

**CPC****COOPERATIVE PATENT CLASSIFICATION****F21K****LIGHT SOURCES NOT OTHERWISE PROVIDED FOR****F21K 2/00**

**Light sources using luminescence** (using excitation by another light source [F21V 9/16](#); lamps, other than those in which all the electrodes are within the vessel, in which a screen or coating is excited to luminesce by radioactive material located inside the vessel [H01J 65/08](#); using electroluminescence [H05B 33/00](#))

## F21K 2/005

- {excited by infra-red radiation using up-conversion (frequency changing of light [G02F 2/02](#))}

## F21K 2/04

- using triboluminescence; using thermoluminescence

## F21K 2/06

- using chemiluminescence

## F21K 2/08

- . . activated by an electric field i.e. electrochemiluminescence

**F21K 5/00**

**Light sources using a charge of combustible material, e.g. illuminating flash devices** (explosive or thermic compositions [C06B](#); fireworks [F42B 4/00](#); photographic flash units [G03B 15/03](#))

## F21K 5/02

- ignited in a non-disrupting container, e.g. photo-flash bulb

## F21K 5/023

- . . {Ignition devices in photo flash bulbs (ignition devices being part of a shutter mechanism included in a camera [G03B 9/70](#); ignition devices not being part of a shutter mechanism included in a camera [G03B 15/04](#); ignition circuits for combustion lamps [H05B 43/02](#))}

## F21K 5/026

- . . . {using mechanical firing e.g. percussion of a fulminating charge (if included in a camera [G03B 15/0489](#))}

**F21K 9/00**

**{Electric lamps using semiconductor devices as light generating elements, e.g. using light emitting diodes [LED] or lasers}** (light emitting diodes per se [H01L 33/00](#), [H01L 51/50](#); semiconductor lasers per se [H01S 5/00](#); electric lamps using a combination of different types of light generation [H05B 35/00](#))}

**WARNING**

This group is not complete pending a reclassification; see also [F21K 99/00](#), [H01L 33/00](#), [H01S 5/00](#), [H05B 35/00](#)

## F21K 9/10

- {specially adapted for retrofitting or substituting conventional lamps, e.g. for substitution of incandescent lamps or fluorescent tubes}

## F21K 9/13

- . . {with only one fitting, e.g. a bayonet or screw based fitting}

## F21K 9/135

- . . . {specially adapted for generating an omni-directional light distribution, e.g. with a glass bulb}

## F21K 9/1355

- . . . . {Details of the base; Arrangements of components inside the base}

## F21K 9/137

- . . . {specially adapted for generating a spot light distribution, e.g. to substitute reflector lamps}

## F21K 9/1375

- . . . . {Details of the base; Arrangements of components in the base}

## F21K 9/17

- . . {with two fittings, e.g. for substituting a fluorescent tube}

## F21K 9/175

- . . . {Details of the base; Arrangements of components in the base}

## F21K 9/30

- {LED lamps or modules comprising attachment means not covered by groups [F21K 9/10](#) to [F21K 9/175](#)}

- F21K 9/50
  - {Optical arrangements, i.e. for improving the color rendering index or the light extraction}
- F21K 9/52
  - • {using a light guide}
- F21K 9/54
  - • {using a mixing chamber, e.g. a housing with reflective walls}
- F21K 9/56
  - • {using wavelength conversion means distinct or spaced from the light generating element, e.g. a remote phosphor layer}
- F21K 9/58
  - • {specially adapted for changing the characteristics or the distribution of the light, e.g. by movement of parts}
- F21K 9/90
  - {Manufacturing methods}
- F21K 99/00**
  - Subject matter not provided for in other groups of this subclass**
- F21K 2099/005
  - {Other light sources comprising light emitting diodes associated with conversion means}