CLAIMS

1. A process for fabricating a thermo-optic component comprising the following steps:

a) providing an SOI substrate comprising:

- a surface layer made of single-crystal silicon, extending in a main plane and placed on a dielectric layer, itself placed on a carrier made of silicon, and
- at least one buried cavity, which is formed in the carrier and which opens under the dielectric layer, then,

b) forming an optical waveguide extending in the main plane and comprising a core formed in the surface layer and encircled by an optical confinement layer including the dielectric layer, then,

c) producing at least one heating element, on the optical waveguide, said heating element being positioned, in the main plane, plumb with a segment of the optical waveguide, or on either side of said segment, the heating element and the segment of the optical waveguide being located plumb with the -at least one- buried cavity.

2. The process for fabricating a thermo-optic component according to the preceding claim, wherein, in step b), an aperture is produced through the optical waveguide, in order to place the -at least one- cavity under an exterior pressure.

3. The process for fabricating a thermo-optic component according to claim 2, wherein said aperture is plugged so as to hermetically seal the -at least one- cavity.

4. The process for fabricating a thermo-optic component according to Claim 1, wherein the -at least one- cavity remains hermetically sealed throughout steps a), b) and c).

5. The process for fabricating a thermo-optic component according to one of the preceding claims, wherein the dielectric layer is made of silicon oxide and has a thickness comprised between 100 nm and 3 microns.

6. The process for fabricating a thermo-optic component according to one of the preceding claims, wherein the surface layer has a thickness comprised between 100 nm and 500 nm.

7. The process for fabricating a thermo-optic component according to one of the preceding claims, wherein the optical confinement layer comprises an additional dielectric layer having a thickness comprised between 0.5 and 1.5 microns.

8. The process for fabricating a thermo-optic component according to one of the preceding claims, wherein the -at least one- cavity has lateral dimensions, in the main plane, comprised between 10 microns and a few millimetres, and a depth, along an axis normal to the main plane, comprised between a few microns and 100 microns, and advantageously between 5 and 10 microns.

9. A thermo-optic component produced using the fabricating process according to one of the preceding claims, forming a switch, a phase-shifter, a modulator, a laser emitter, an amplifier, a directional coupler, a filter and/or a multiplexer.