

ABSTRACT

[Object] To provide a thermopile infrared detecting element capable of accurate temperature measurement at low cost.

[Solving Means] An infrared detecting element 1 using a silicon nitride
5 film as a first structure layer 22 constituting a structure of a
membrane portion 4 is provided. Unlike silicon oxide, the first
structure layer 22 has internal stress in the tensile direction, and can
thus prevent the occurrence of bending. Also, diodes D1 and D2 can be
formed in a silicon substrate 2 by using the first structure layer 22 as
10 an element isolation region, and thus deformation of a thermopile 12 due
to a change in the environment can be prevented to suppress measurement
error of the thermopile 12. Furthermore, a high accuracy infrared
detecting element capable of accurately detecting the temperature of
cold junctions using the diodes D1 and D2 can be provided.

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