## Claims

1. A ~~Cooling~~ cooling element for cooling a heat source of an LED module, ~~particularly for highly equipped LED modules, with~~the cooling element comprising:

- ~~one~~ a base body ~~(2)~~, ~~that is~~ having a first and a second surface, the first surface of the base body configured to be in thermal and mechanical contact with the ~~body of the~~ heat source ~~(12)~~ and the second surface of the base body having lamellae formed integrally therewith,
- at least one heat pipe ~~(4,5,6)~~,

~~, whose end is received in form-fit and thermally conducting in the base body (2) and~~

- at least one cooling ~~element~~ body ~~(3) with cooling body lamellae (20) on the other end of the heat pipe, characterized in that:~~ comprising cooling body lamellae,
- wherein the first end of the at least one heat pipe is received within the at least one cooling body and the other end of the at least one heat pipe is received within the entire length of the base body in a form-fit and thermally conducting manner, ~~the heat pipes (4,5,6) run over the entire length of the base body (2) so that the heat source (12) is in contact with a hot zone (16, 34) on a contact surface (21) of the base body (2), whereby the heat pipes run parallel to each other spaced from another and parallel to the contact surface of the heat source with the hot zone (16, 34) and the base body (2) is fastened to the body of the heat source (12),~~
- the heat pipes being arranged to run parallel to each other, spaced from another, and parallel to a contact surface between the cooling body and the heat source when the cooling body and the heat source are in thermal and mechanical contact,

~~and~~

~~on the exterior of the base body (2) integrally formed therewith lamellae (10) connected with the base body are provided; whereas the heat pipes (4,5,6) run in an angle increasing outward in the end direction of the cooling element (3), whereby a positive angle "warm side" to "cold side" is present.~~

- characterized in that shapes of the cooling body lamellae, includes arch shaped, wing shaped, oval shaped, oval shaped with notches in a cloud-like fashion, and/or round shaped; and
- wherein the cooling body lamellae may be bent in order to ensure a smaller visible surface of the cooling body.

2. Cooling element according to claim 1, characterized in that at least two heat pipes ~~(5, 6)~~ are provided that, outside of the base body ~~(2)~~ lead away from each other in the style

of a pitchfork and thereafter run parallel to one another with a larger distance between them, whereby the cooling body (3) is formed by the outer section of the heat pipes having greater distance with cooling body lamellae (10).

3. Cooling element according to claim 1, characterized in that three thermoconducting pipes are provided, whereby a straight central heat pipe (4) runs in the middle ~~betweenf~~ between two outer, pitchfork-shaped, heat pipes that are bent outwardly (5,6) in the style of a three-pronged fork, whereby the cooling body (3) is formed through the part with parallel section areas of the heat pipes having cooling body lamellae (20).

4. Cooling element according to claim 1, characterized in that the heat pipes (4,5,6) are received in holes (9) along the whole length of the base body (2) or are set in a groove (26) that is open to the contact surface between the base body (2) and the heat source (12), so that there is good contact between the heat pipes (5, 6) and the contact surface (15) of the heat source (12).

5. Cooling element according to claim 1, characterized in that the base body (2) is a plate with exterior base body lamellae (10) extending from the contact surface.

6. Cooling element according to claim 5, characterized in that the plate of the base body (2) is thinner than the diameter of the heat pipe and is arched (27) around the heat pipe through grooves (26).

7. Cooling element according to claim 4, characterized in that the base body (2) with base body section (7) and base body sides (8) at least partially wraps around the heat source (12) in a U-form, whereby the base body sides (8) offer support.

8. Cooling element according to claim 4, characterized in that the base body lamellae (10) run perpendicular or parallel to the base body.

9. Cooling element according to the claims 6 or 7, characterized in that on the base body sides (8) axially aligned base body lamellae (10) are provided in addition to the lamellae extending upwards from the floor section (7) as side lamellae (28).

10. Cooling element according to at least one of the previous claims, characterized in that in the base body floor section (7) thread holes (19) are provided to fasten to the heat source (12) that correspond with the holes in the heat source (12), whereby

optionally additional fastening holes are provided in the base body ~~(2)~~ – mirrored to the first – so that turning the entire cooling element by 180 degrees to the heating source ~~(12)~~ is possible.

11. Cooling element according to ~~the claims 1 or 10~~at least one of the preceding claims, characterized in that the bent cooling body lamellae ~~(20, 50)~~ are attached at an angle of 30 to 60 degrees to the heat pipe, preferably between 40 to 50 degrees in order to make optimal air circulation possible.
~~rectangular, with arch-shaped and wing-shaped sections, oval or cloud-like notches in an oval or cloud-like fashion, round or other metal cuttings, wing-shaped in order to ensure a minimal visible surfaceof the cooling body (3).~~

12. Cooling element according to claim 1, characterized in that the cooling lamellae ~~(10)~~ of the cooling body ~~(3)~~ in press or shrink fit on the heat pipes ~~(4,5,6)~~ at a predetermined distance from one another, whereby spacers ~~(32)~~ are provided between the cooling lamellae ~~(10)~~.

13. Cooling element according to claim 10, characterized in that the spacers ~~(32)~~ are punched out from the lamellae sheet tongues, bent away from the lamella main level.

14. Cooling element according to at least one of the previous claims, characterized in that on the lower side of the cooling body lamellae ~~(20)~~, at least one slit ~~(30)~~ running from top to bottom or leading inside is provided to take accommodate vertical support sheets ~~(36)~~.

15. Cooling element according to claim 1, characterized in that the cooling element ~~(3)~~ is configured above the base body ~~(2)~~, whereby the heat pipes on the cooling element ~~(3)~~ connected to the thermal conducting tubes ~~(5, 6)~~ are bent upwards in a U-shape.

16. Cooling element according to one of the previous claims, characterized in that the openings ~~(38)~~ for the heat pipes ~~(5, 6)~~ of the cooling body cooling lamellae ~~(20)~~ comprise a step-like deep drawn area ~~(45)~~ in their circumference, so that after passing through the heat pipe, adhesives can collect in the groove ~~(45)~~ formed between the heat pipe and the cooling body lamella ~~(20)~~.