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(54) Title: HERMETICALLY-SEALED PACKAGES FOR ELECTRONIC COMPONENTS HAVING REDUCED UNUSED AREAS

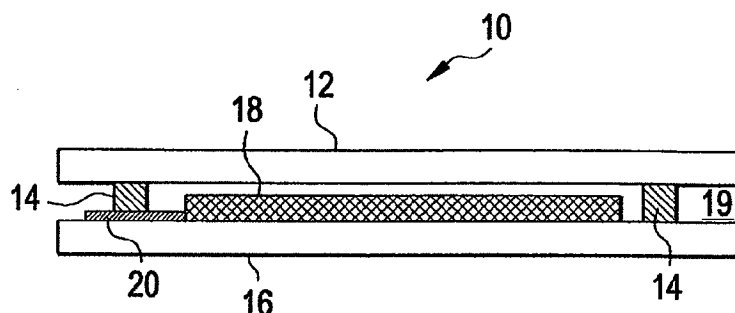


FIG. 1

(57) Abstract: Hermetically-sealed packages for electronic components, e.g., OLEDs, are provided. The packages have a first glass substrate (12), a second glass substrate (16), and a wall (14) that separates the first and second substrates (12,16) and hermetically seals the electronic component (18) between the substrates (12,16). The package has a reduced outer unused area characterized by distances D_{first} (32a) and D_{second} (32b) at least one of which, and, in certain embodiments, both of which are less than 200 microns, e.g., one or both of D_{first} (32a) and D_{second} (32b) is approximately 100 microns. The reduction in unused area can be used to increase viewing area, improve electrical lead design, and/or increase package strength through the use of a wider sintered frit wall (14).



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 09/01219

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H01L 21/50, H01L 23/48 (2009.01)

USPC - 257/678; 257/100, 313/512, 445/25

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

USPC - 257/678; 257/100, 313/512, 445/25

IPC(8) - H01L 21/50, H01L 23/48 (2009.01)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC - 257/678; 257/100, 313/512, 445/25, 257/E21.499, 257/E23.01, 438/106 (keyword delimited)

IPC(8) - H01L 21/50, H01L 23/48 (2009.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST (USPT,PGPB,EPAB,JPAB); Google, Google Patent

Search terms used: OLED LED frit hermetic glass package wall score scored broken substrate border distance width seal resin edge minimize unused area display grind polish fill

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2006/0082298 A1 (Becken et al.) 20 April 2006 (20.04.2006), Fig 1A, 1B; para [0025], [0026], [0011]	1-5, 9 ----- 6-8
Y	US 2007/0267972 A1 (Menegus et al.) 22 November 2007 (22.11.2007), Fig 2; para [0020]	6-8
Y	US 6,910,953 B2 (Allaire et al.) 28 June 2005 (28.06.2005), col 2, ln 1-4; col 1, ln 5-7; col 7, ln 13-16; col 11, ln 2-3; col 10, ln 5-18	6-8
Y	US 2004/0191566 A1 (Kikuchi et al.) 30 September 2004 (30.09.2004), Fig 6; para [0057]-[0059]	8

☐ Further documents are listed in the continuation of Box C.

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