

ABSTRACT

OPTICAL WAVEGUIDE TUNING ELEMENT

5 A tunable element for an optical waveguide device, such as an Optical Phased Array (OPA),
is described. Tunable element comprises three waveguide sections arranged such that light
propagates through the first waveguide section, then through the second waveguide section
and then through the third waveguide section, with light being either evanescently or directly
coupled from one waveguide section to the next. The tunable element further comprises one
10 or more resistive heating pad formed proximate to the second waveguide section. The first
and third waveguide sections are formed from a first material and the second waveguide
section is formed from a second, different material and the second material is more thermo-
optically sensitive than the first material.

[Figure 3A]