

Title (en)  
SILICON-BASED LIGHT EMITTING DIODE

Title (de)  
SILIZIUMBASIERTE LICHEMITTIERENDE DIODE

Title (fr)  
DIODE ELECTROLUMINESCENTE A BASE DE SILICIUM

Publication  
**EP 1820222 A1 20070822 (EN)**

Application  
**EP 05820850 A 20051114**

Priority  

- KR 2005003847 W 20051114
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- KR 20050037623 A 20050504

Abstract (en)  
[origin: WO2006062300A1] Provided is a highly efficient silicon-based light emitting diode (LED) including a Distributed Bragg Reflector (DBR), an n-type doping layer, and a p-type substrate structure. The silicon-based LED includes: a substrate having a p-type mesa substrate structure; an active layer that is formed on the substrate and has a first surface and a second surface opposite the first surface; a first reflective layer facing the first surface of the active layer; a second reflective layer that is located on either side of the p-type substrate structure and faces the second surface of the active layer; an n-type doping layer sandwiched between the active layer and the first reflective layer; a first electrode electrically connected to the n-type doping layer; and a second electrode electrically connected to the p-type substrate structure.

IPC 8 full level  
**H01L 33/34** (2010.01); **H01L 33/38** (2010.01); **H01L 33/46** (2010.01)

CPC (source: EP)  
**H01L 33/34** (2013.01); **H01L 33/38** (2013.01); **H01L 33/46** (2013.01)

Citation (search report)  
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