

Title (en)  
MINIATURIZED IMAGING DEVICE

Title (de)  
MINIATURISIERTE ABBILDUNGSEINRICHTUNG

Title (fr)  
DISPOSITIF D'IMAGERIE MINIATURISE

Publication  
**EP 1486077 A4 20080326 (EN)**

Application  
**EP 03717997 A 20030318**

Priority

- US 0308312 W 20030318
- US 36569202 P 20020318
- US 36556102 P 20020318
- US 43126102 P 20021206
- US 39148903 A 20030317
- US 39149003 A 20030317
- US 39151303 A 20030317

Abstract (en)  
[origin: WO03081831A2] The present invention is drawn toward miniaturized imaging devices. In one embodiment, the device can include a utility guide (36) having at least one aperture (60) configured for supporting utilities, and an SSID (38) carried by the utility guide. The SSID can include an imaging array (48) on a top surface (72), and a conductive element (56) on a side surface (74), wherein the imaging array is electrically coupled to the conductive element. Further, a lens (40), such as a GRIN lens, can be optically coupled to the imaging array, and an umbilical (30), including a conductive line (32), can be carried by the at least one aperture. The conductive line can be electrically coupled to the conductive element on the side surface of the SSID. Alternatively, the device can include an SSID having, as an integral structure, an imaging array electrically coupled to a conductive pad, wherein the SSID further includes at least one utility aperture (82) passing therethrough. Further, a lens can be optically coupled to the imaging array, and an umbilical, including a conductive line carried by the at least one aperture, can be configured such that the conductive line is directly electrically coupled to the conductive pad. In another embodiment, electrical communication between a conductive line and an SSID can be through an adaptor (52) or connector block, which can optionally also support the lens.

IPC 1-7  
**H04N 15/00**; H04N 3/14; A62B 1/04; H01L 21/00

IPC 8 full level  
**A61B 1/04** (2006.01); **A61B 1/05** (2006.01); **H04N 15/00** (2006.01)

CPC (source: EP)  
**A61B 1/05** (2013.01)

Citation (search report)

- [X] US 5220198 A 19930615 - TSUJI KIYOSHI [JP]
- [X] US 5021888 A 19910604 - KONDOU YUU [JP], et al
- [X] US 4745471 A 19880517 - TAKAMURA KOJI [JP], et al
- See references of WO 03081831A2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 03081831 A2 20031002**; **WO 03081831 A3 20040610**; AU 2003222014 A1 20031008; AU 2003222014 A8 20031008;  
EP 1486077 A2 20041215; EP 1486077 A4 20080326; JP 2005533530 A 20051110; JP 2009273927 A 20091126; JP 4574169 B2 20101104;  
JP 4903844 B2 20120328

DOCDB simple family (application)  
**US 0308312 W 20030318**; AU 2003222014 A 20030318; EP 03717997 A 20030318; JP 2003579407 A 20030318; JP 2009195048 A 20090826