

EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 324

DATE: NOVEMBER 1, 2016

PROJECT DP0111

The following classification changes will be effected by this Notice of Changes:

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
New Definitions	F21V	29/504
	F21V	29/506
	F21V	29/507
	F21V	29/508
	F21V	29/51
	F21V	29/52
	F21V	29/54
	F21V	29/56
	F21V	29/63
	F21V	29/65
	F21V	29/673
	F21V	29/677
	F21V	29/70
	F21V	29/713
	F21V	29/717
	F21V	29/73
	F21V	29/74
	F21V	29/745
	F21V	29/767
	F21V	29/77
	F21V	29/773
	F21V	29/777
	F21V	29/78
	F21V	29/80
	F21V	29/81
	F21V	29/83
	F21V	29/85
Modified Definitions	F21V	29/00
	F21V	29/15
	F21V	29/505
	F21V	29/90

No other subclasses/groups are impacted by this Notice of Changes.

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This Notice of Changes includes the following *[Check the ones included]:*

1. CLASSIFICATION SCHEME CHANGES
 - A. New, Modified or Deleted Group(s)
 - B. New, Modified or Deleted Warning Notice(s)
 - C. New, Modified or Deleted Note(s)
 - D. New, Modified or Deleted Guidance Heading(s)
2. DEFINITIONS (New or Modified)
 - A. DEFINITIONS (Full definition template)
 - B. DEFINITIONS (Definitions Quick Fix)
3. REVISION CONCORDANCE LIST (RCL)
4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5. CROSS-REFERENCE LIST (CRL)

2. A. Definition

F21V29/00 (modified)

Application-oriented references

In the text associated with G03B 21/16, after the existing text

Insert:

“or projector type viewers”

Informative references

In the text associated with H011 23/34, replace “sate” with “state”

F21V29/15 (modified)

Delete:

The current Definition Statement.

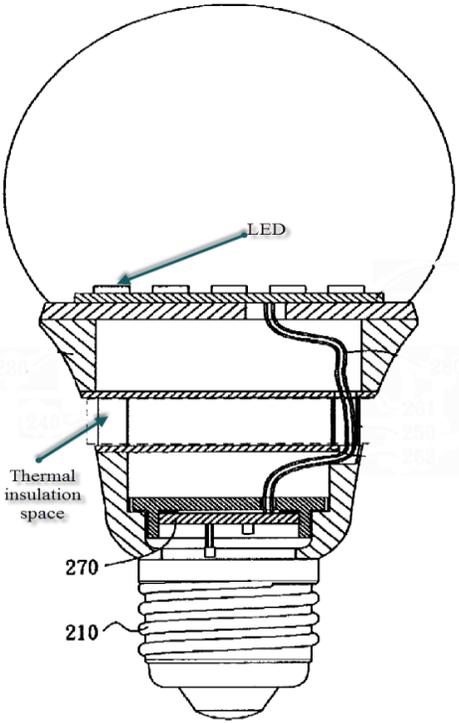
Insert:

Definition statement

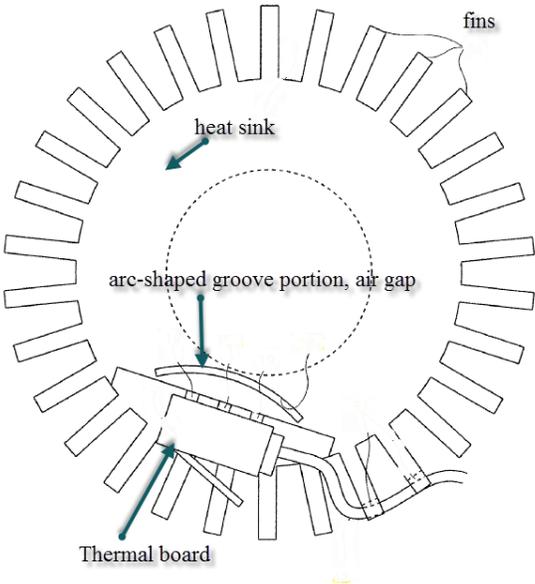
This subgroup covers:

- Means for screening the heat, e.g. screen for heat radiation
- Thermal insulation spaces or air gaps
- Use of heat insulation materials

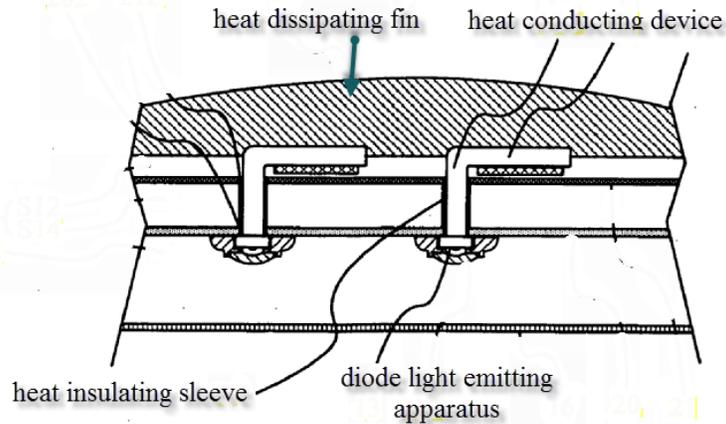
Illustrative example of thermal insulation space in figure below:



Illustrative example of air gap between components or in the mass of a component in the figure below:



Heat insulating material between components to prevent heat conduction in figure below:



Informative references

Attention is drawn to the following places, which may be of interest for search:

Through holes in printed circuit board to screen conductive heat transfer from on one part to the other	H05K1/0203
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F21V29/504 (new)

Definition statement

This group covers:

Refractors for light sources being designed to facilitate cooling.

F21V29/505 (modified)

Delete:

The current Definition Statement.

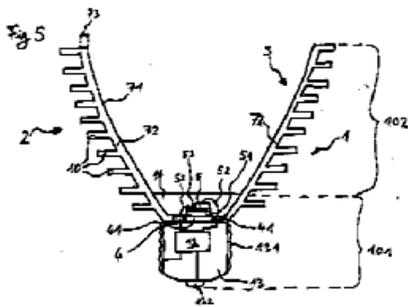
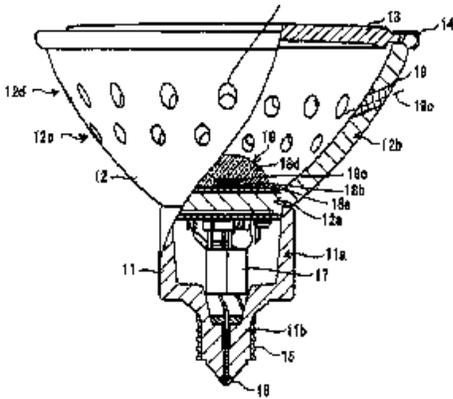
Insert:

Definition statement

This subgroup covers:

Reflectors for light sources being designed to facilitate cooling.

Illustrative examples of subject matter classified in this group, see figures below:



F21V29/506 (new)

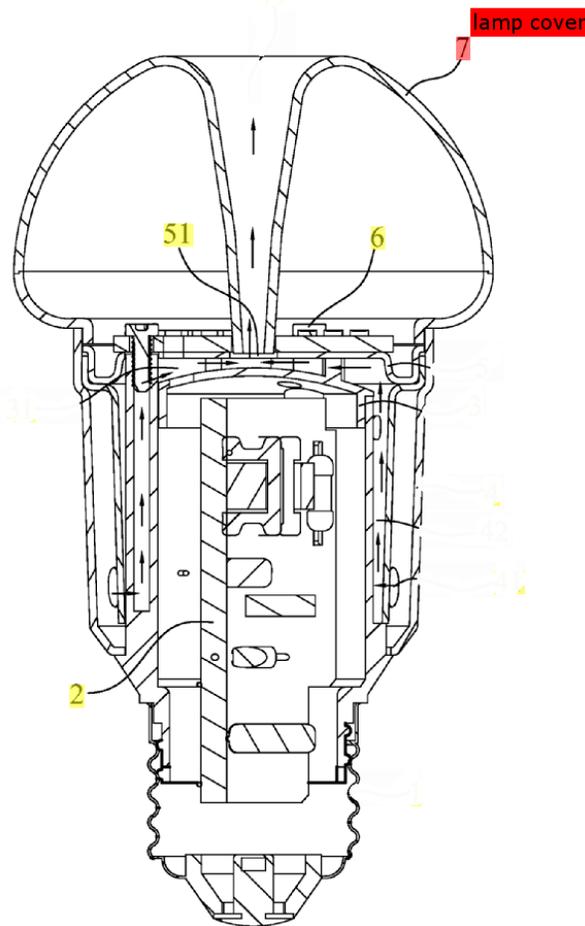
Definition statement

This group covers:

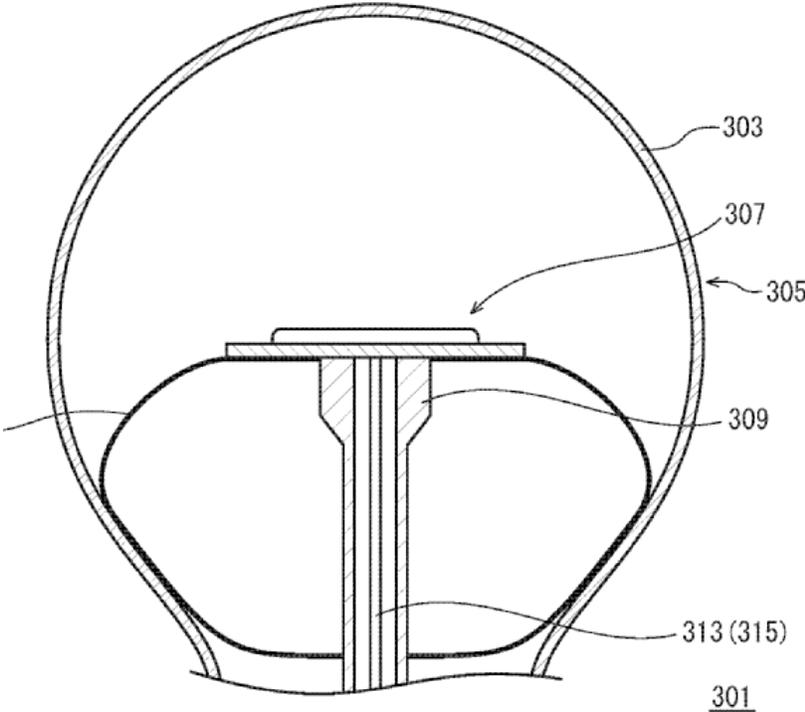
Globes, bowls and cover glasses being designed to facilitate cooling.

Illustrative examples of subject matter classified in this group:

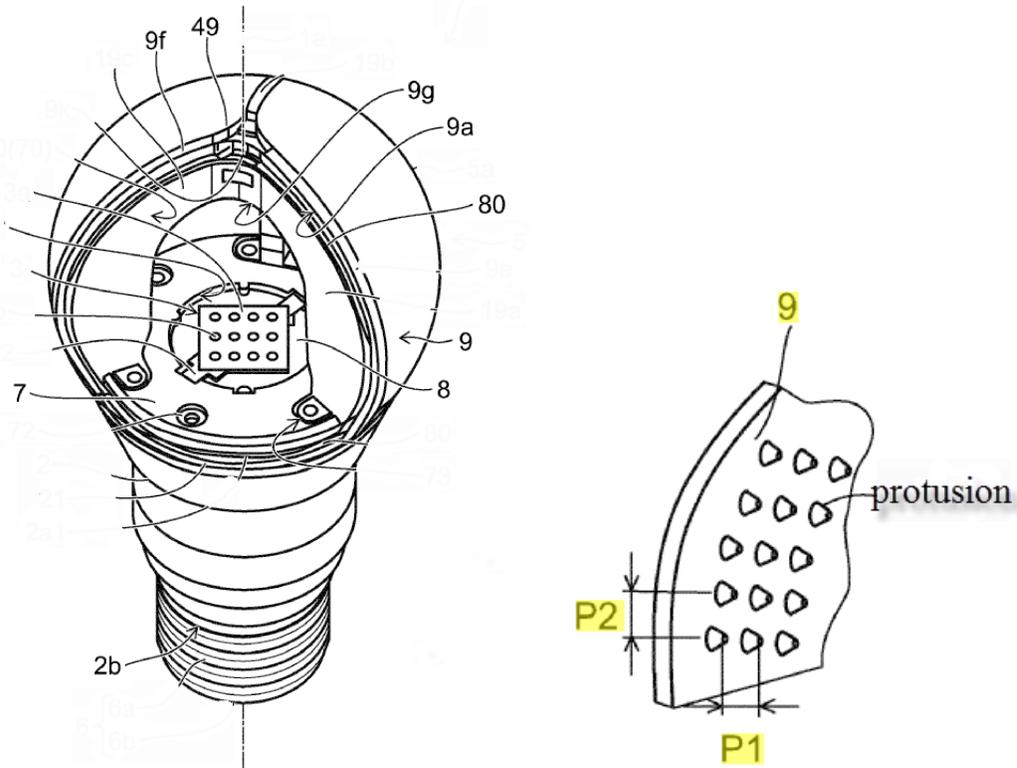
Special shape of the lamp cover with means for conducting or dissipating heat, e.g. channels or openings. See illustrative example below:



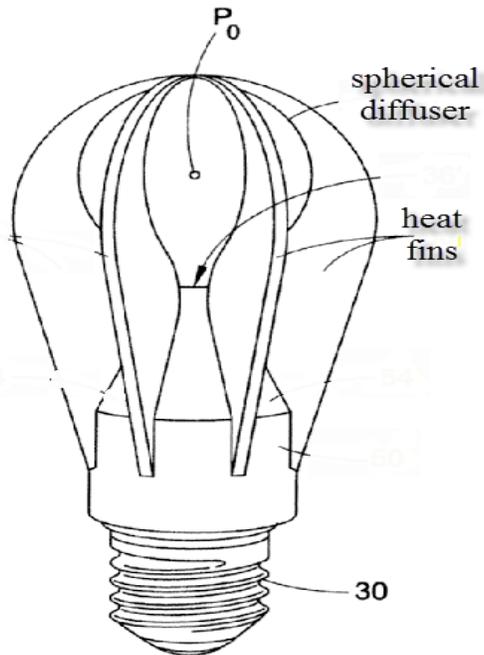
Thermally conductive films or blades contacting the inner surface of the globe to transfer the heat generated by light source to the globe. See illustrative example below:



Structure of the cover surface facilitating cooling. See illustrative example below:



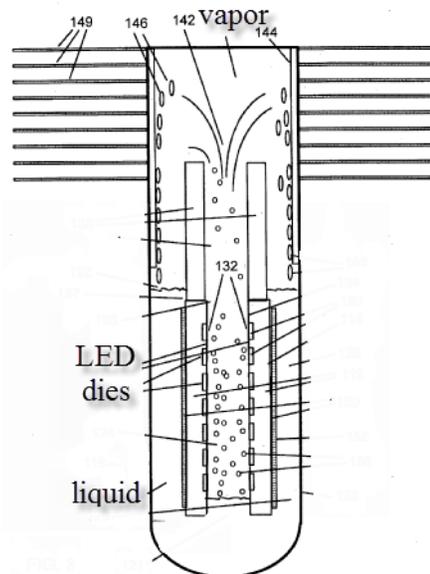
Globe forming fins or the exterior of which in contact with fins. See illustrative example below:



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Evaporation and condensation within the globe of the lighting device or LED module or LED lamp, i.e. part of a globe is forming a part of a heat pipe. See illustrative example below:



F21V29/507 (new)

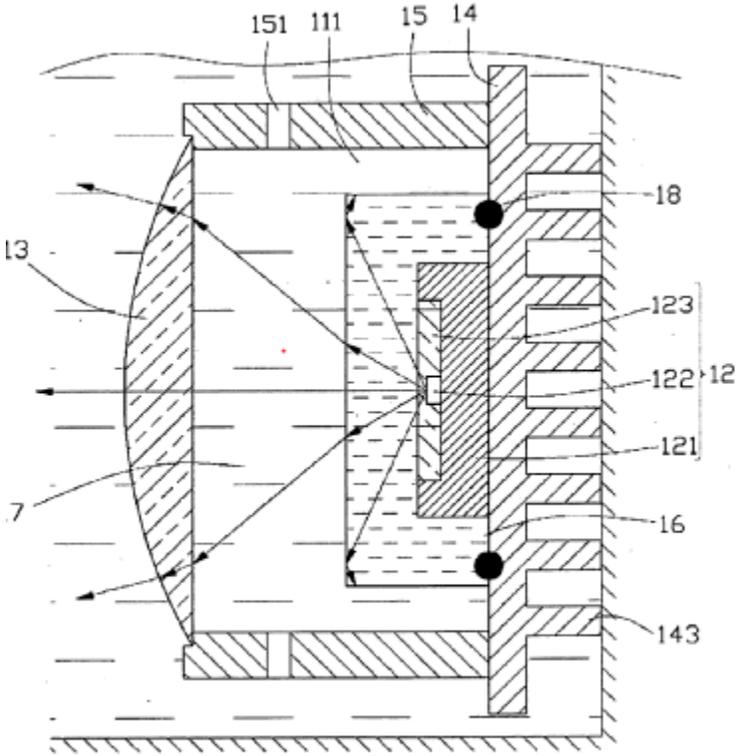
Definition statement

This group covers:

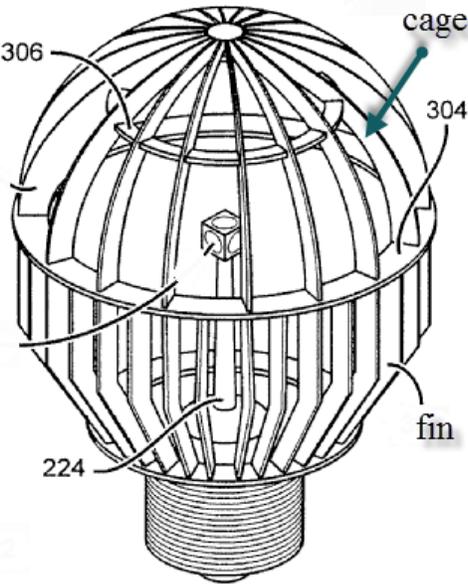
Means for protecting lighting devices from damage, e.g. housings, being designed to facilitate cooling.

Illustrative examples of subject matter classified in this group:

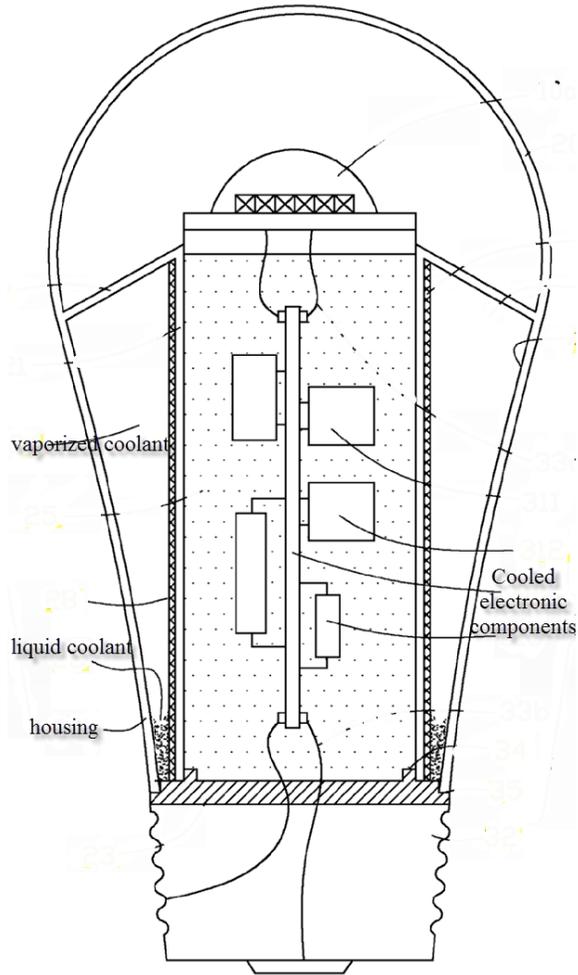
Housing for enclosing light source with openings (151) for facilitating cooling:



Cage provided for facilitating cooling:



Evaporation and condensation in a housing compartment:



F21V29/508 (new)

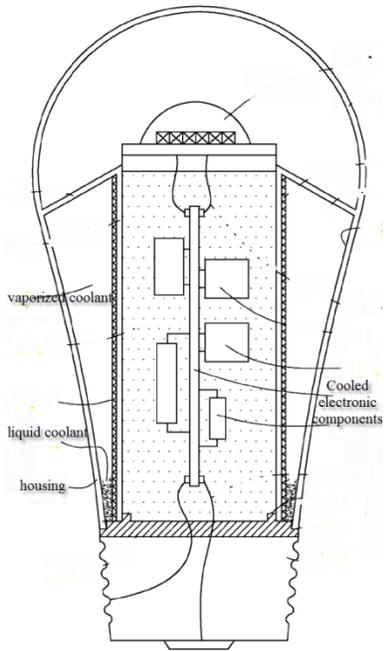
Definition statement

This group covers:

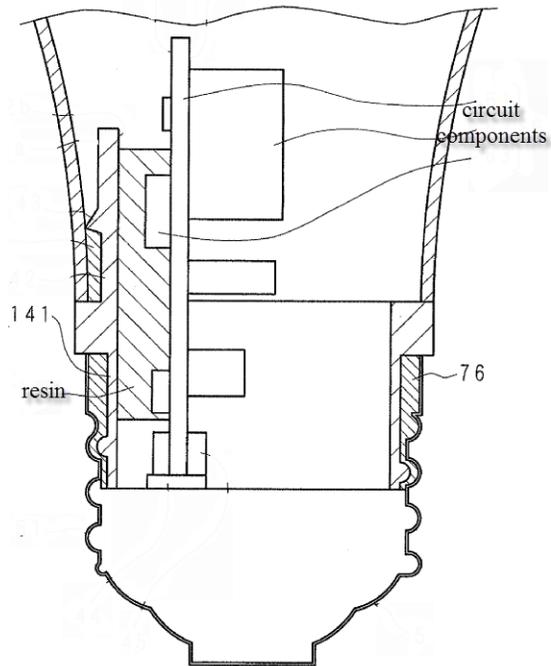
Means for facilitating the cooling of circuit boards for the drivers or supply circuits of the light sources but not the cooling of light emitters or their supports.

Illustrative examples of subject matter classified in this group:

Electric circuit is cooled directly by evaporation, see figure below:



Heat transfer from circuit to the housing, see figure below:

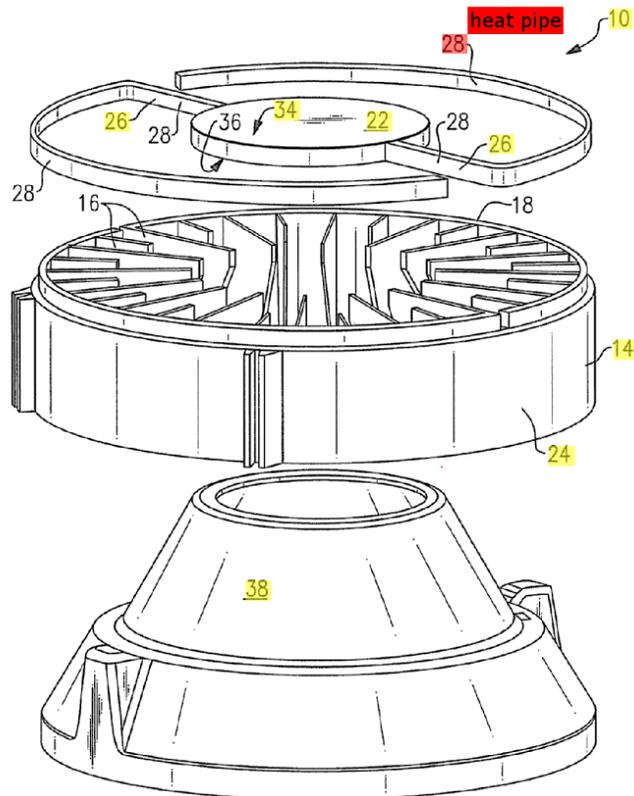


F21V29/51 (new)

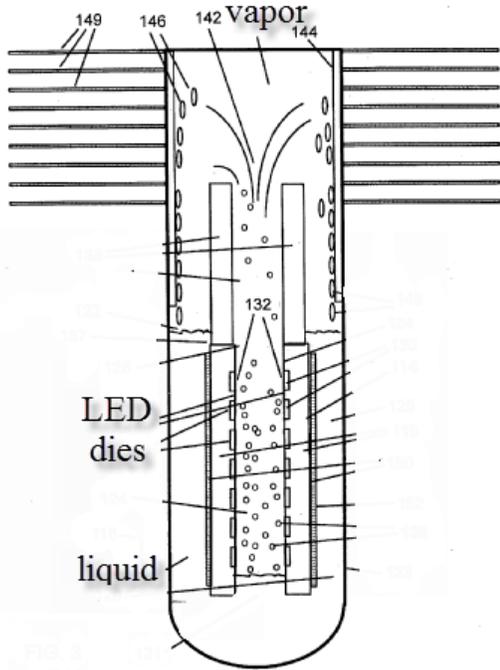
Definition statement

Illustrative examples of subject matter classified in this group:

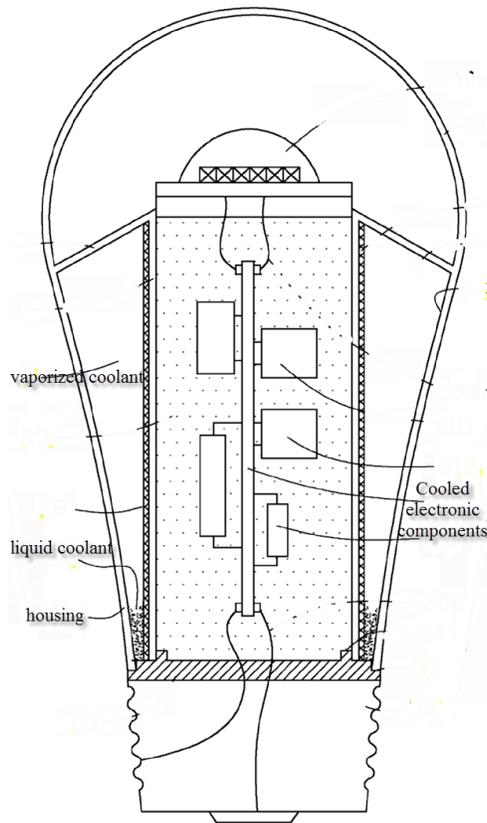
by using a heat pipe:



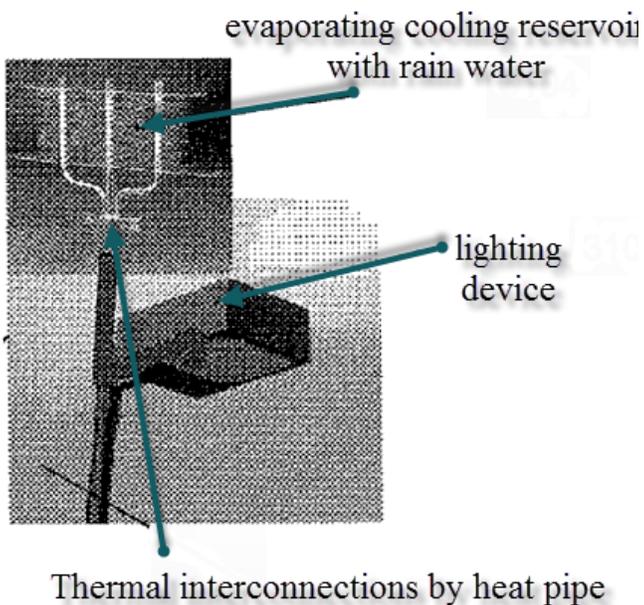
Evaporation and condensation within the globe of the lighting device or LED module:



Evaporation and condensation in a housing compartment for cooling of the central arranged electronic circuit:



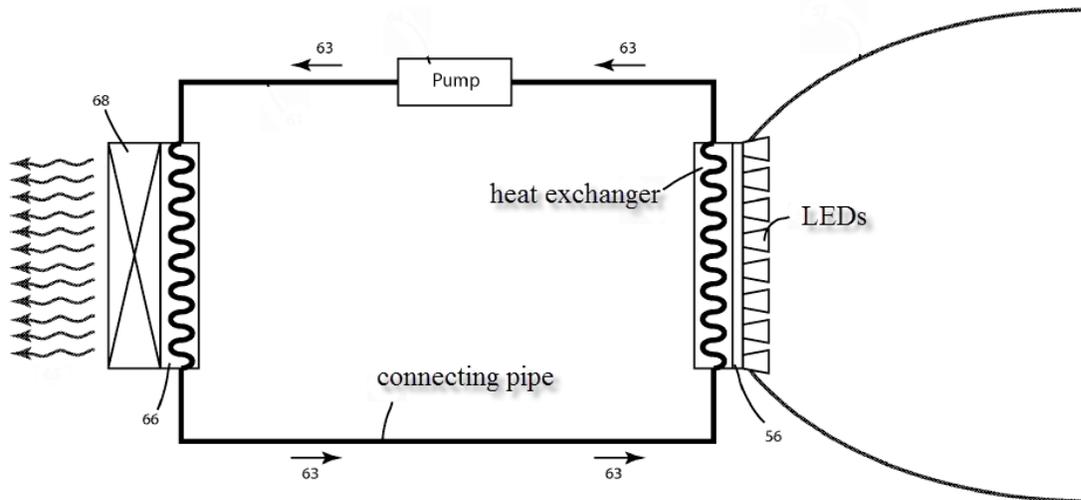
Evaporation of water in open environment to improve heat dissipation



F21V29/52 (new)

Definition statement

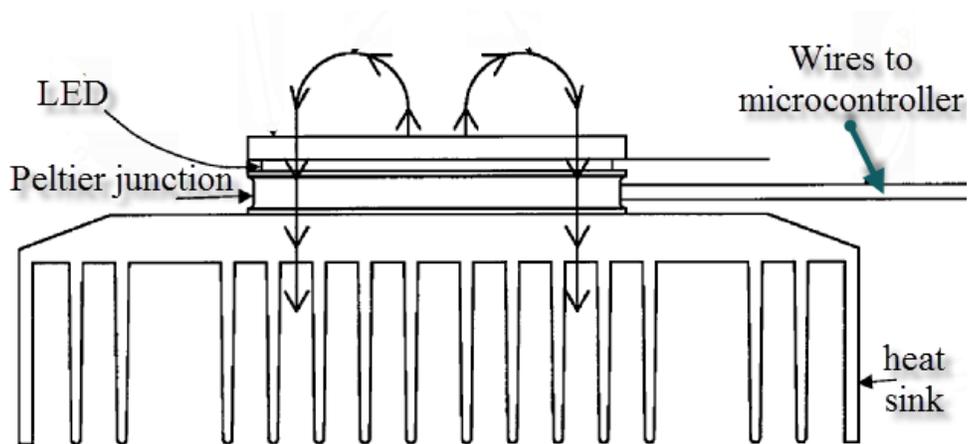
Illustrative example of subject matter classified in this group:

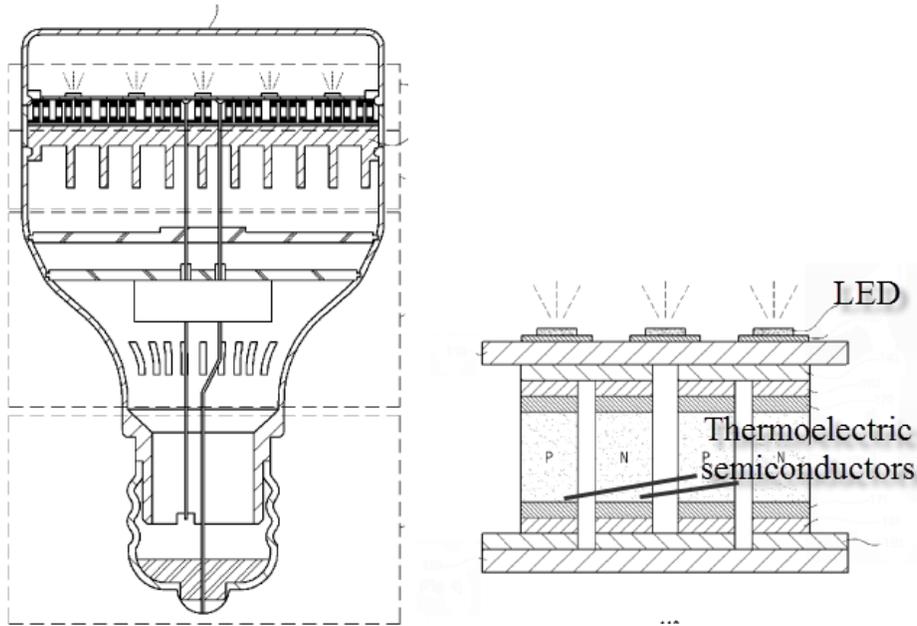


F21V29/54 (new)

Definition statement

Illustrative examples of subject matter classified in this group:



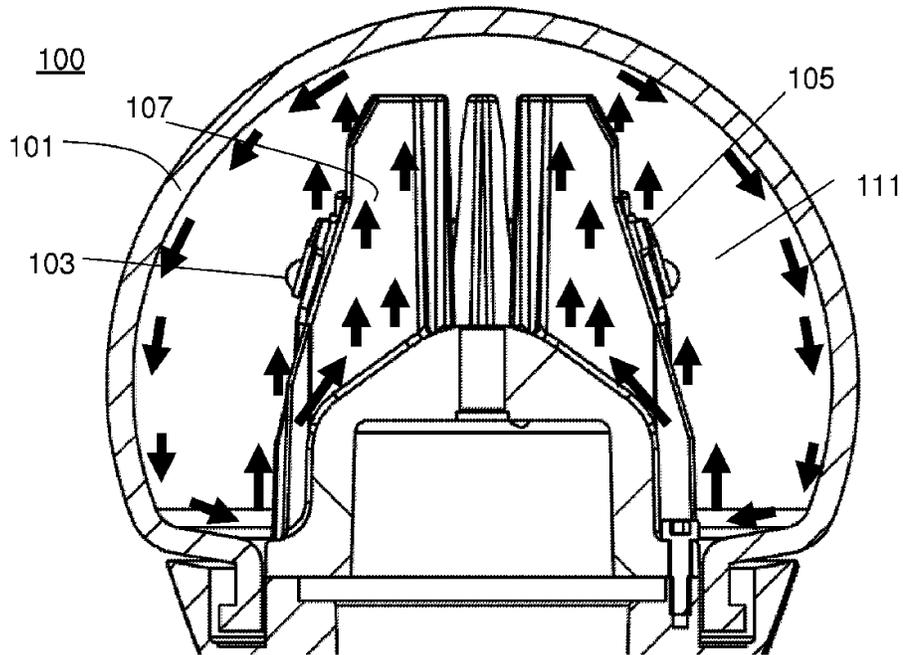


F21V29/56 (new)

Definition statement

This group covers the cooling by liquids without condensation or evaporation of the fluid

Below an illustrative example of subject matter classified in this group. In this example the thermally conductive liquid is permanently enclosed within the shell:



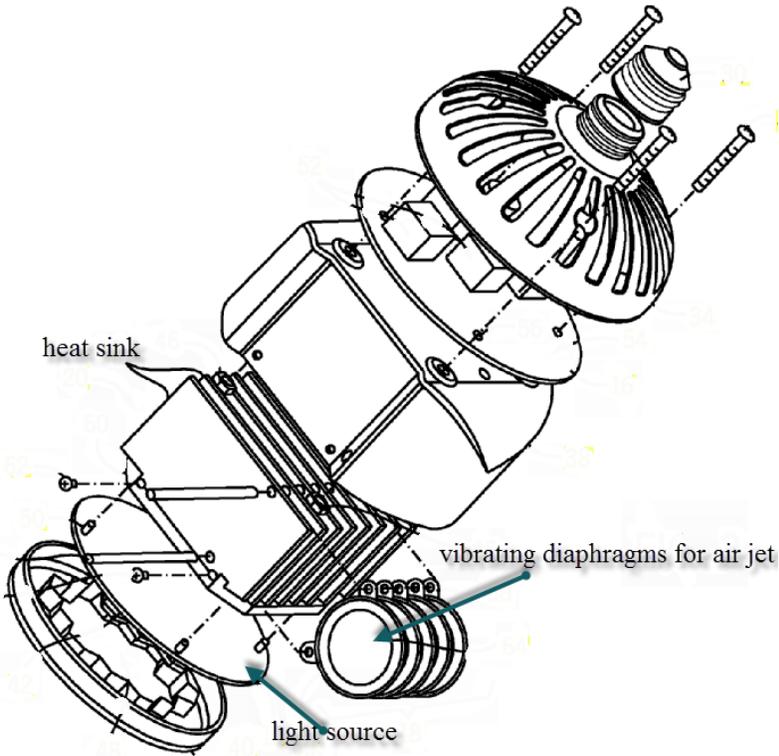
References relevant to classification in this group

Cooling arrangements using condensation or evaporation of a fluid, e.g. heat pipes	F21V29/51
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F21V29/63 (new)

Definition statement

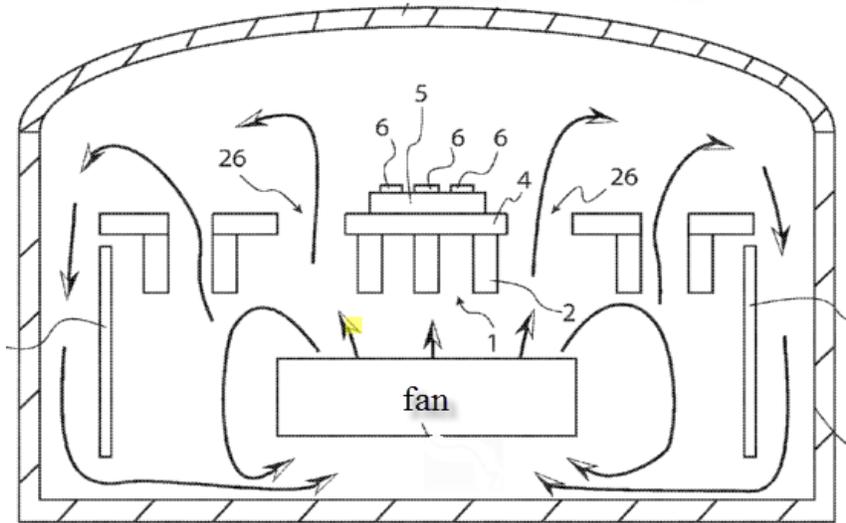
Illustrative example of subject matter classified in this group:



F21V29/65 (new)

Definition statement

Illustrative example of subject matter classified in this group:



F21V29/673 (new)

Definition statement

This group covers:

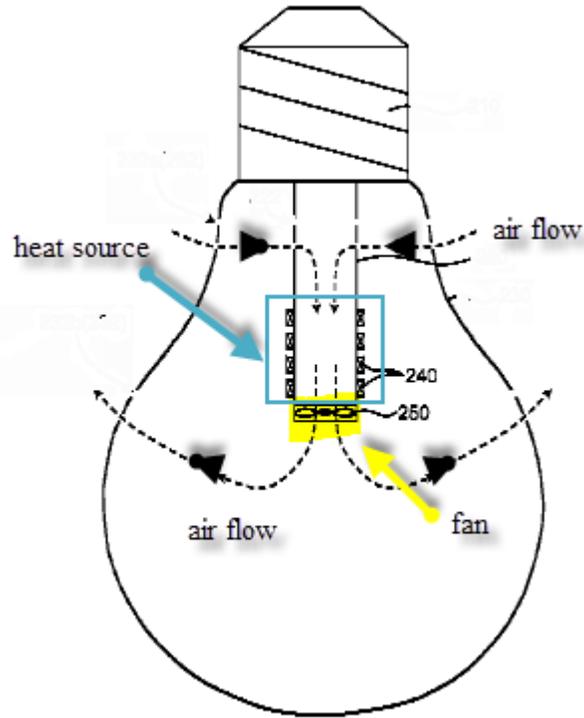
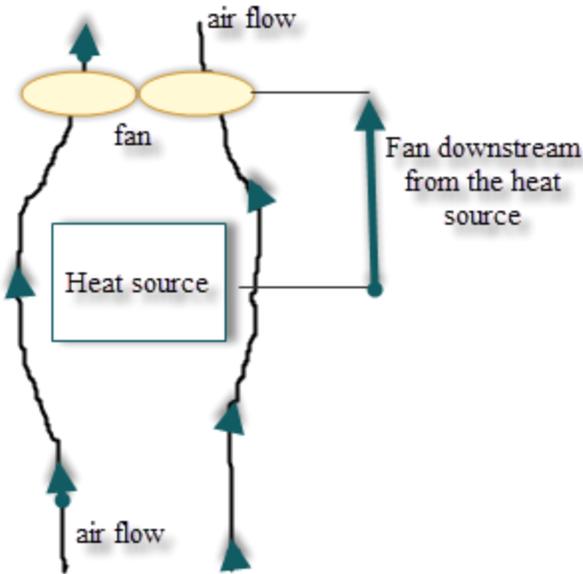
Fans arranged in such a way that the warm air is moved away from the heat source after the air was heated by the heat source, i.e. the fans are arranged downstream from the light/heat sources in respect of the air flow.

Illustrative example of subject matter classified in this group:

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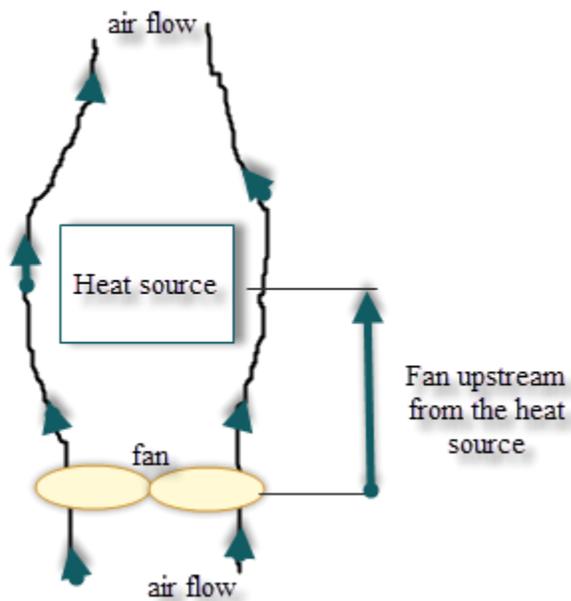
F21V29/677 (new)

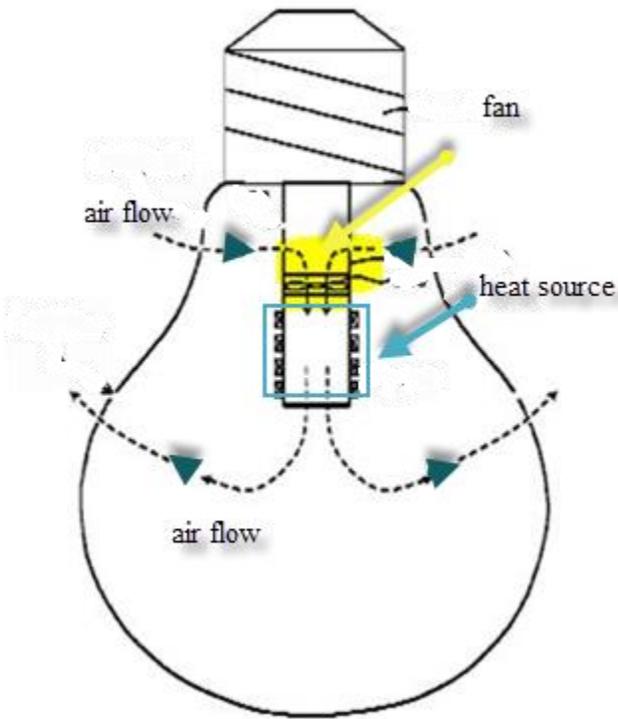
Definition statement

This group covers:

Fans arranged in such a way that they move cooling air in the direction of the heat or light sources, i.e. the fans are located upstream from the light sources in respect of the air the flow.

Illustrative examples of subject matter classified in this group:



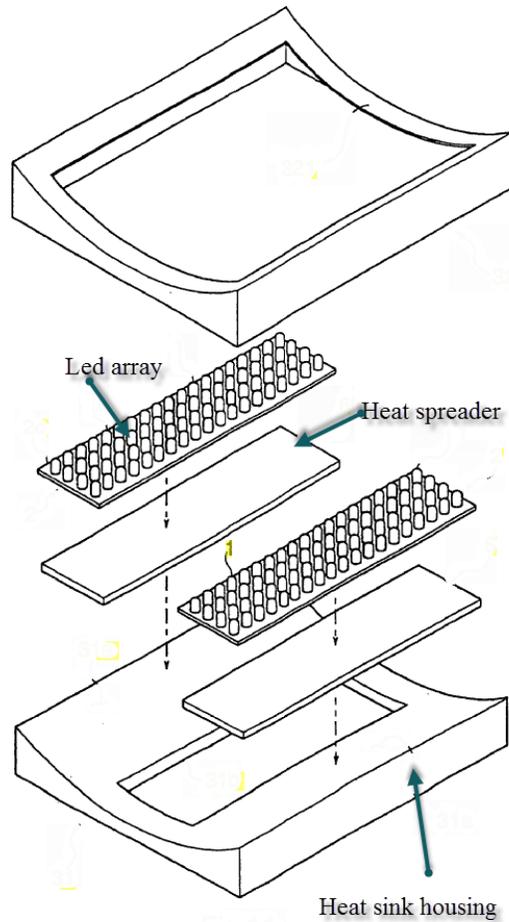


F21V29/70 (new)

Definition statement

Heat spreaders, i.e. thermal conducting element interconnecting the source of heat and the heat sink, in order spread the heat on a heat sink surface.

Illustrative example, e.g. a heat spreader for a printed circuit board supporting LEDs:

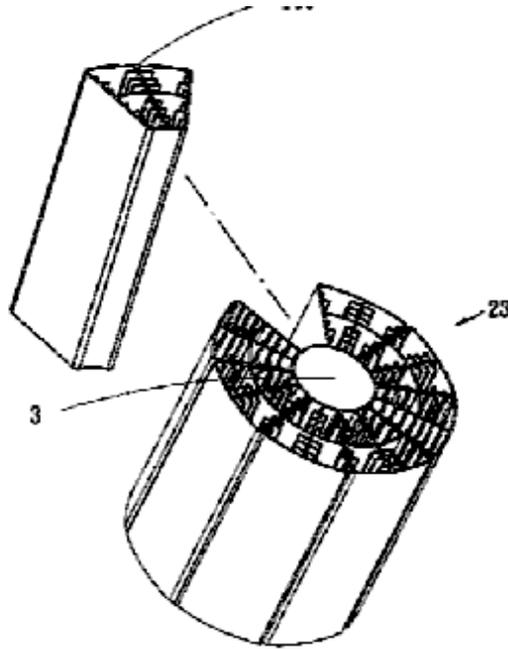


F21V29/713 (new)

Definition statement

Heat sinks being built from multiple elements forming a single system where the elements are in direct thermal contact.

Illustrative example of subject matter classified in this group:

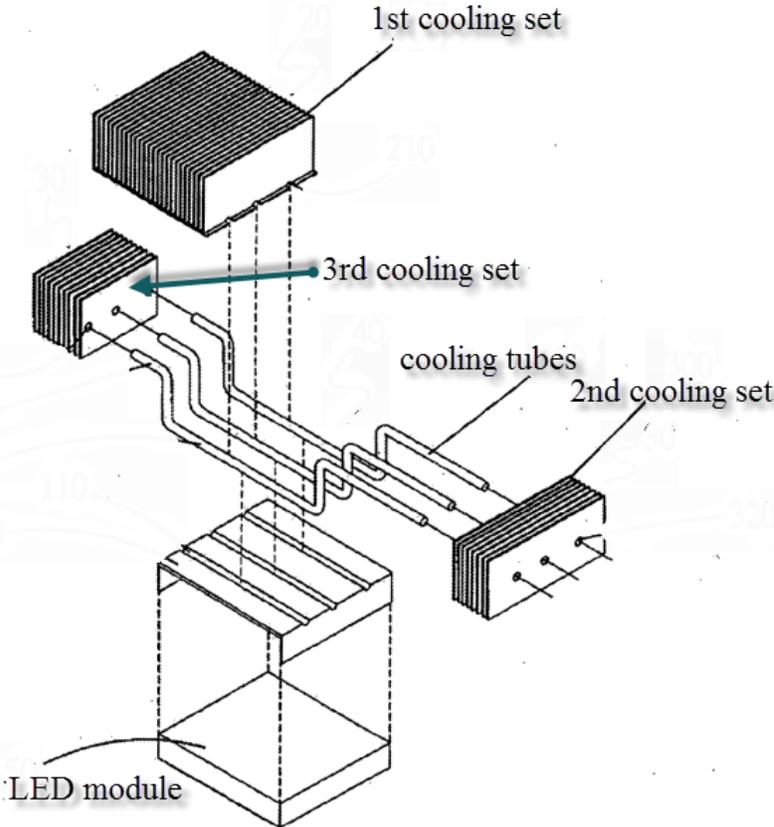


F21V29/717 (new)

Definition statement

Separate heat sink units or split units connected by conductive bars or heat pipes.

Illustrative examples of subject matter classified in this group:



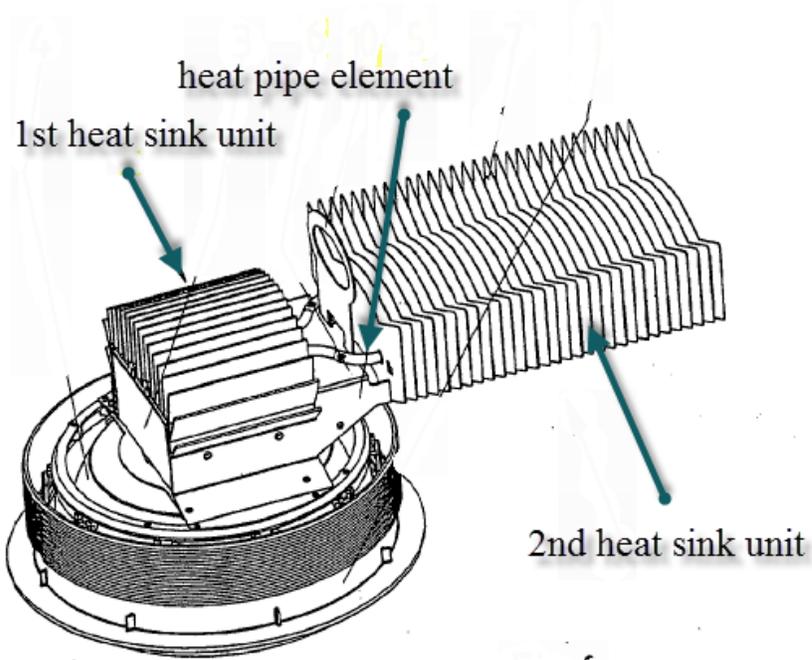
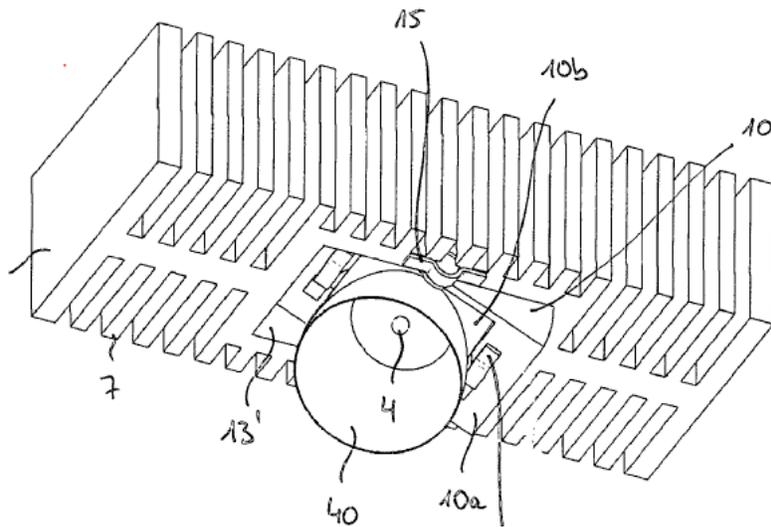


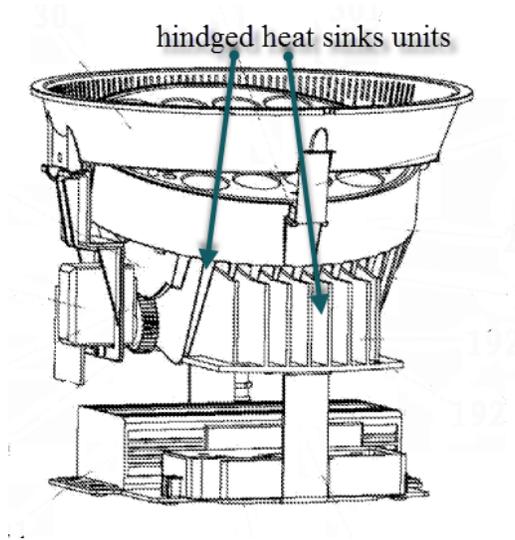
Fig. 1

F21V29/73 (new)

Definition statement

Illustrative examples of subject matter classified in this group:



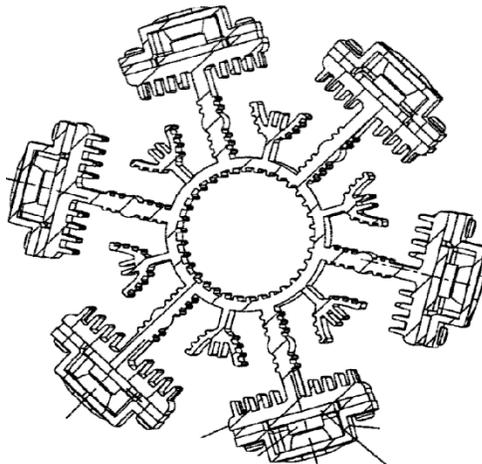


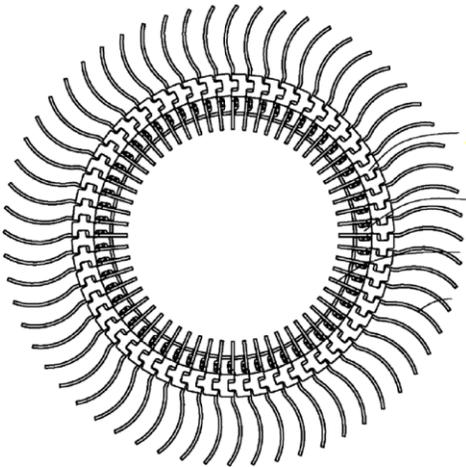
F21V29/74 (new)

Definition statement

Illustrative examples of subject matter classified in this group:

Fins/pins consisting of main fins/pins and supplementary fins/pins increasing the surface areas of the main fins/pins, e.g. snowflake-like profiles or fins with multi-branches.

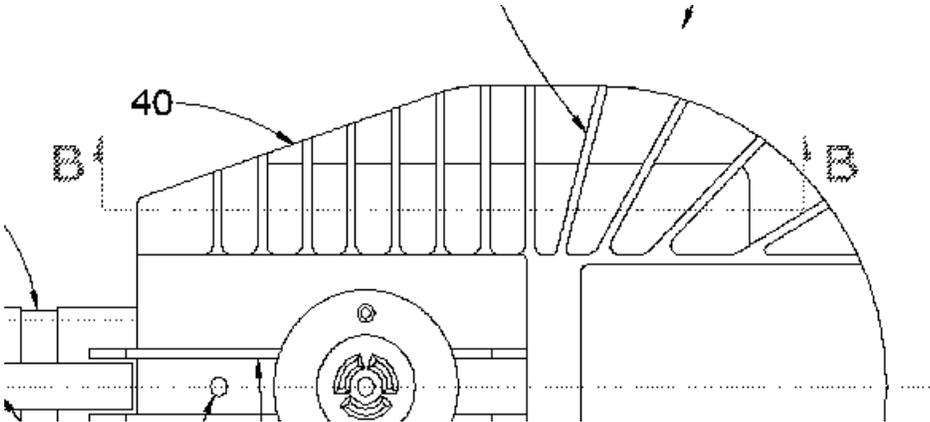




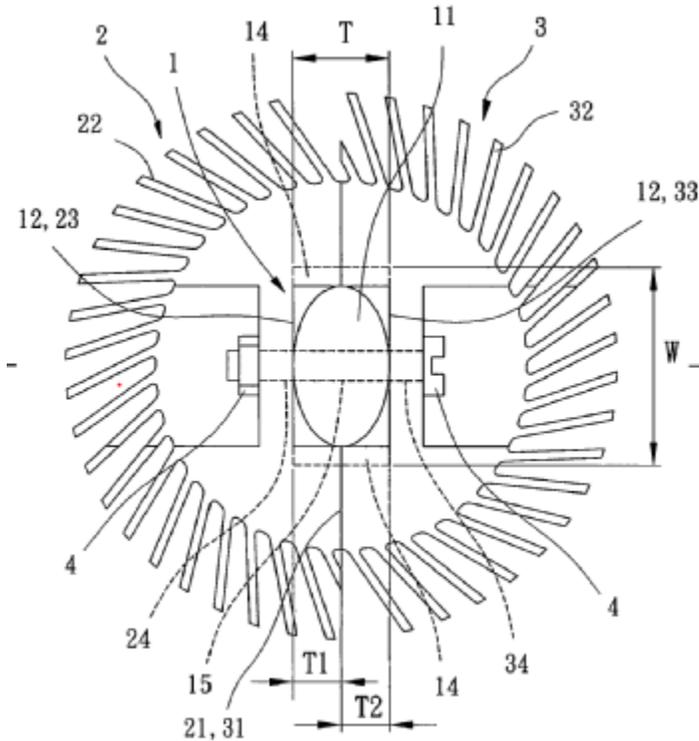
F21V29/745 (new)

Definition statement

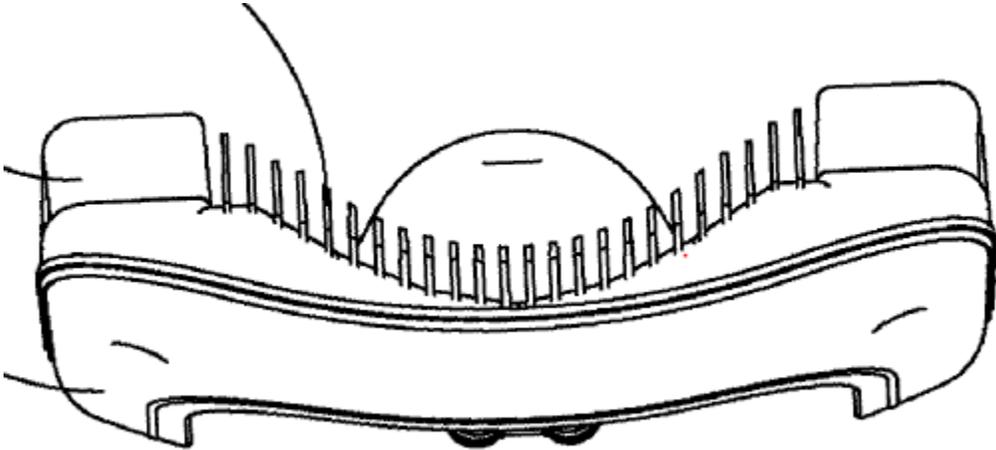
Illustrative examples of subject matter classified in this group:



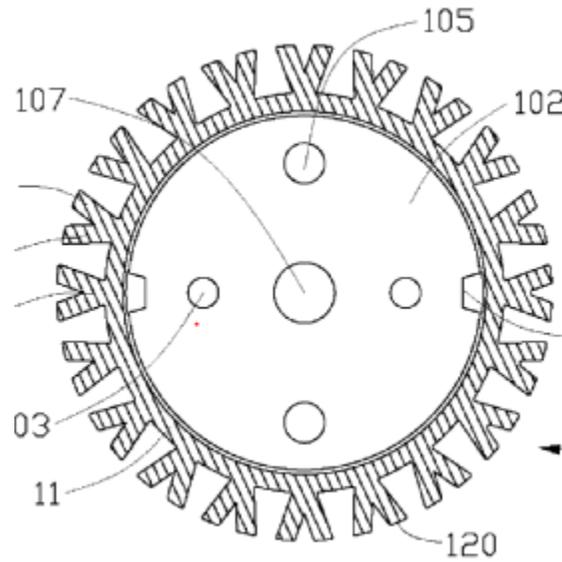
Fins not radially arranged on a cylinder:



Parallel fins attached to a curved surface, therefore forming an angle with respect to the curved surface:



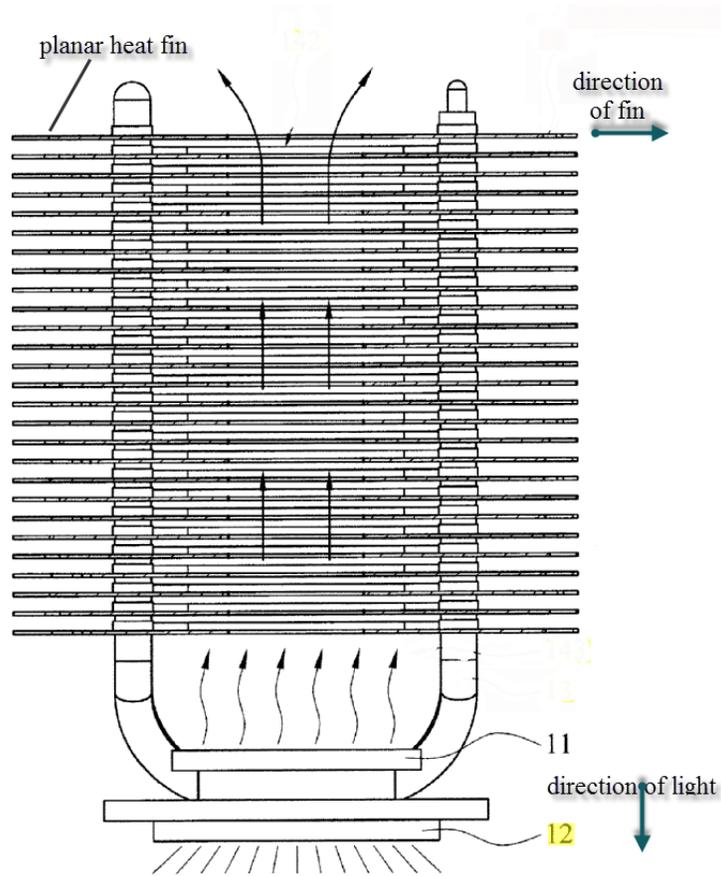
"V" shaped section fins attached at the tip to a surface:



F21V29/767 (new)

Definition statement

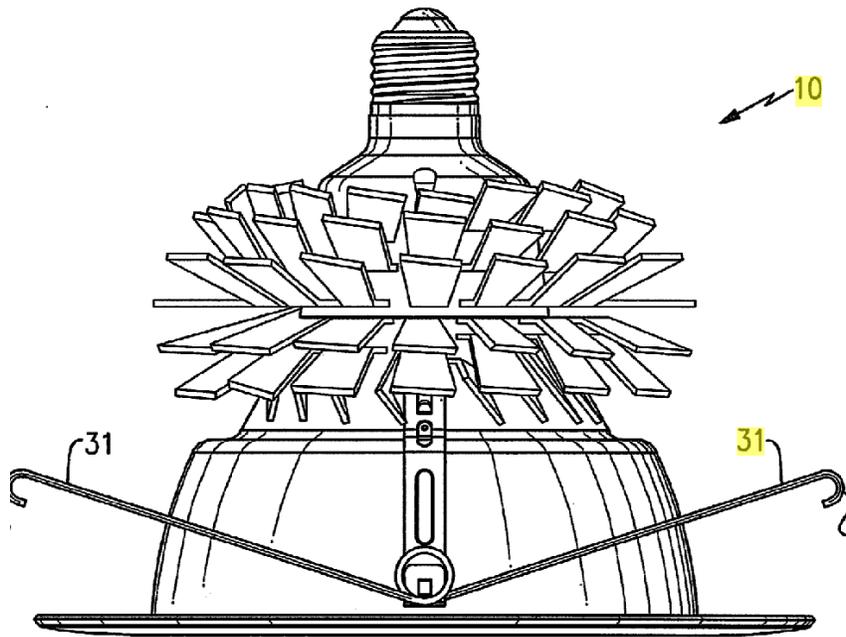
Illustrative example of subject matter classified in this group:



F21V29/77 (new)

Definition statement

Illustrative example of subject matter classified in this group:

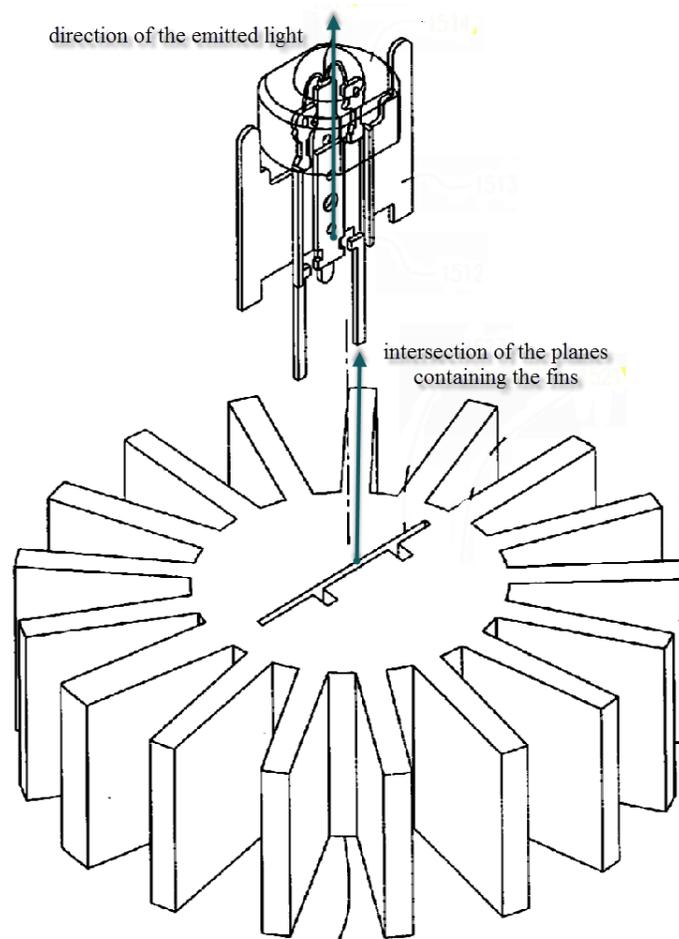


F21V29/773 (new)

Definition statement

The direction of fins or blades on the supporting plane are parallel to the axis of the emitted light.

Illustrative example of subject matter classified in this group:

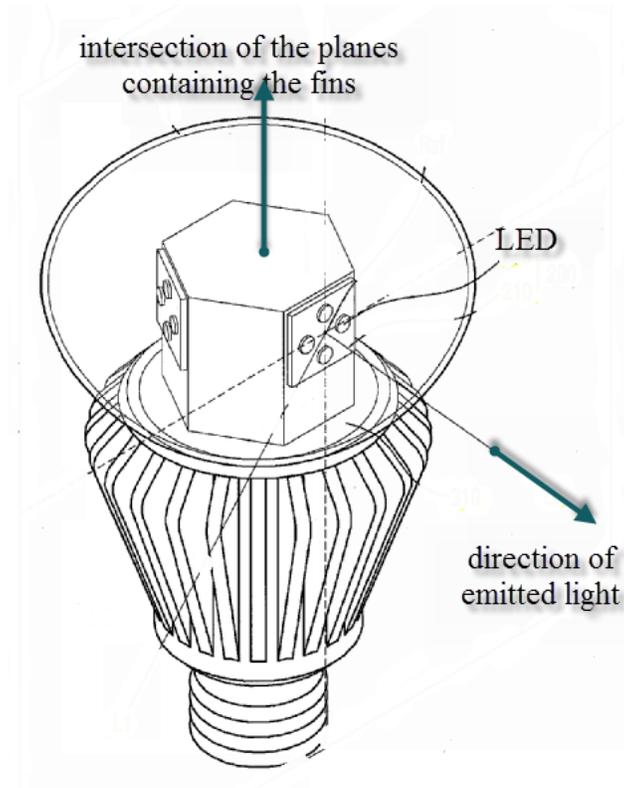


F21V29/777 (new)

Definition statement

The fins or blades are supported on planes which are perpendicular to the direction of the emitted light, i.e. that the extension of the fins or blades from the supporting plane are parallel to the direction of light.

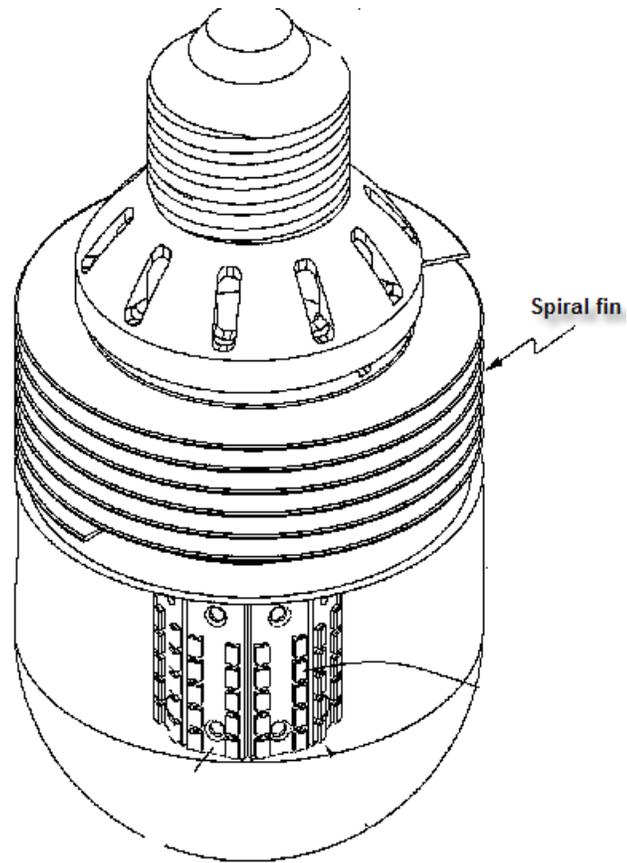
Illustrative example of subject matter classified in this group:



F21V29/78 (new)

Definition statement

Illustrative example of subject matter classified in this group:



F21V29/80 (new)

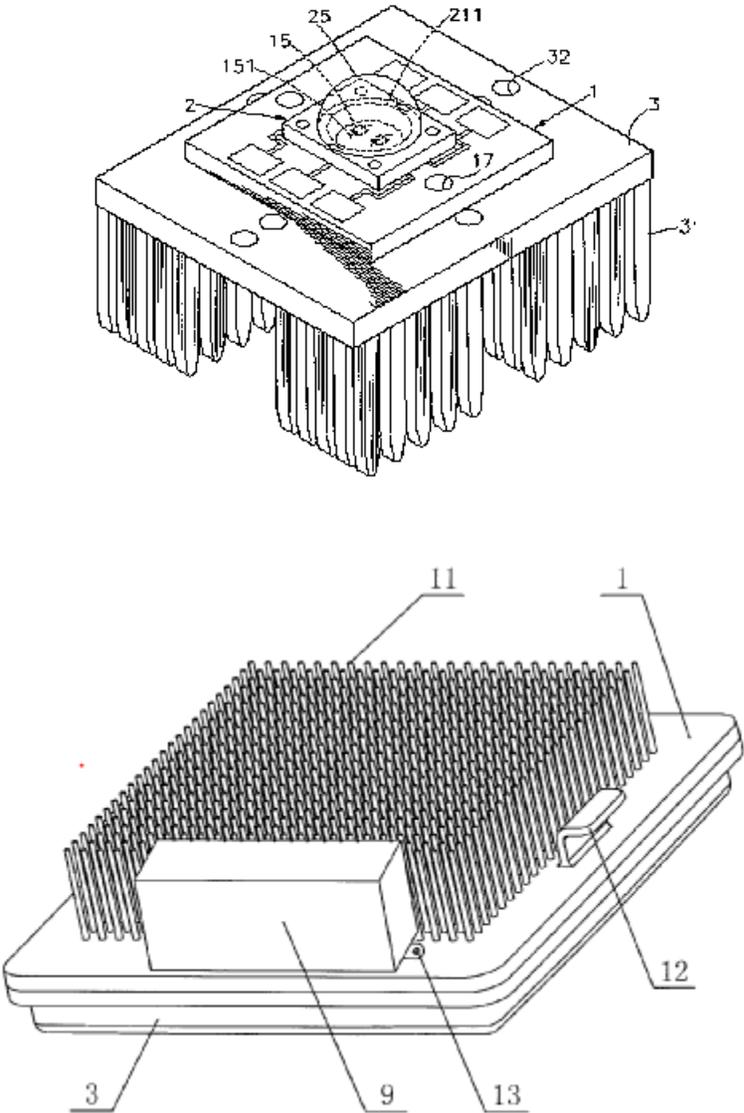
Definition statement

Illustrative examples of subject matter classified in this group:

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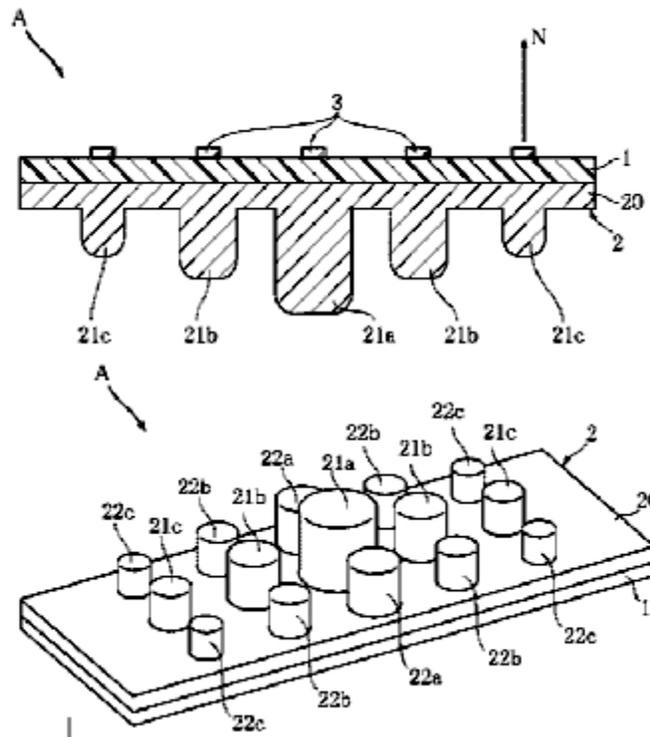
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F21V29/81 (new)

Definition statement

Illustrative example of subject matter classified in this group:

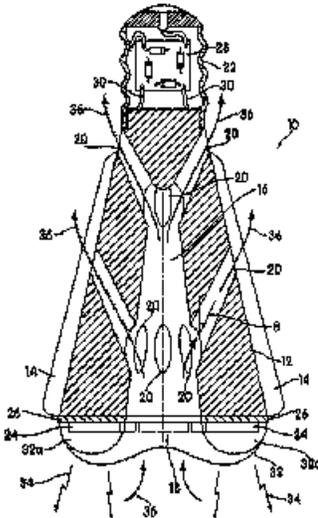


F21V29/83 (new)

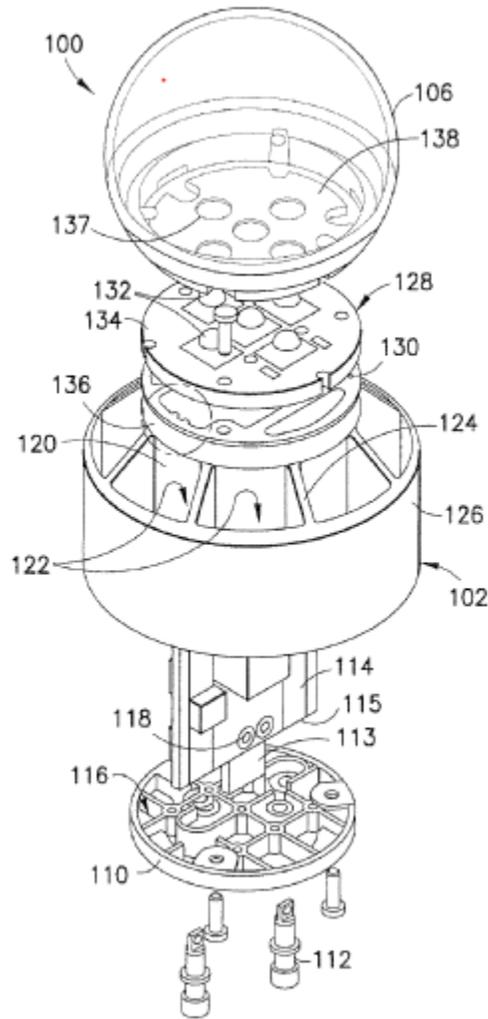
Definition statement

Illustrative examples of subject matter classified in this group:

Channels formed in the mass of the heat sink:



Interconnected fins (124) forming channels (122):

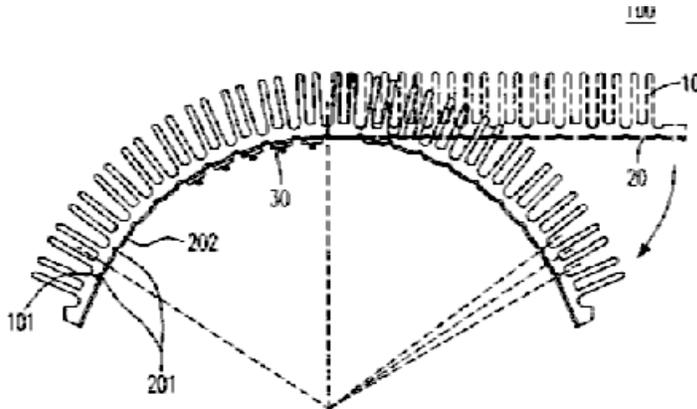


F21V29/85 (new)

Definition statement

Special materials, e.g. for allowing flexibility, bendability and foldability of a heat exchanger

Illustrative example of subject matter classified in this group:



Informative references

Attention is drawn to the following places, which may be of interest for search:

Liquid coolants	F21V29/56
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F21V29/90 (modified)

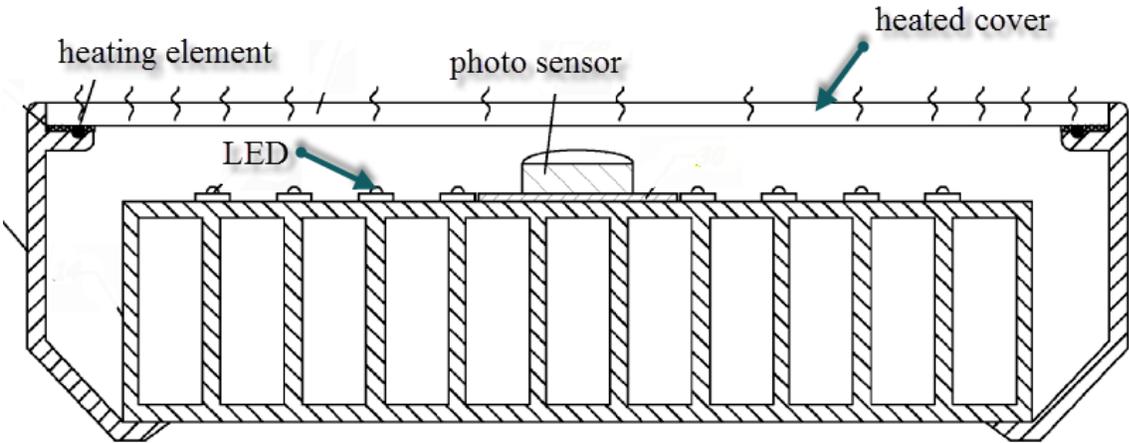
Delete:

The current Definition Statement.

Insert:

Definition statement

Illustrative example of subject matter classified in this group:



References

Application-oriented references

Examples of places where the subject matter of this class is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Heating arrangements for gas- or vapour-discharge lamps	H01J61/52
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