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(54) Title: A LIGHT EMITTING DIODE STRUCTURE AND A METHOD OF FORMING A LIGHT EMITTING DIODE
STRUCTURE

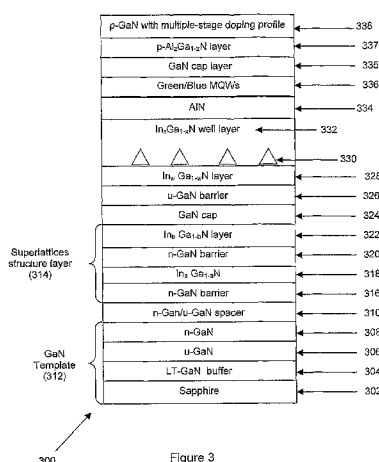


Figure 3

(57) Abstract: A light emitting diode structure and a method of forming a light emitting diode structure are provided. The struc-
ture comprises a superlattice comprising, a first barrier layer; a first quantum well layer comprising a first metal-nitride based ma-
terial formed on the first barrier layer; a second barrier layer formed on the first quantum well layer; and a second quantum well
layer comprising the first metal-nitride based material formed on the second barrier layer; and wherein a difference between con-
duction band energy of the first quantum well layer and conduction band energy of the second quantum well layer is matched to a
single or multiple longitudinal optical phonon energy for reducing electron kinetic energy in the superlattice.