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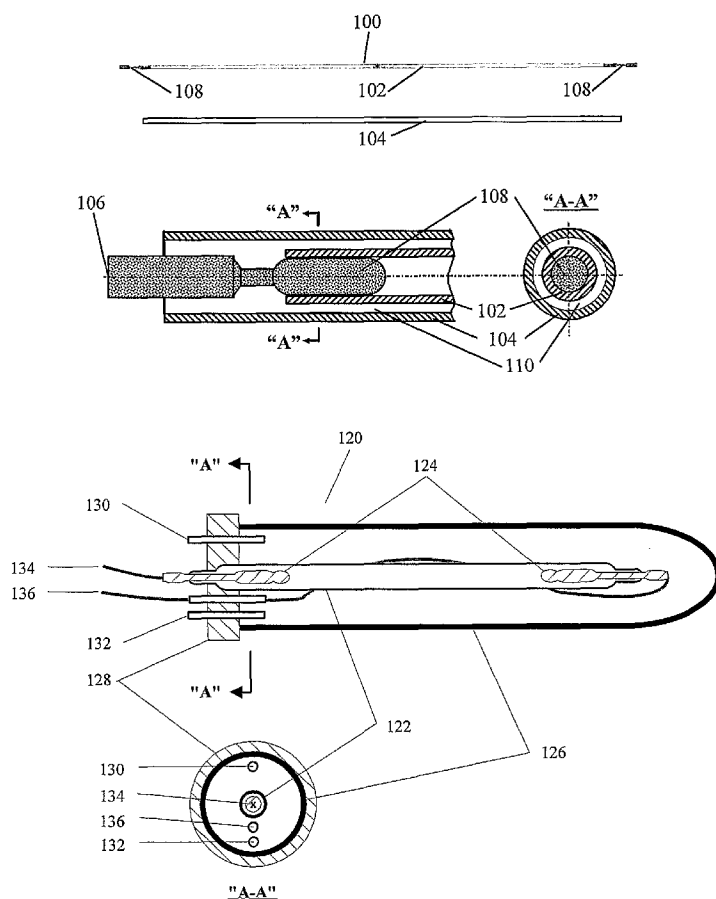
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(54) Title: DESIGN OF HIGH POWER PULSER FLASH LAMPS



(57) Abstract: Broadband output high power pulsed flash lamps are useful in many applications, and when specifically optimized, can become an excellent source of ultraviolet (UV) light, which is particularly useful for photo-chemically-induced materials processing applications. Multiple factors involved with the production of high-energy light pulses can in certain cases adversely affect the ultraviolet lamp operation, thereby resulting in the development of micro cracks in lamp envelopes and subsequent limitation in lamp lifetime. Similar factors can be responsible for an increased absorption of UV radiation by lamp components and degradation of lamp efficiency. This invention describes new pulsed flash lamp designs that enable a new generation of high power and performance as required by, for example, many large-scale photo-processing applications. This invention uniquely and advantageously mitigates the development of micro-cracks and failure, and produces dramatically improved electrical efficiency, stability of lamp optical characteristics, and service lifetime.



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