers the lamp. According to the invention, the chamber (1) is equipped with a wall that is transparent to the light and contains a low-pressure gas. A permanent magnet (2) creates a static magnetic field inside the chamber (1). The respective values of the static magnetic field and the frequency of the electromagnetic wave are determined such as to cause an electron cyclotron resonance inside the chamber (1). Moreover, the emitter (4), the antenna (3) and the magnet (2) are disposed in relation to the chamber (1) such as to clear a solid angle of at least 2 PI steradians for the light. The antenna (3) can be disposed inside the chamber (1) and, optionally, can comprise the magnet (2). The magnet is essentially sheathed by the chamber (1).

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H01J 65/042 (2013.01 - EP US); **H01J 65/044** (2013.01 - EP US)

Citation (search report)
See references of WO 2005117069A1

Citation (third parties)
Third party :

- WO 9605600 A1 19960222 - RUXAM INC [US]
- US 6327338 B1 20011204 - GOLOVANIVSKY KONSTANTIN S [FR], et al
- US 5461656 A 19951024 - GOLOVANIVSKY KONSTANTIN S [FR], et al

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