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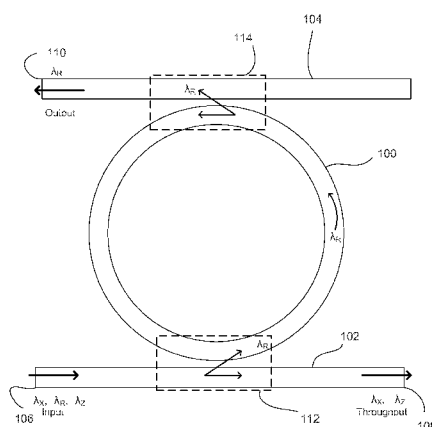


Fig. 1

(57) Abstract: The waveguide in the ring and the bus waveguide in the immediate vicinity of the ring are made wider than the optimal single mode size. The bus waveguide has adiabatic tapers which serve to connect single mode portions in the bus waveguide to the wider portion of the bus waveguide to expand the mode from the narrower waveguide to the wider waveguide. Since the light is now spread out over a larger area in the wider waveguides, the scattering loss from the sidewalls is reduced and the loss is lower. This lower loss gives rise to a higher Q in the ring since the Q of the ring is directly proportional to the round trip loss.

