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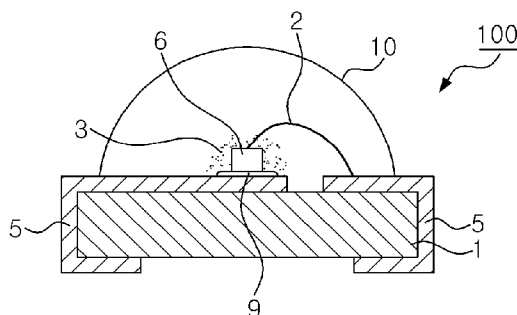
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[Fig. 1]



tetragonal Alkaline Earth Silicate phosphors.

(57) Abstract: Disclosed is a light emitting device employing non-stoichiometric tetragonal Alkaline Earth Silicate phosphors. The light emitting device comprises a light emitting diode emitting light of ultraviolet or visible light, and non-stoichiometric luminescent material disposed around the light emitting diode. The luminescent material adsorbs at least a portion of the light emitted from the light emitting diode and emits light having a different wavelength from the absorbed light. The non-stoichiometric luminescent material has tetragonal crystal structure, and contains more silicon in the crystal lattice than that in the crystal lattice of silicate phosphors having stoichiometric crystal structure. The luminescent material is represented as the formula $(\text{Ba}_u\text{Sr}_v\text{Ca}_w\text{Cu}_x)_{3-y}(\text{Zn}, \text{Mg}, \text{Mn})_z\text{Si}_{1+b}\text{O}_{5+2b}:\text{Eu}_a$. Light emitting devices having improved temperature and humidity stability can be provided by employing the non-stoichiometric