

FIG. 1A

100a

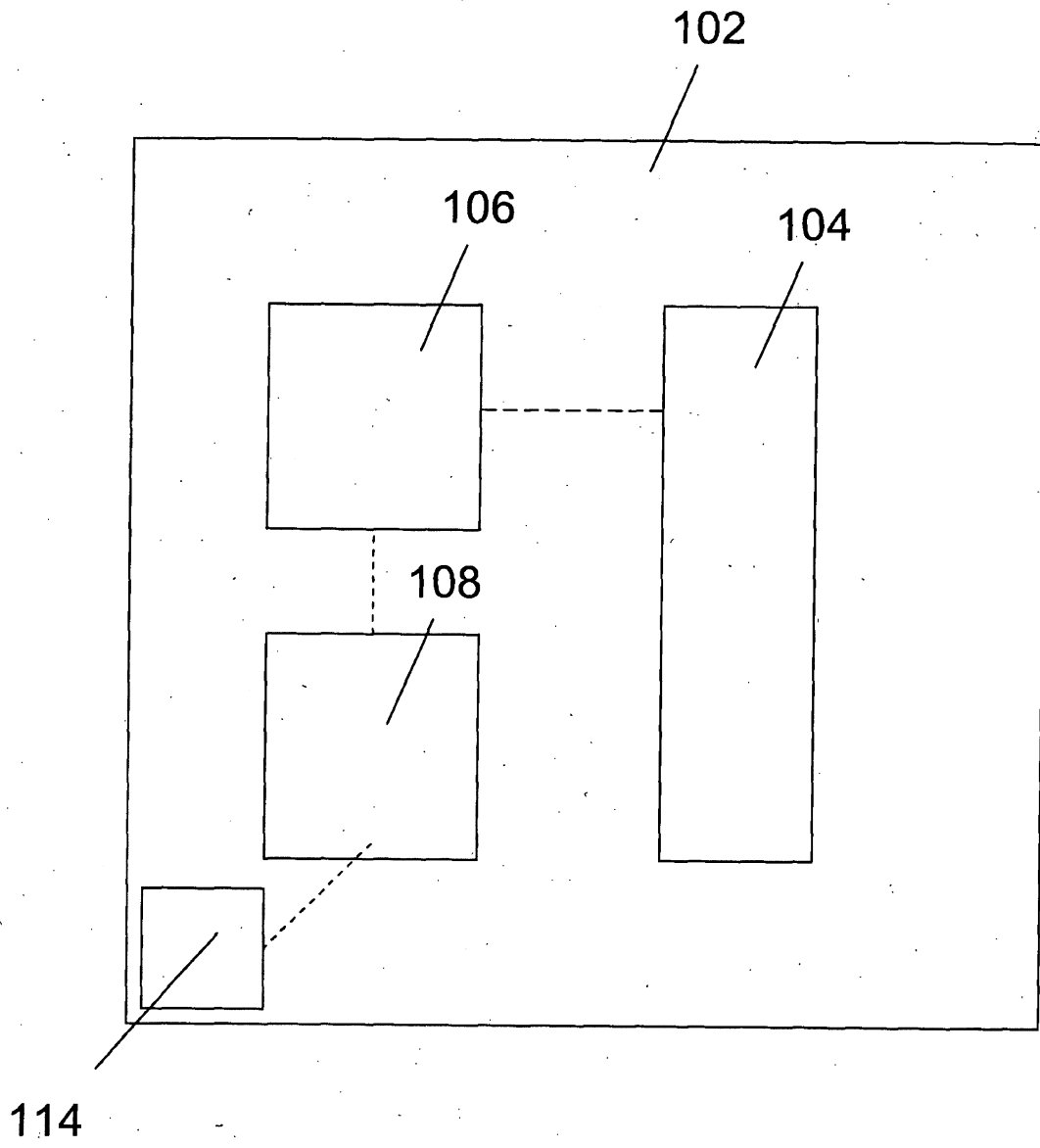


FIG. 1B

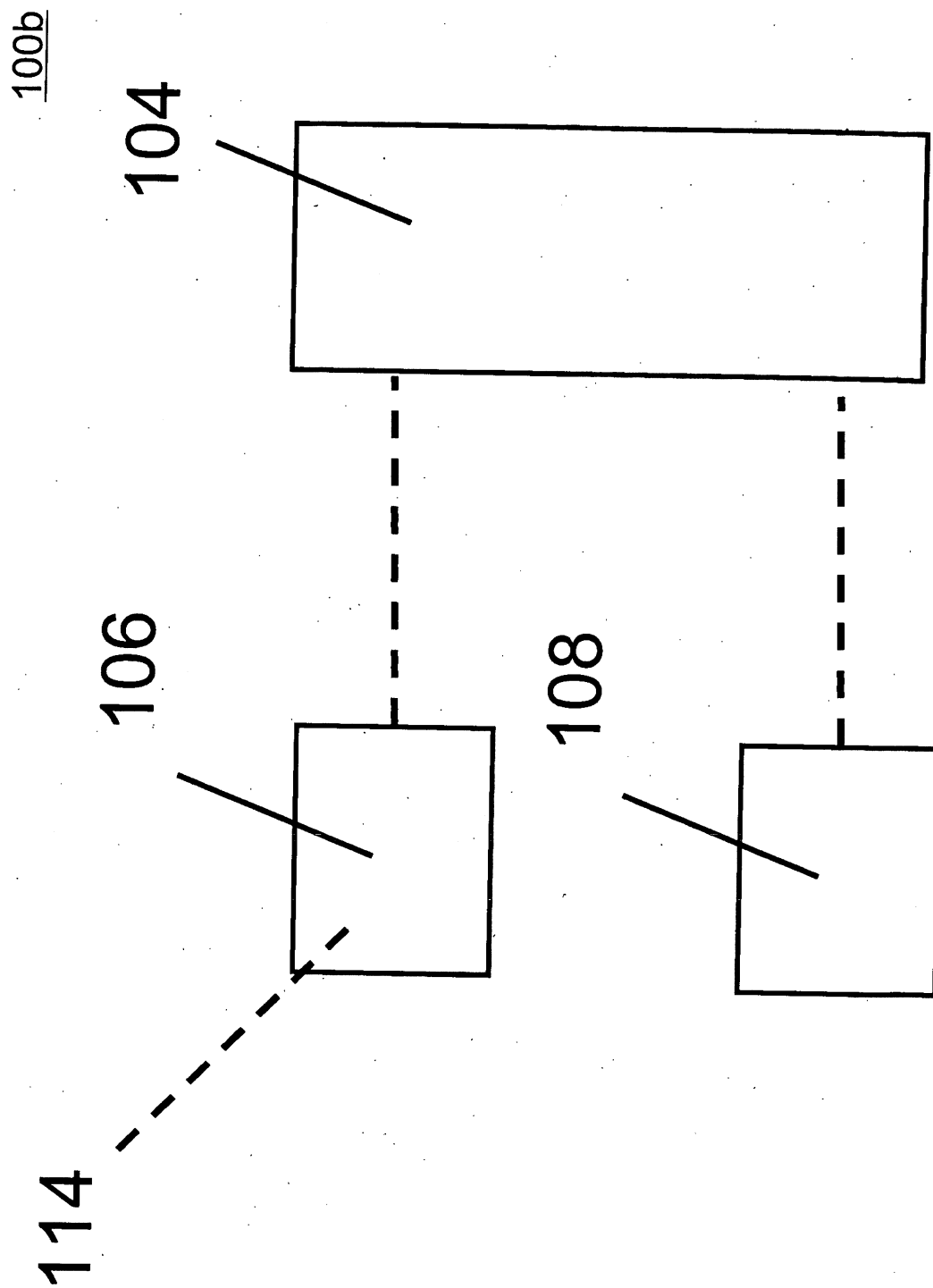


FIG. 1C

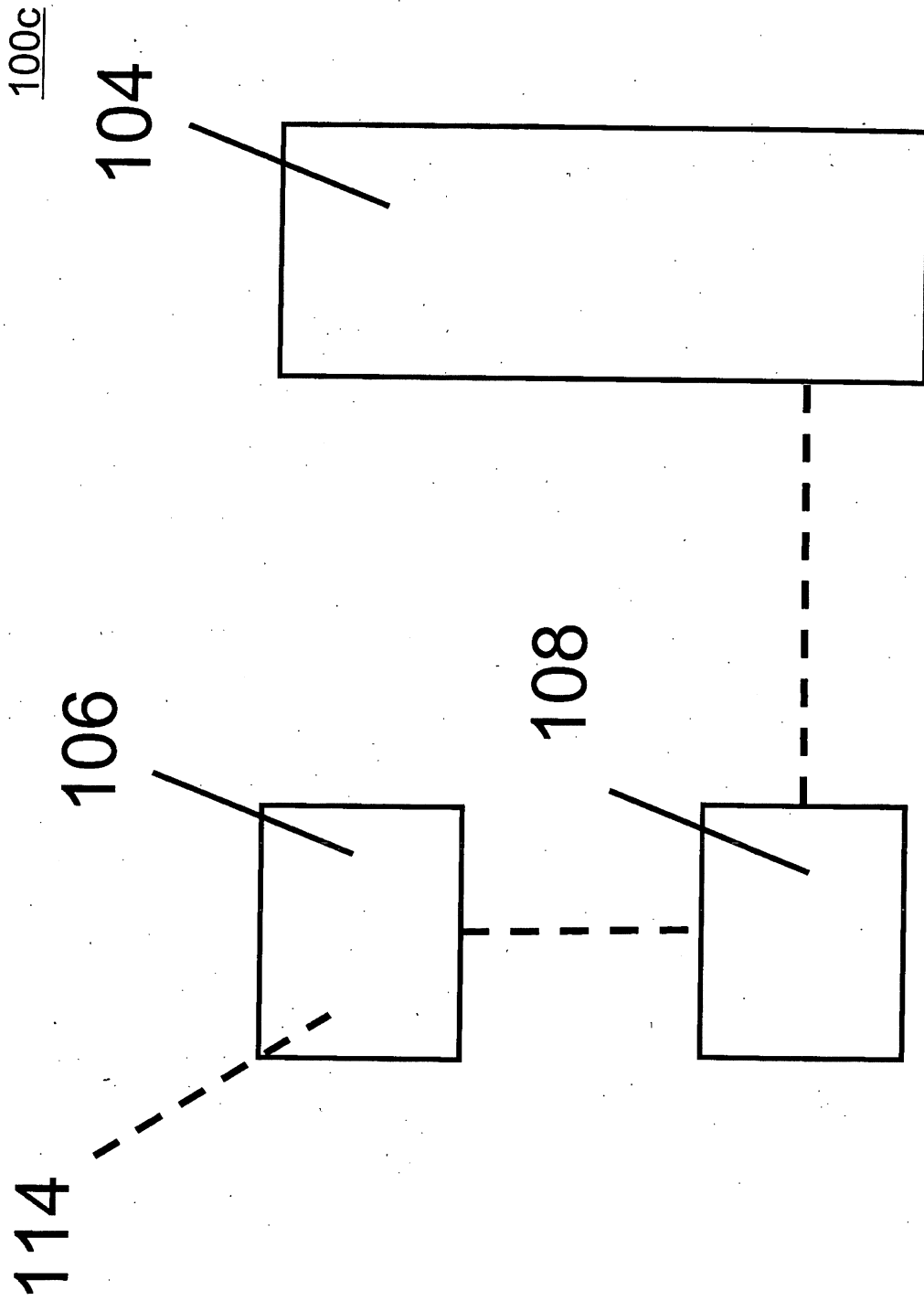


FIG. 2A

200a

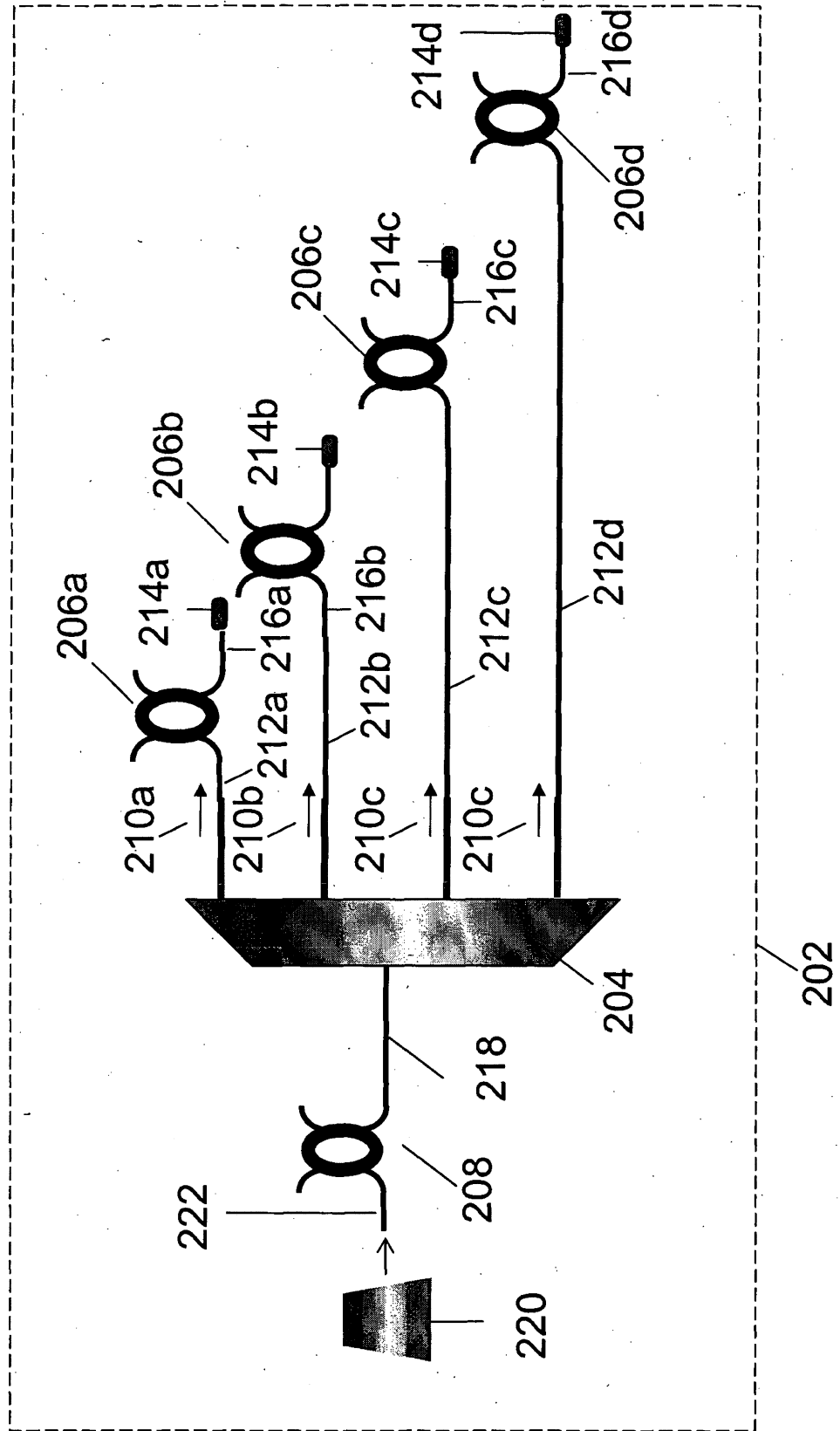


FIG. 2B

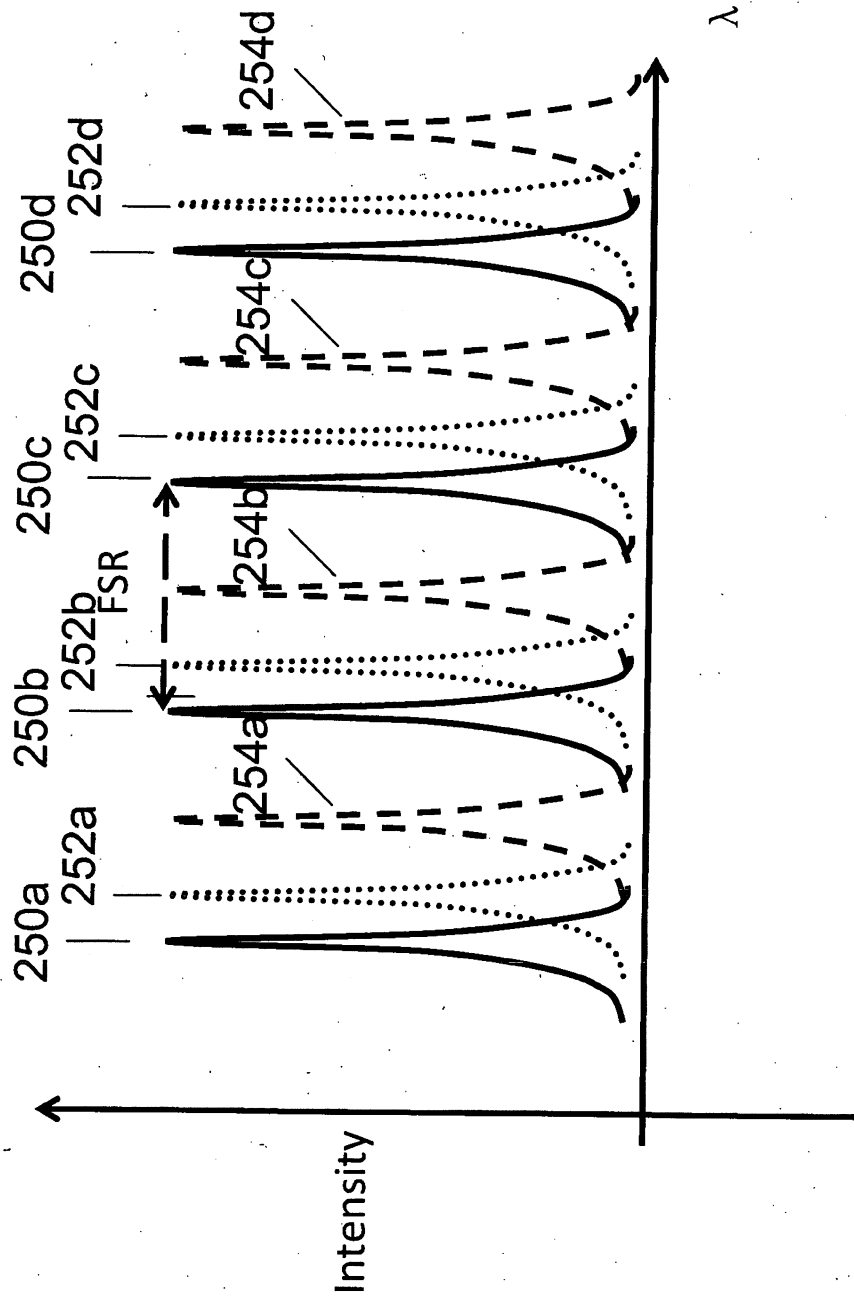
200b

FIG. 2C

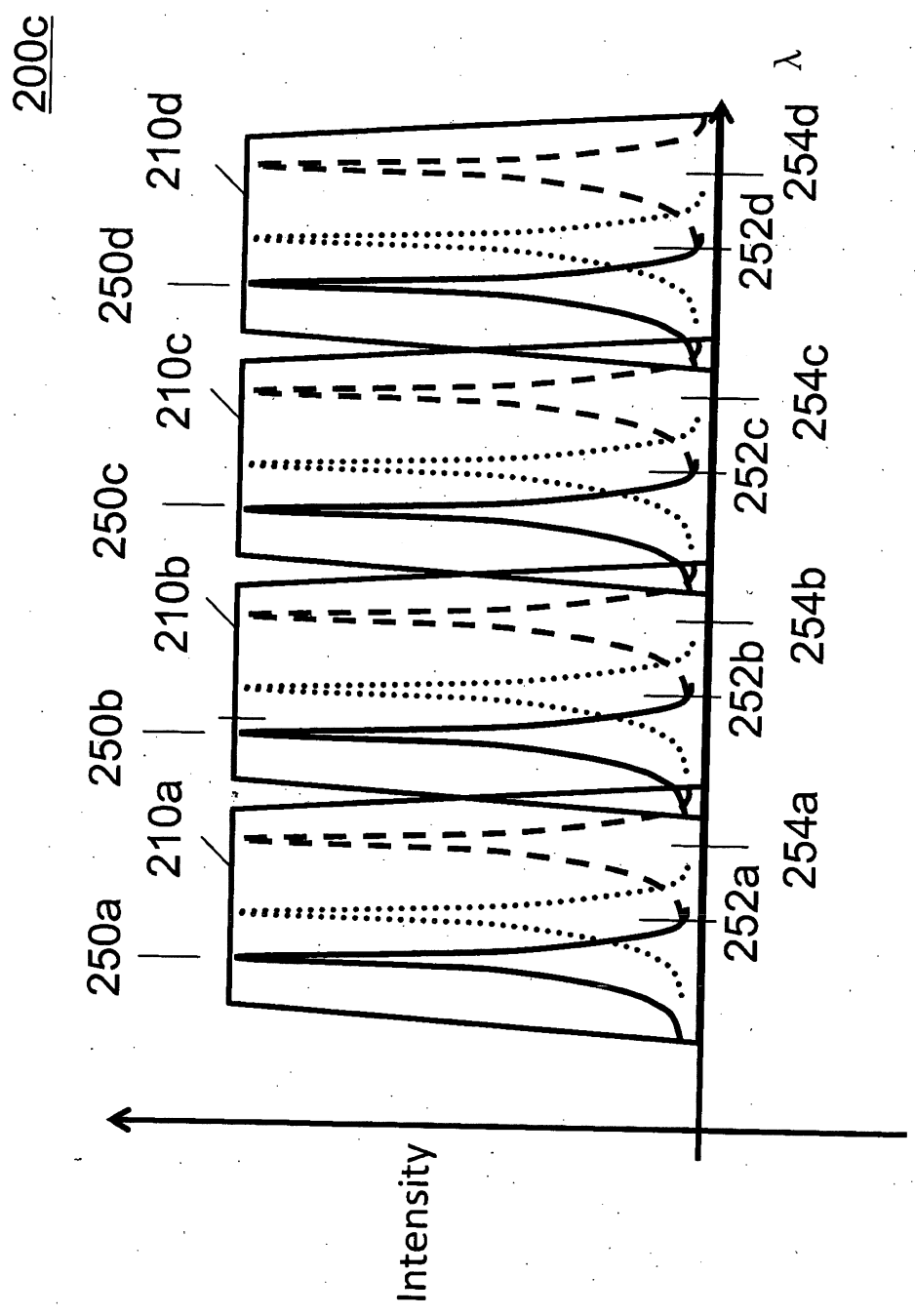


FIG. 2D

200d

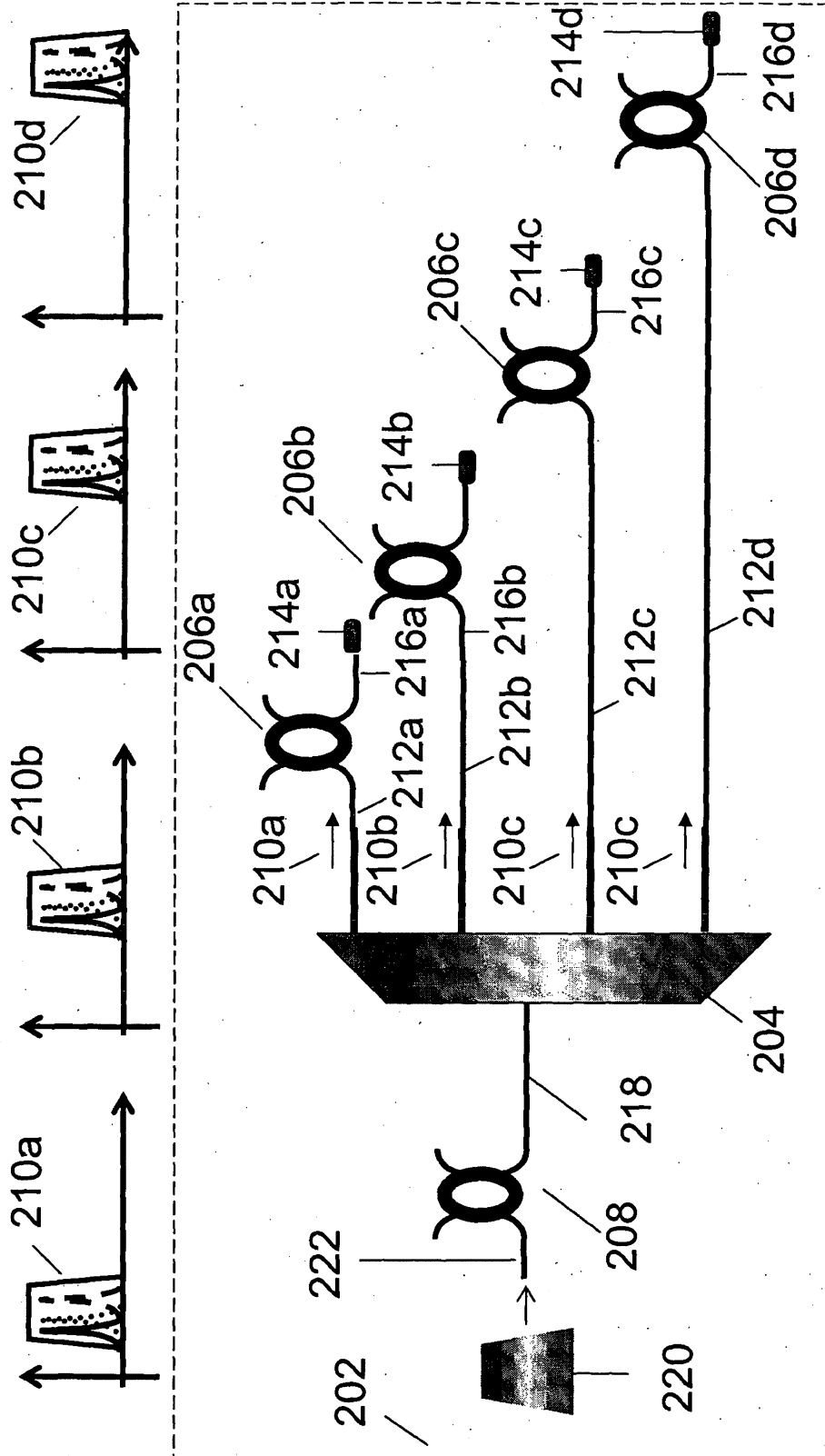


FIG. 2E

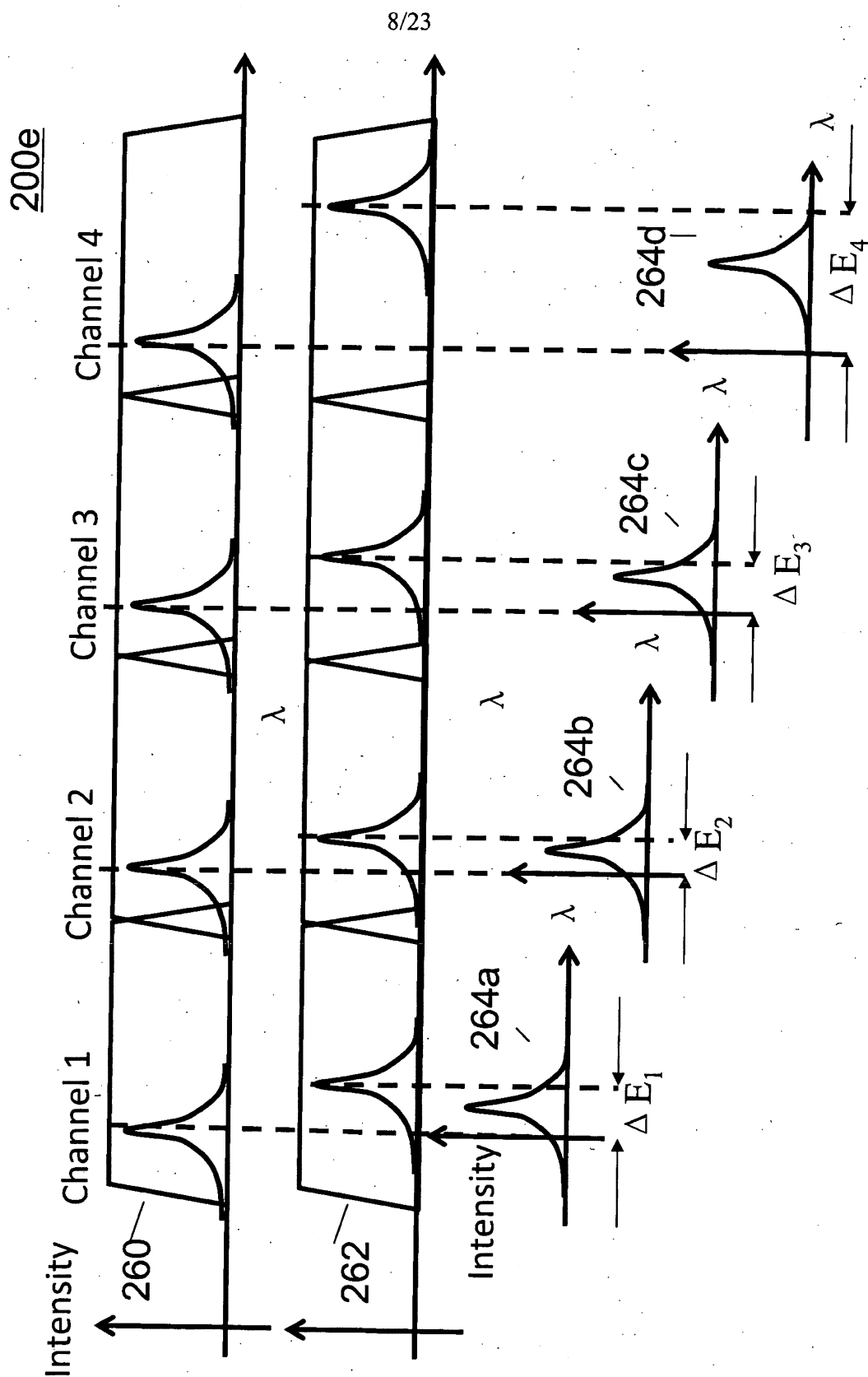


FIG. 4A

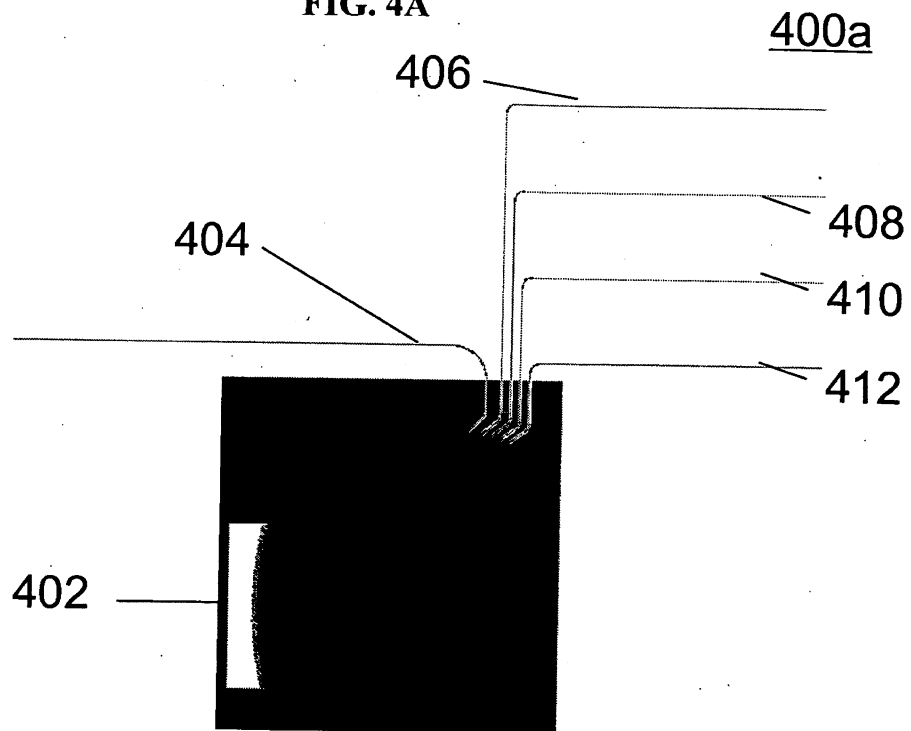
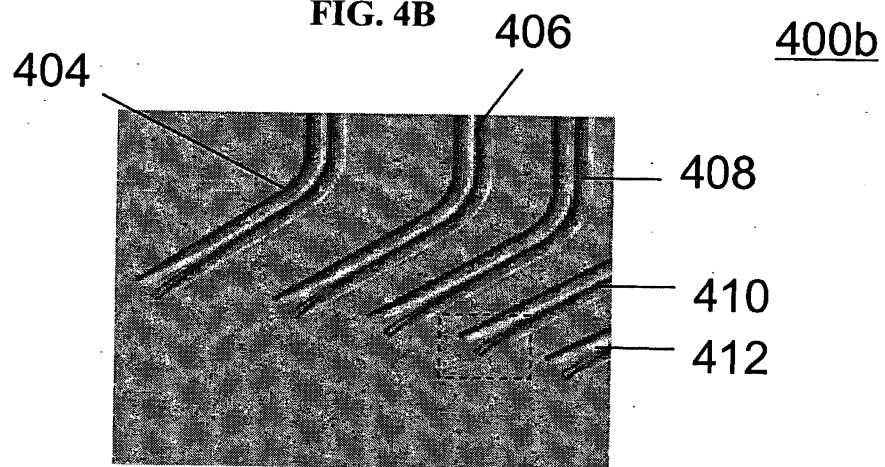


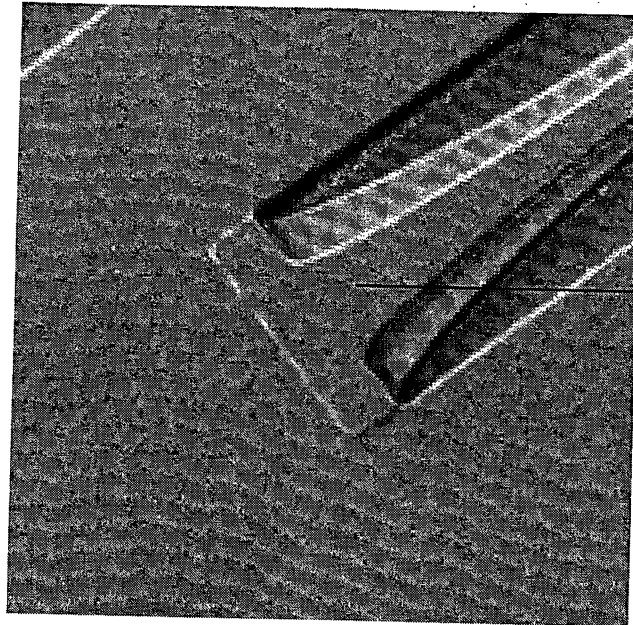
FIG. 4B



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FIG. 4C

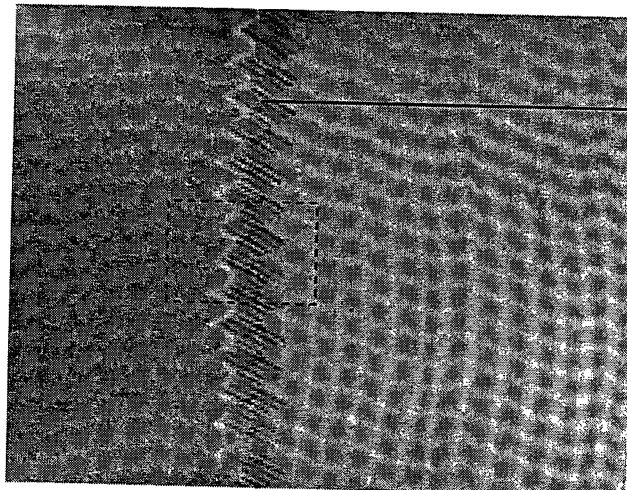
400c



420

FIG. 4D

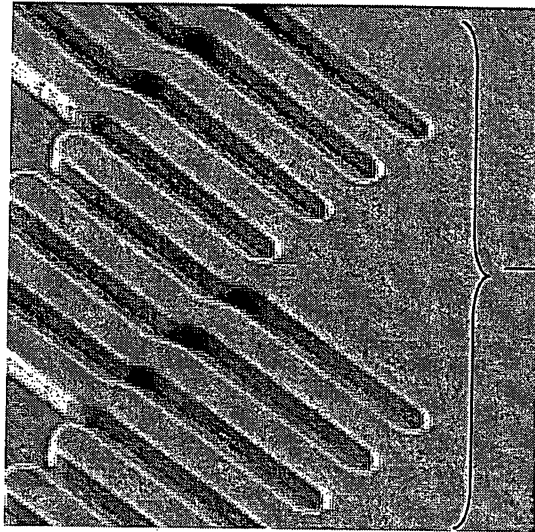
400d



430

FIG. 4E

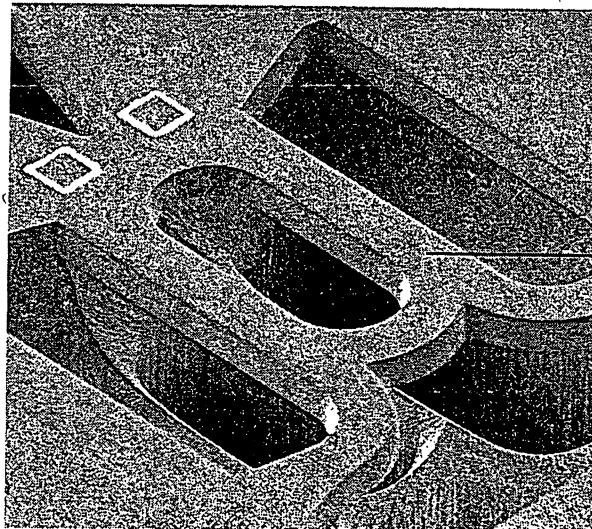
400e



430

FIG. 4F

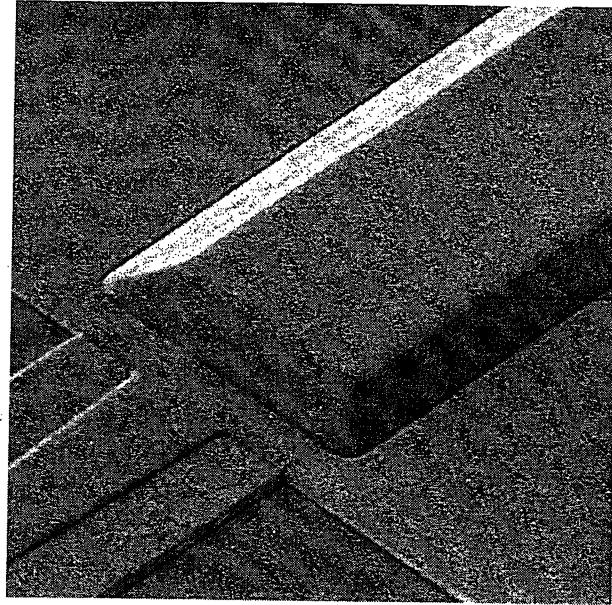
400f



440

FIG. 4G

400g



450

FIG. 4H

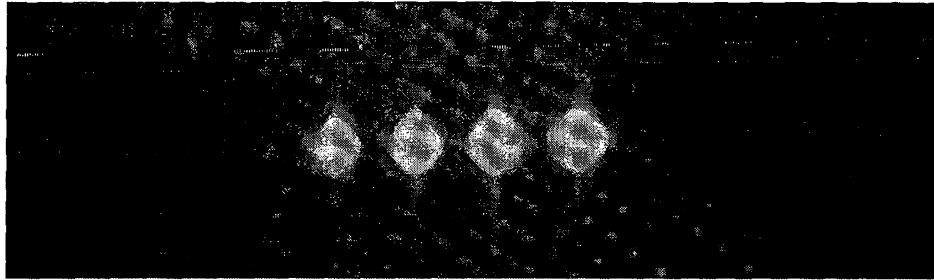
400h

FIG. 4I

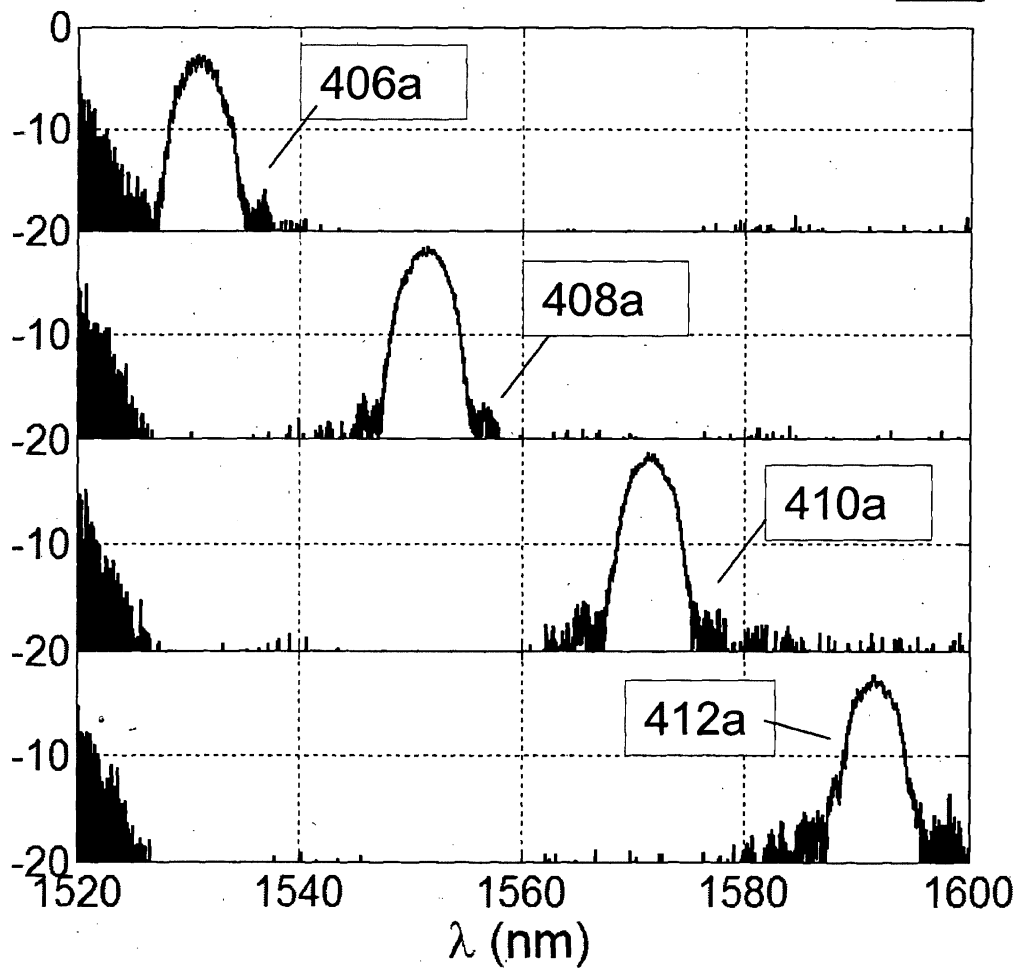
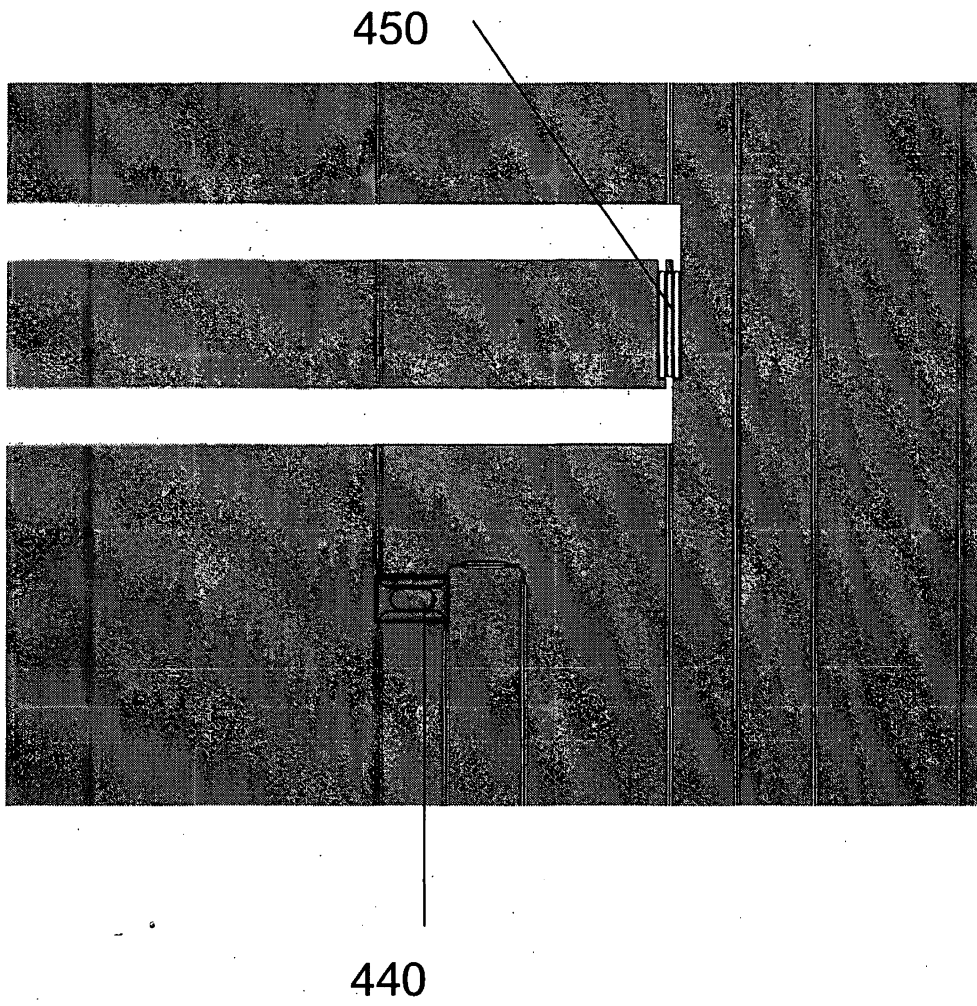
400i

FIG. 4J

400j



400k

FIG. 4K

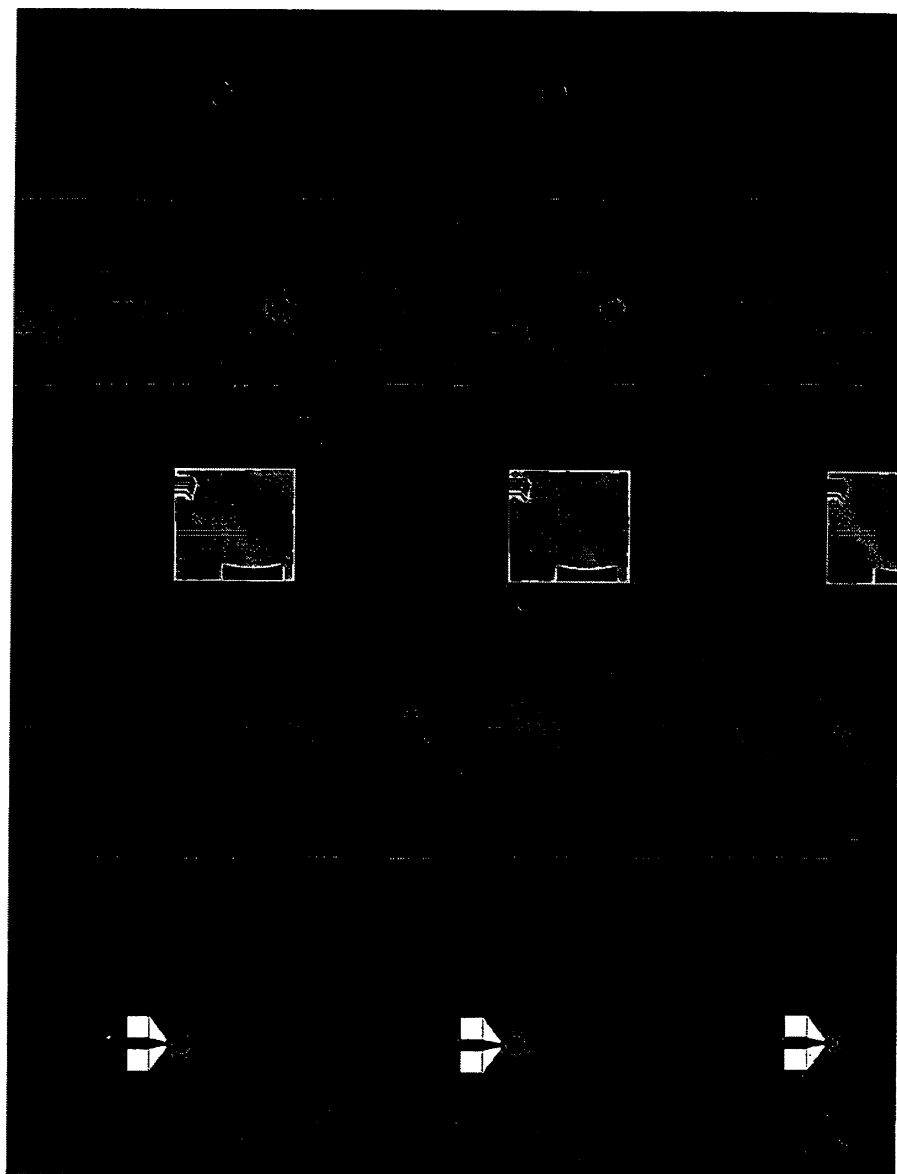


FIG. 5A

500a

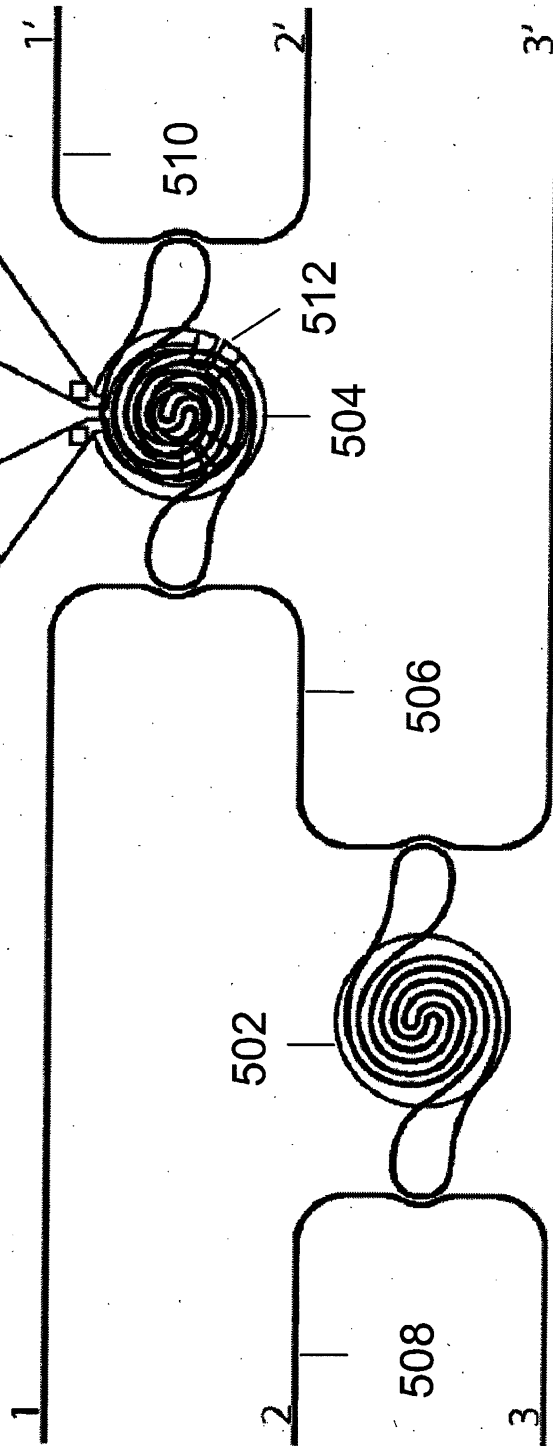


FIG. 5B

500b

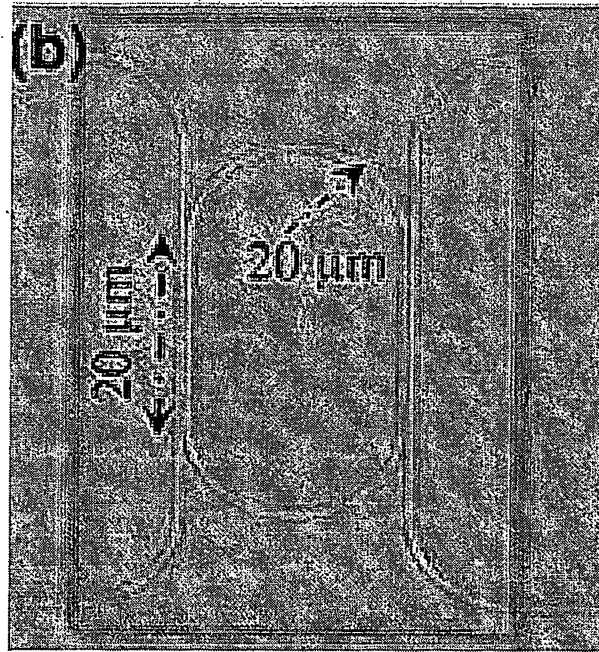


FIG. 5C

400i

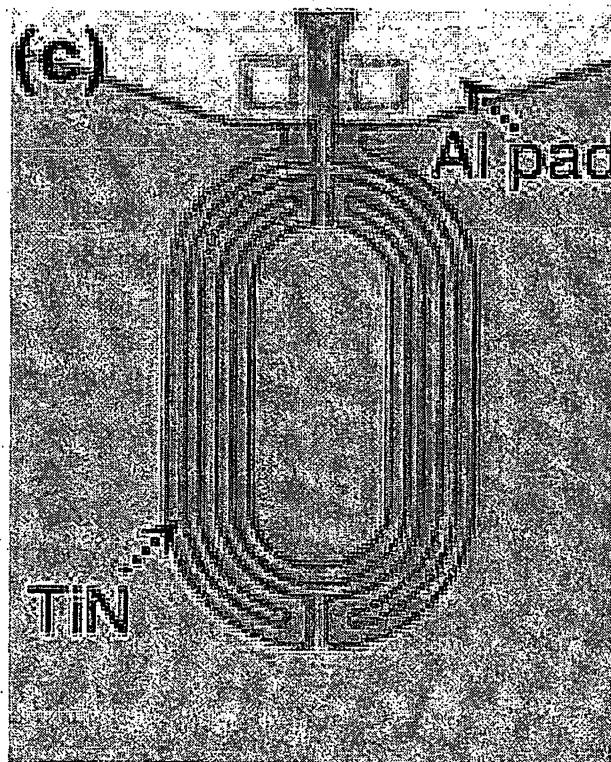


FIG. 5D

500d

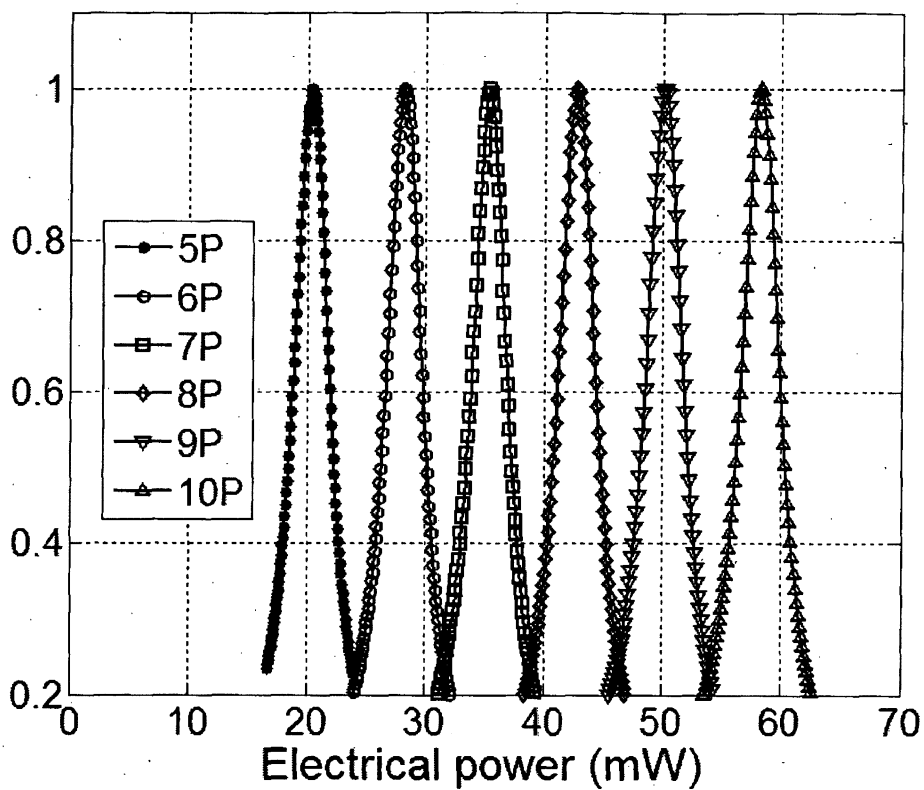


FIG. 5E

400e

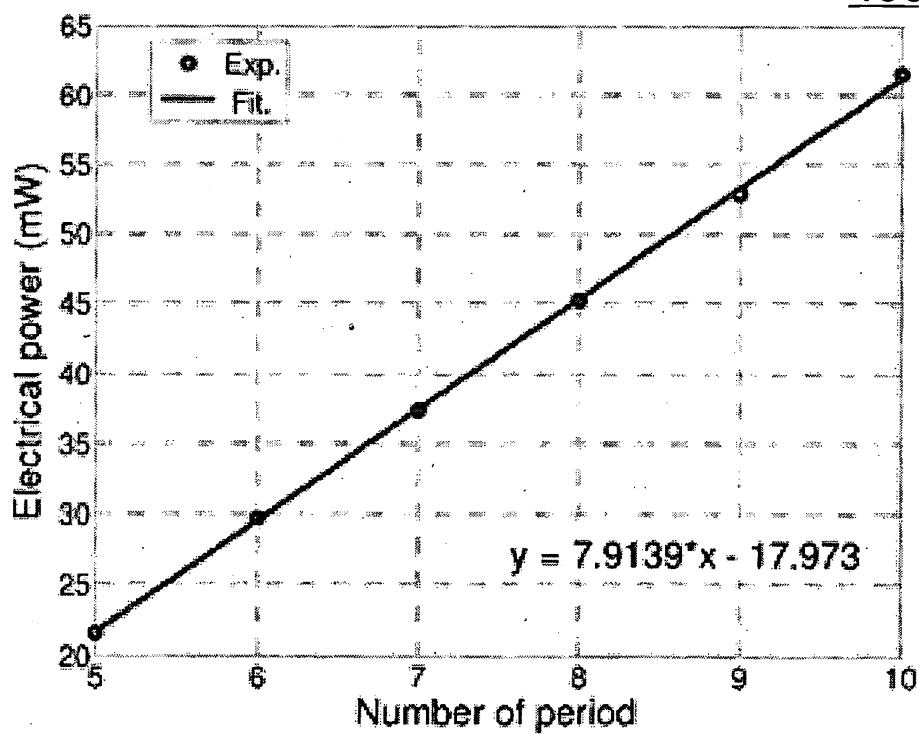


FIG. 5F

500f

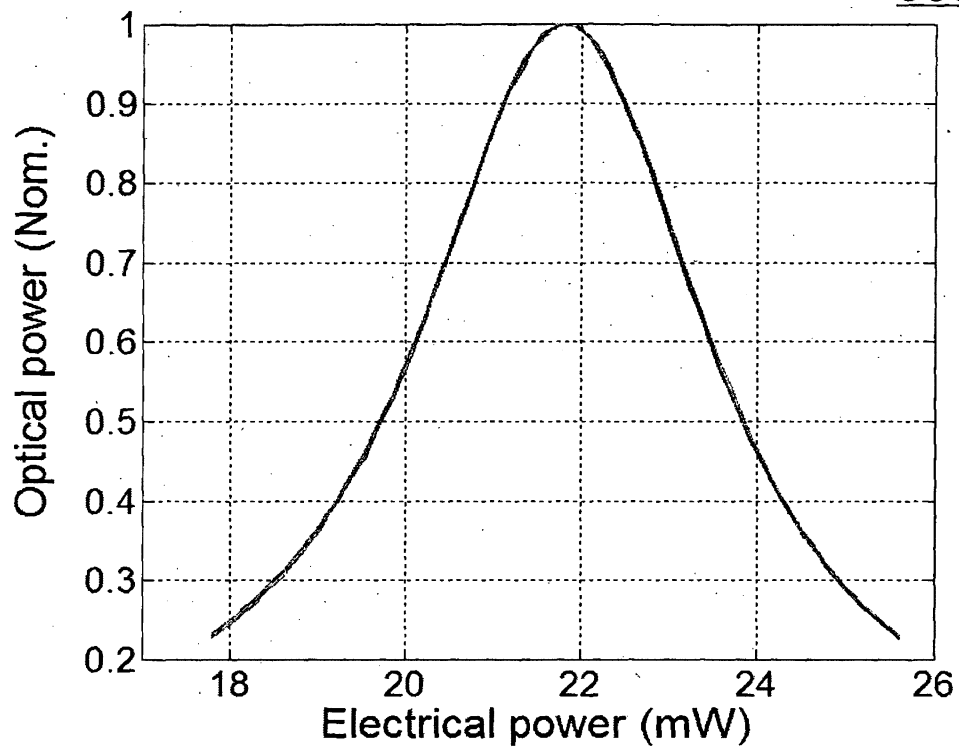


FIG. 5G

500g

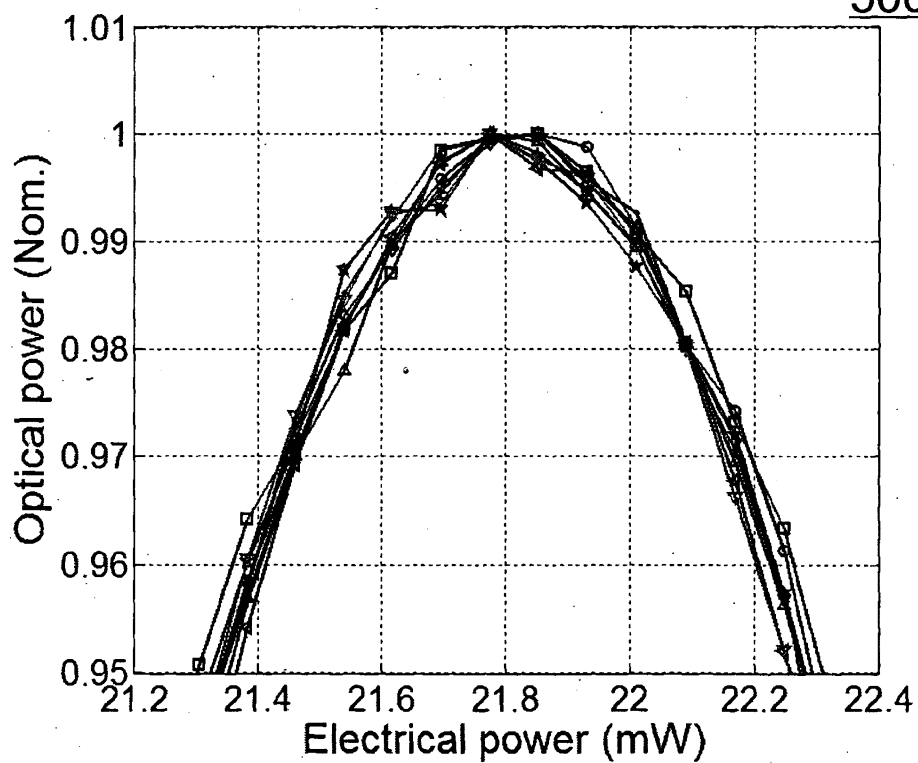


FIG. 5H

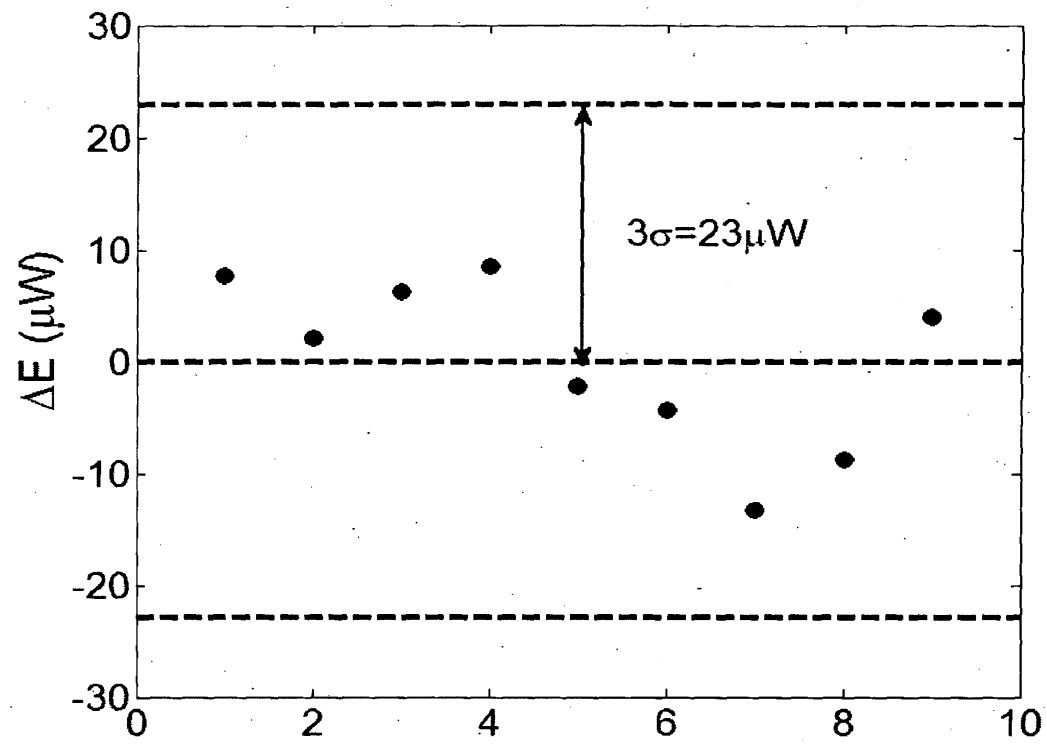
500h

FIG. 6A

600a

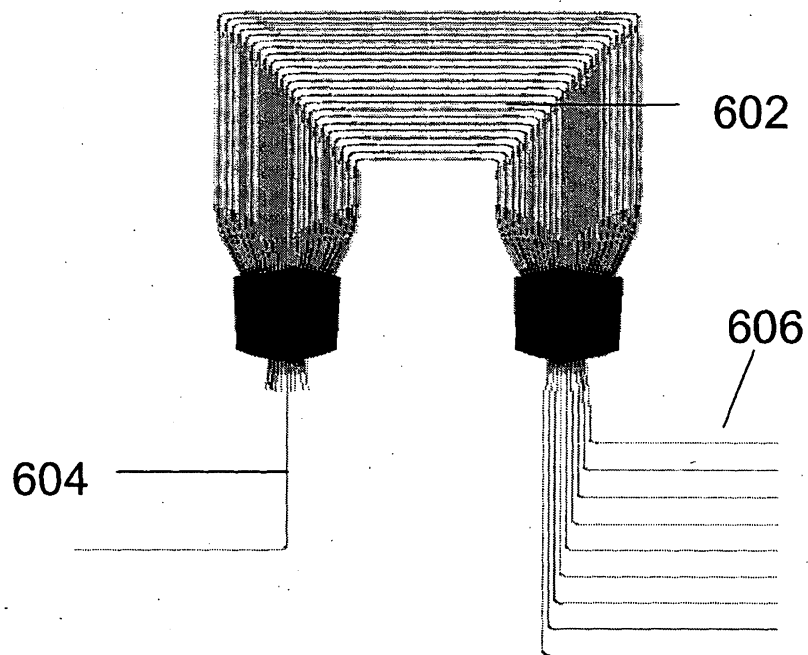


FIG. 6B

600b

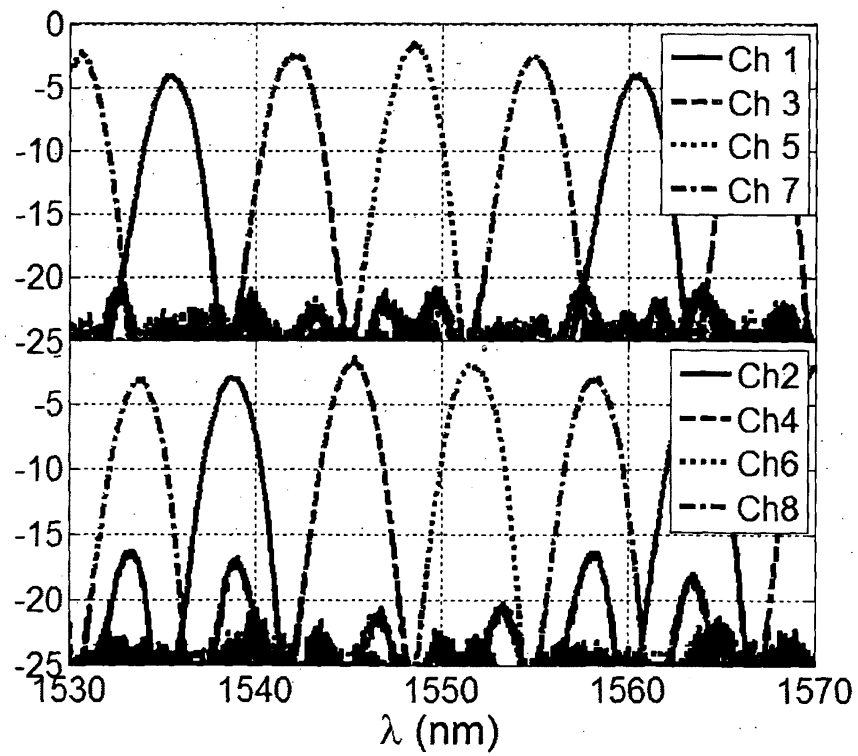


FIG. 7

700

separate an input light into a plurality of sliced lights

702

couple one sliced light of the plurality of sliced lights through a first resonator of a plurality of first resonators to one detector of a plurality of detectors of the optical sensing system

704

place a sample in contact with the first resonator,

706

measure a change in an intensity of the sliced light by the detector due to the sample being placed in contact with the first resonator, the change in intensity based on a change in a difference between a resonant wavelength of the first resonator and a resonant wavelength of a second resonator

708

determine the change in an effective refractive index of the first resonator based on the change in the intensity of the sliced light

710