

Title (en)  
PHOTODETECTION DEVICE

Title (de)  
FOTODETEKTOR

Title (fr)  
DISPOSITIF DE PHOTODETECTION

Publication  
**EP 2652793 A2 20131023 (FR)**

Application  
**EP 11813407 A 20111216**

Priority  
• FR 1060711 A 20101217  
• IB 2011055742 W 20111216

Abstract (en)  
[origin: WO2012080989A2] The present invention relates to a photodetector for detecting an infrared-light emission having a given wavelength (?) comprising a multilayer with: a layer (11) of a partially absorbent semiconductor; a spacer layer (12) made of a material that is transparent to said wavelength; and a structured metallic mirror (13), the distance (g) between the top of said mirror and said spacer layer being smaller than  $\lambda$  and said mirror comprising a network of holes defining an array of metallic reliefs with a pitch P of between  $0.5 \lambda / n_{SC}$  and  $1.5 \lambda / n_{SC}$ , where  $n_{SC}$  is the real part of the refractive index of the semiconductor, a relief width L of between  $9P/10$  and  $P/2$  and a hole depth h of between  $\lambda/100$  and  $\lambda/15$ .

IPC 8 full level  
**H01L 31/0232** (2006.01)

CPC (source: EP US)  
**H01L 31/0232** (2013.01 - EP US); **H01L 31/02327** (2013.01 - EP US)

Citation (search report)  
See references of WO 2012080989A2

Designated contracting state (EPC)  
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