

# CPC COOPERATIVE PATENT CLASSIFICATION

## F MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING (NOTE omitted)

### LIGHTING; HEATING

#### F21 LIGHTING (electric aspects or elements, [see](#) section [H](#), e.g. electric light sources [H01J](#), [H01K](#), [H05B](#)) (NOTE omitted)

#### F21K NON-ELECTRIC LIGHT SOURCES USING LUMINESCENCE; LIGHT SOURCES USING ELECTROCHEMILUMINESCENCE; LIGHT SOURCES USING CHARGES OF COMBUSTIBLE MATERIAL; LIGHT SOURCES USING SEMICONDUCTOR DEVICES AS LIGHT-GENERATING ELEMENTS; LIGHT SOURCES NOT OTHERWISE PROVIDED FOR

##### NOTE

In this subclass, it is desirable to add the indexing codes of subclasses [F21W](#) and [F21Y](#).

##### WARNING

The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

<a href="#">F21K 5/04</a>	covered by	<a href="#">G03B 15/0457</a> ;
<a href="#">F21K 5/06</a>	covered by	<a href="#">G03B 15/0442</a> ;
<a href="#">F21K 5/08</a>	covered by	<a href="#">F21K 5/02</a> , <a href="#">G03B 15/0442</a> ;
<a href="#">F21K 5/10</a>	covered by	<a href="#">G03B 15/0442</a> ;
<a href="#">F21K 5/12</a>	covered by	<a href="#">F21K 5/023</a> ;
<a href="#">F21K 5/14</a>	covered by	<a href="#">F21K 5/026</a> , <a href="#">G03B 15/0489</a> ;
<a href="#">F21K 5/16</a>	covered by	<a href="#">G03B 15/0452</a> ;
<a href="#">F21K 5/18</a>	covered by	<a href="#">G03B 15/0452</a> ;
<a href="#">F21K 5/20</a>	covered by	<a href="#">G03B 15/0447</a> ;
<a href="#">F21K 5/22</a>	covered by	<a href="#">G03B 15/0442</a> .

#### 2/00 Non-electric light sources using luminescence (using excitation by radioactivity [G21H 3/02](#), [H01J 65/06](#), [H01J 65/08](#); using excitation by an external electromagnetic field or by external corpuscular radiation [H01J 65/04](#)); Light sources using electrochemiluminescence

- 2/005 . {excited by infra-red radiation using up-conversion}
- 2/04 . using triboluminescence; using thermoluminescence
- 2/06 . using chemiluminescence
- 2/08 . . activated by an electric field, i.e.  
electrochemiluminescence

#### 5/00 Light sources using charges of combustible material, e.g. illuminating flash devices

- 5/02 . {ignited in a non-disrupting container, e.g. photo-  
flash bulb}
- 5/023 . . {Ignition devices in photo flash bulbs}
- 5/026 . . . {using mechanical firing, e.g. percussion of a  
fulminating charge}

#### 9/00 Light sources using semiconductor devices as light-generating elements, e.g. using light-emitting diodes [LED] or lasers

##### NOTES

1. In this group, the following expressions are used  
with the meaning indicated:

- "light source" means a light-generating component intended for installation in a fitting or holder incorporated in a lighting device;
  - "retrofit light source" means a light source comprising substantially the same attachment means as those of incandescent lamps or fluorescent lamps. "Retrofit light sources" are specially adapted for replacing or substituting such lamps.
2. Semiconductor devices per se, or assemblies thereof, specially adapted for light emission, e.g. for use in light sources (in the sense of Note (1)) are covered by subclass [H01L](#), e.g. [H01L 33/00](#) or [H01L 51/50](#), or by subclass [H01S](#).
  3. Lighting devices or systems in which light sources are used are covered by subclasses [F21L](#) or [F21S](#).
  4. When classifying in this group, classification is also made in subclass [F21V](#) if detail aspects covered by that subclass are of interest.

## F21K

F21K 9/00

(continued)

### **WARNINGS**

1. Group [F21K 9/00](#) is incomplete pending reclassification of documents from groups [F21K 99/00](#), [F21V 19/042](#), [F21V 19/045](#), [F21S 2/00](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
2. Group [F21K 9/00](#) is impacted by reclassification into groups [F21K 9/20](#), [F21K 9/23](#), [F21K 9/232](#), [F21K 9/233](#), [F21K 9/235](#), [F21K 9/237](#), [F21K 9/238](#), [F21K 9/27](#), [F21K 9/272](#), [F21K 9/275](#), [F21K 9/278](#), [F21K 9/60](#), [F21K 9/61](#), [F21K 9/62](#), [F21K 9/64](#), [F21K 9/65](#), [F21K 9/66](#), [F21K 9/68](#), [F21K 9/69](#), [F21K 9/90](#) and [F21K 99/00](#).  
All groups listed in this Warning should be considered in order to perform a complete search.

- 9/20 . . . Light sources comprising attachment means

### **WARNINGS**

1. Group [F21K 9/20](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
2. Group [F21K 9/20](#) is impacted by reclassification into groups [F21K 9/23](#), [F21K 9/232](#), [F21K 9/233](#), [F21K 9/235](#), [F21K 9/237](#), [F21K 9/238](#), [F21K 9/27](#), [F21K 9/272](#), [F21K 9/275](#) and [F21K 9/278](#).  
All groups listed in this Warning should be considered in order to perform a complete search..

- 9/23 . . . Retrofit light sources for lighting devices with a single fitting for each light source, e.g. for substitution of incandescent lamps with bayonet or threaded fittings

### **WARNINGS**

1. Group [F21K 9/23](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/20](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).  
All groups listed in this Warning should be considered in order to perform a complete search..
2. Group [F21K 9/23](#) is impacted by reclassification into [F21K 9/235](#), [F21K 9/237](#) and [F21K 9/238](#).  
All groups listed in this Warning should be considered in order to perform a complete search.

- 9/232 . . . specially adapted for generating an essentially omnidirectional light distribution, e.g. with a glass bulb

### **WARNING**

Group [F21K 9/232](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/20](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).  
All groups listed in this Warning should be considered in order to perform a complete search.

- 9/233 . . . specially adapted for generating a spot light distribution, e.g. for substitution of reflector lamps

### **WARNING**

Group [F21K 9/233](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/20](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).  
All groups listed in this Warning should be considered in order to perform a complete search.

- 9/235 . . . Details of bases or caps, i.e. the parts that connect the light source to a fitting; Arrangement of components within bases or caps ([F21K 9/238](#) takes precedence)

### **WARNING**

Group [F21K 9/235](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/20](#), [F21K 9/23](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).  
All groups listed in this Warning should be considered in order to perform a complete search.

- 9/237 . . . Details of housings or cases, i.e. the parts between the light-generating element and the bases; Arrangement of components within housings or cases ([F21K 9/238](#) takes precedence)

### **WARNING**

Group [F21K 9/237](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/20](#), [F21K 9/23](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).  
All groups listed in this Warning should be considered in order to perform a complete search.

- 9/238 . . . Arrangement or mounting of circuit elements integrated in the light source

**WARNING**

Group [F21K 9/238](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/20](#), [F21K 9/23](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#), [F21V 19/045](#), [F21V 23/003](#), [F21V 23/004](#), [F21V 23/005](#) and [F21V 23/006](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/27 . . Retrofit light sources for lighting devices with two fittings for each light source, e.g. for substitution of fluorescent tubes

**WARNINGS**

1. Group [F21K 9/27](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/20](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#), [F21V 19/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

2. Group [F21K 9/27](#) is impacted by reclassification into groups [F21K 9/272](#), [F21K 9/275](#) and [F21K 9/278](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/272 . . . Details of end parts, i.e. the parts that connect the light source to a fitting; Arrangement of components within end parts ([F21K 9/278](#) takes precedence)

**WARNING**

Group [F21K 9/272](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/20](#), [F21K 9/27](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/275 . . . Details of bases or housings, i.e. the parts between the light-generating element and the end caps; Arrangement of components within bases or housings ([F21K 9/278](#) takes precedence)

**WARNING**

Group [F21K 9/275](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/20](#), [F21K 9/27](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/278 . . . Arrangement or mounting of circuit elements integrated in the light source

**WARNING**

Group [F21K 9/278](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/20](#), [F21K 9/27](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#), [F21V 19/045](#), [F21V 23/003](#), [F21V 23/004](#), [F21V 23/005](#) and [F21V 23/006](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/60 . Optical arrangements integrated in the light source, e.g. for improving the colour rendering index or the light extraction

**WARNINGS**

1. Group [F21K 9/60](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

2. Group [F21K 9/60](#) is impacted by reclassification into groups [F21K 9/66](#), [F21K 9/68](#) and [F21K 9/69](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/61 . . using light guides

**WARNING**

Group [F21K 9/61](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/62 . . using mixing chambers, e.g. housings with reflective walls

**WARNING**

Group [F21K 9/62](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/64 . . using wavelength conversion means distinct or spaced from the light-generating element, e.g. a remote phosphor layer

**WARNING**

Group [F21K 9/64](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/65 . . specially adapted for changing the characteristics or the distribution of the light, e.g. by adjustment of parts

**WARNING**

Group [F21K 9/65](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/66 . . Details of globes or covers forming part of the light source

**WARNING**

Group [F21K 9/66](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/60](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/68 . . Details of reflectors forming part of the light source

**WARNING**

Group [F21K 9/68](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/60](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/69 . . Details of refractors forming part of the light source

**WARNING**

Group [F21K 9/69](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 9/60](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/90 . Methods of manufacture

**WARNING**

Group [F21K 9/90](#) is incomplete pending reclassification of documents from groups [F21K 9/00](#), [F21K 99/00](#), [F21S 2/00](#), [F21V 19/042](#) and [F21V 19/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 99/00 **Subject matter not provided for in other groups of this subclass**

**WARNINGS**

1. Group [F21K 99/00](#) is incomplete pending reclassification of documents from groups [F21V 19/042](#) and [F21V 19/045](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
2. Group [F21K 99/00](#) is impacted by reclassification into groups [F21K 9/00](#), [F21K 9/20](#), [F21K 9/23](#), [F21K 9/232](#), [F21K 9/233](#), [F21K 9/235](#), [F21K 9/237](#), [F21K 9/238](#), [F21K 9/27](#), [F21K 9/272](#), [F21K 9/275](#), [F21K 9/278](#), [F21K 9/60](#), [F21K 9/61](#), [F21K 9/62](#), [F21K 9/64](#), [F21K 9/65](#), [F21K 9/66](#), [F21K 9/68](#), [F21K 9/69](#) and [F21K 9/90](#).  
All groups listed in this Warning should be considered in order to perform a complete search.

2099/005

- . {Other light sources comprising light emitting diodes associated with conversion means}