

GLASS MEMBER PROVIDED WITH SEALING MATERIAL LAYER, ELECTRONIC DEVICE USING IT AND PROCESS FOR PRODUCING THE ELECTRONIC DEVICE

ABSTRACT

A glass member provided with a sealing material layer is provided, which suppresses generation of failures such as cracks or breakage of glass substrates or a sealing layer even when the distance between two glass substrates is narrowed, and thereby makes it possible to improve the sealing property between the glass substrates and its reliability.

A glass substrate 3 has a surface 3a provided with a sealing region. On the sealing region of the glass substrate 3, a sealing material layer 9 having a thickness of at most 15 μm is formed. The sealing material layer 9 comprises a fired material of a glass material for sealing containing a sealing glass, a laser absorbent and optionally a low-expansion filler, wherein the total content of the laser absorbent and the low-expansion filler being the optional component in the glass material for sealing is within the range of from 2 to 44 vol%. The difference between the thermal expansion coefficient α_1 of the material of the sealing material layer 9 and the thermal expansion coefficient α_2 of the glass substrate 3 is within the range of from 15 to $65 \times 10^{-7}/^\circ\text{C}$.

Fig. 2