

Pressure sensor, endoscope hood, endoscope, and pressure measurement device

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Technology description

Provided is a medical endoscope in which a doctor can easily notice a change in internal air pressure.

A pressure sensor (10) for detecting a pressure of a gas supplied to a surgical site in a body is arranged in an imaging field of view of a camera of a medical endoscope, and the pressure sensor (10) converts the pressure in the body into five sensory information. Specifically, the cylindrical cover (5) is mounted on the front end portion of the lens barrel (2), and the pressure sensor (10) is mounted on the inner wall surface of the cover (5). The pressure sensor (10) can convert the air pressure in the body into a color, and since the color enters the camera field of view, the doctor can intuitively judge the pressure change in the surgical field of view on the monitor. Therefore, even if the focus is on surgery, it is easy to monitor pressure changes. In addition, since the wiring for the pressure sensor (10) is not required, the outer diameter of the electronic oscilloscope can be reduced.

Claims

[claim1]

A light emitted by an endoscope is irradiated in an imaging field of view of a camera equipped with a medical endoscope, and the pressure at a surgical site in the body is converted into visual information.

A pressure sensor characterized by.

[claim2]

The diaphragm has a diaphragm and a transparent member, the diaphragm being displaced under the pressure of the surgical portion in the body and disposed at a position away from the surface of the diaphragm.

The pressure sensor according to claim 1, wherein.

[claim3]

The pressure sensor including the front diaphragm is manufactured by MEMS

The pressure sensor according to claim 2, wherein.

[claim4]

A groove representing the profile of the diaphragm is formed in the diaphragm.

The pressure sensor according to claim 2, wherein.

[claim5]

It's an endoscope cover,

The pressure sensor of claims 1 to 4 is mounted on the inner wall surface of the housing.

An endoscopic cover characterized by.

[claim6]

It has a lens barrel forming an endoscope,

The pressure sensor according to claim 1 is mounted at the front end of the lens barrel.

An endoscope characterized by.

[claim7]

It has a lens barrel forming an endoscope,

The endoscope cover of claim 5 is mounted so as to be rotatable at the front end of the lens barrel.

An endoscope characterized by.

[claim8]

Converting visual information transmitted by the pressure sensor according to claims 1 to 4 into an electrical signal.

Control unit for converting an electric signal into five sensory information perceived by a person

A pressure measuring device characterized by.

Institution

[Kagawa University](#)

Inventors

[森 宏仁](#)

[高尾 英邦](#)

联系我们



叶先生

电话 : 021-65679356

手机 : 13414935137

邮箱 : yeyingsheng@zf-ym.com