

Title (en)  
THERMAL FLUID SENSOR

Title (de)  
THERMISCHER FLUIDSENSOR

Title (fr)  
CAPTEUR DE FLUIDE THERMIQUE

Publication  
**EP 4359778 A1 20240501 (EN)**

Application  
**EP 22753608 A 20220622**

Priority  
• US 202117354692 A 20210622  
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Abstract (en)  
[origin: WO2022268896A1] A fluid sensor for sensing a concentration or composition of a fluid, the sensor comprising: a semiconductor substrate comprising a first etched portion; a dielectric region located on the semiconductor substrate, wherein the dielectric region comprises a first dielectric membrane located over the first etched portion of the semiconductor substrate; a first heating element located within the first dielectric membrane; and a second heating element; wherein the first heating element is arranged to thermally shield the second heating element from ambient temperature changes; wherein the first heating element or the second heating element is configured to operate as a temperature sensing element; wherein the first heating element is configured to operate in a constant temperature or constant resistance mode; wherein the second heating element is configured to operate in a constant current or constant voltage mode or constant power mode; and wherein the sensor is configured to determine a thermal conductivity of the fluid using the temperature sensing element to determine said concentration or composition of the fluid.

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