

Title (en)  
Cathodoluminescent lighting system

Title (de)  
System für Kathodolumineszenzbeleuchtung

Title (fr)  
Système pour éclairage cathodoluminescent

Publication  
**EP 2503588 A3 20130828 (EN)**

Application  
**EP 12173268 A 20090911**

Priority  
• EP 09813685 A 20090911  
• US 9666508 P 20080912  
• US 16485309 P 20090330  
• US 16485209 P 20090330

Abstract (en)  
[origin: WO2010030899A1] Electron sources for a cathodoluminescent lighting system are disclosed. An electron source is a broad-beam reflecting-type electron gun having a cathode for emitting electrons and a reflector and/or secondary emitter electrode and no grids. An alternative electron gun has a cathode having a heater welded to a disk, the disk having an emissive surface on a side facing a dome-shaped defocusing grid and an anode. A lighting system incorporating the electron sources has an envelope with a transparent face, an anode with a phosphor layer to emit light through the face and a conductor layer. The system also has a power supply for providing from five to thirty thousand volts of power to the light emitting device to draw electrons from cathode to anode and excite a cathodoluminescent phosphor, and the electrons transiting from cathode to anode are essentially unfocused. A power- factor-corrected embodiment is also disclosed.

IPC 8 full level  
**H01J 63/06** (2006.01); **H01J 1/15** (2006.01); **H05B 41/14** (2006.01)

CPC (source: EP)  
**H01J 1/15** (2013.01); **H01J 63/06** (2013.01); **H05B 41/14** (2013.01)

Citation (search report)  
• [XYI] EP 0102139 A2 19840307 - GEN ELECTRIC CO PLC [GB]  
• [Y] US 4499405 A 19850212 - LODA GARY K [US]  
• [A] GB 653835 A 19510530 - MARCONI WIRELESS TELEGRAPH CO  
• [A] US 5831397 A 19981103 - STEVENS JESSICA L [US], et al  
• [Y] WO 2008098013 A2 20080814 - TELEGEN CORP [US], et al

Designated contracting state (EPC)  
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 SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2010030899 A1 20100318**; CA 2740623 A1 20100318; CN 102210003 A 20111005; EP 2335265 A1 20110622; EP 2335265 A4 20111228; EP 2503588 A2 20120926; EP 2503588 A3 20130828

DOCDB simple family (application)  
**US 2009056684 W 20090911**; CA 2740623 A 20090911; CN 200980144852 A 20090911; EP 09813685 A 20090911; EP 12173268 A 20090911