PHYSICAL REVIEW A **92**, 053839 (2015)

Impact of slow-light enhancement on optical propagation in active semiconductor photonic-crystal waveguides

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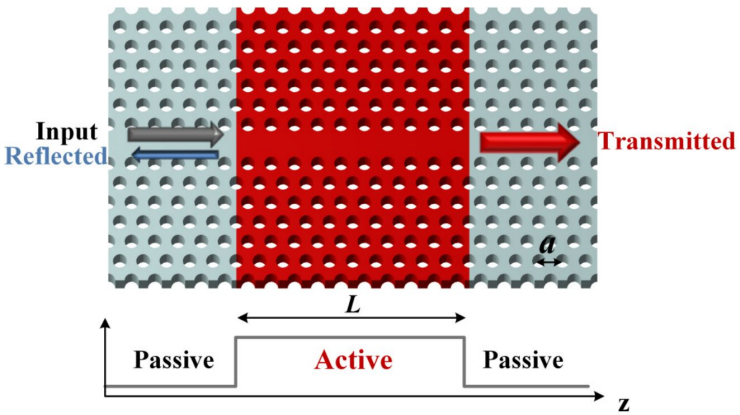
(Received 21 August 2015; published 17 November 2015)



$$\partial_z \psi_+(z) = \frac{i\omega}{c} n_{gz} \chi_{\text{pert}} [\delta(z)\psi_+ + \kappa^*(z) e^{-i2k_z z} \psi_-],$$

$$\partial_z \psi_-(z) = -\frac{i\omega}{c} n_{gz} \chi_{\text{pert}} [\delta(z)\psi_- + \kappa(z) e^{i2k_z z} \psi_+],$$