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(54) Title: MEASURING TEMPERATURE OF PHOSPHORESCENT MATERIAL USING A DUAL ELEMENT LIGHT EMITTING DIODE

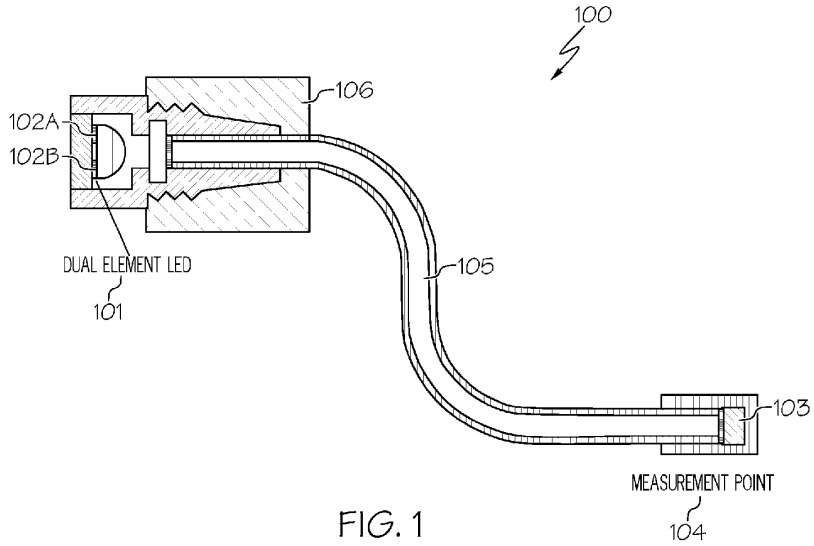

FIG. 1

(57) Abstract: A system and method for measuring a temperature of phosphorescent material, which may be applied to a surface of a material whose temperature needs to be measured or integrated within a material enabling the measurement of the temperature within the material. A first light emitting diode element of a multiple element light emitting diode is configured to output a first wavelength to excite the phosphorescent material. A second light emitting diode element of the multiple element light emitting diode is configured to detect an emission from the excited phosphorescent material at a second wavelength, where the first wavelength is at a different wavelength than the second wavelength. The first wavelength may correspond to a peak absorption intensity of the phosphorescent material and the second wavelength may correspond to a peak emission intensity of the phosphorescent material.

[Continued on next page]

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