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(54) Title: ILLUMINATION DEVICE INCLUDING A COLOR SELECTING PANEL FOR RECYCLING UNWANTED LIGHT

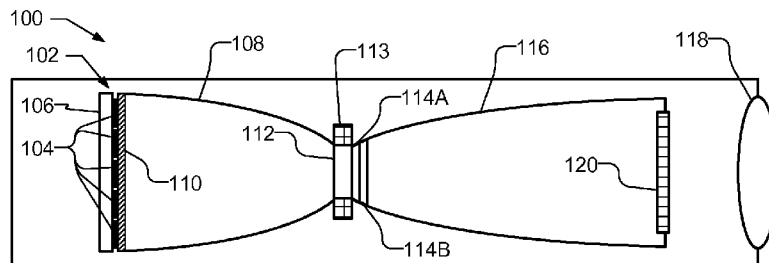


FIG. 1

(57) Abstract: An illumination source (100) includes at least one light emitting diode (104), e.g., in array of LEDs that produce short wavelength light. One or more wavelength converting elements (114A), such as phosphor elements, convert at least a portion of the short wavelength light from the LED(s) (104) to longer wavelengths, such as Red and Green. A dichroic element (110) positioned between the LED(s) and the wavelength converting element(s) transmits the light from the LED(s) and reflects the longer wavelengths from the wavelength converting element(s). A color selection panel (120) selects the colors of light to be produced by the illumination device (100) and to be recycled for another opportunity to be converted by the wavelength converting element(s) (114A) or to be reflected by the dichroic element (110). The color selection panel (120) may operate in one or both of the spatial domain and the temporal domain.

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