

Title (en)  
TONER CONCENTRATION MONITOR

Publication  
**EP 0050528 B1 19851218 (EN)**

Application  
**EP 81304954 A 19811021**

Priority  
US 19899380 A 19801021

Abstract (en)  
[origin: EP0050528A2] An apparatus for monitoring toner concentration on a photoreceptor surface. The apparatus includes a light emitting diode (90) a phototransistor (92), a beam splitter (94), and a lens (96) disposed between the beam splitter (94) and the photoreceptor surface (12) to collimate the light beam between the lens and the photoreceptor surface. A portion of the light emitted from the LED is transmitted through the beam splitter and the lens to the photoreceptor surface. Collimated light is reflected from the photoreceptor surface back through the lens and reflected from the beam splitter to the phototransistor. The output signal from the phototransistor because of the incident and reflected collimated light is independent of the distance of the lens (96) from the photoreceptor surface (12). A second lens may be disposed between the beam splitter and the phototransistor to enhance overall resolution.

IPC 1-7  
**G03G 15/08**

IPC 8 full level  
**G01N 21/47** (2006.01); **G03G 15/08** (2006.01)

CPC (source: EP)  
**G03G 15/0855** (2013.01); **G03G 15/5041** (2013.01)

Cited by  
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**EP 0050528 A2 19820428**; **EP 0050528 A3 19820602**; **EP 0050528 B1 19851218**; BR 8106703 A 19820706; CA 1160278 A 19840110; DE 3173272 D1 19860130; JP S5797429 A 19820617; MX 149815 A 19831226

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**EP 81304954 A 19811021**; BR 8106703 A 19811019; CA 386768 A 19810928; DE 3173272 T 19811021; JP 16256781 A 19811012; MX 18949381 A 19811005