CLAIMS:

1. A heat dissipation device comprising:

a lateral-spreading heat dissipating structure (102) having a base structure, said base structure having a top surface and a bottom surface;

a closed-loop shunting heat conductive structure (103) having a first end and a second end;

a distal heat dissipating segment (104) configured to dissipate heat to an exterior of the heat dissipation device, said distal heat dissipating segment (104) connected to at least one end of the lateral-spreading heat dissipating structure (102); and

a heat generating unit (101), said heat generating unit connected to the top surface or the bottom surface of the base structure,

wherein the first end of the closed-loop shunting heat conductive structure (103) is connected on the opposite surface of the base structure than the heat generating unit (101) and the second end of the closed-loop shunting heat conductive structure (103) is connected to the distal heat dissipating segment (104) so that heat generated from the heat generating unit (101) is conductable through the closed-loop shunting heat conductive structure (103) and through the lateral-spreading heat dissipating structure (102) to the distal heat dissipating segment (104) to be dissipated to the exterior of the heat dissipation device, and

wherein the lateral-spreading heat dissipating structure (102) comprises a different heat-conductive material than the closed-loop shunting heat conductive structure (103).

2. The heat dissipation device according to claim 1, wherein the heat dissipation device comprises a heat conductive material selected from the group consisting of aluminum, copper, a metal alloy, and ceramic material.

3. The heat dissipation device according to claim 1, wherein the heat generating unit is disposed at a center of the base structure, and

wherein the first end of the closed-loop shunting heat conductive structure is connected to a central area at the center of the base structure of the lateral-spreading heat dissipating structure.

4. The heat dissipation device according to claim 1, wherein the heat generating unit comprises at least one of a lamp configured to emit light and generate heat as a result of the emission of light, an electrically-charged heating member, or a heat conductive material configured to receive heat from a source external to the heat dissipation device, wherein the heat generating unit is installed at a center area on the bottom surface of the base structure, wherein said lateral-spreading heat dissipating structure extends radially and outwardly from the center area of the base structure and said distal heat dissipating segment extends upwardly from the base structure so that heat is conductable to the distal heat dissipating segment to dissipate the heat to the exterior.

5. The heat dissipation device according to claim 1, wherein the closed-loop shunting heat conductive structure comprises a heat conductive material, and said closed-loop shunting heat conductive structure being combined or welded with the base structure of the heat dissipation device proximate to the heat generating unit and at a combining location with the distal heat dissipating segment.

6. The heat dissipation device according to claim 1, wherein the base structure of the lateral-spreading heat dissipating structure has a first end and a second end, wherein the heat generating unit is disposed proximate the first end of the base structure at the bottom surface of the base structure, and the first end of the closed-loop shunting heat conductive structure is connected to the first end of the base structure and the distal heat dissipating segment is connected to the second end of the base structure.

7. The heat dissipation device according to claim 1, wherein the distal heat dissipating segment extends upwardly away from either the top surface or the bottom surface of the base structure, wherein the heat generating unit is disposed at a center of the lateral-spreading heat dissipating structure, wherein the first end of the closed-loop shunting heat conductive structure is connected to the base structure at the center of the lateral-spreading heating dissipating structure and the second end of the closed-loop shunting heat conductive structure

is connected to the upwardly extending distal heat dissipating segment in a way such that a temperature difference at the center of the lateral-spreading heat dissipating structure and a distal location of the distal heat dissipating segment is reduced.

8. The heat dissipation device according to claim 1, wherein the heat dissipation device is formed as a U-shaped plate shaped, a circular cup-like shaped, a polygonal cup-like shaped, or formed in a fork-like cup-shaped structure.

9. The heat dissipation device according to claim 6, wherein the distal heat dissipating segment extends upwardly away from either the top surface or the bottom surface of the base structure.

10. The heat dissipation device according to claim 1, further comprising at least a second heat generating unit, wherein the heat generating unit and the at least one second heat generating unit are annularly arranged on the base structure around a center of the base structure of the lateral-spreading heat dissipating structure, wherein the distal heat dissipating segment extends upwardly away from either the top surface or the bottom surface of the base structure, wherein the first end of the closed-loop shunting heat conductive structure is connected to the base structure proximate to the center of the base structure and the second end of the closed-loop shunting heat conductive structure is connected to a distal end of the upwardly extending distal heat dissipating segment in a way such that a temperature difference at the center of the lateral-spreading heat dissipating structure and the distal location of the distal heat dissipating segment is reduced.

11. The heat dissipation device according to claim 10, further comprising a central airflow aperture at a center of the base structure, wherein the heat generating unit and the at least one second heat generating unit are annularly arranged on the base structure around a periphery of the central airflow aperture.

12. The heat dissipation device according to claim 11, wherein the central airflow aperture is formed as a single aperture or plural aperture structure.

13. The heat dissipation device according to claim 12, wherein the plural aperture structure includes plural individual apertures or net-like apertures or grid-like apertures.

14. The heat dissipation device according to claim 10, wherein the base structure further comprises at least two airflow aperture formed at an outer periphery of the base structure.

15. The heat dissipation device according to claim 1, wherein the heat dissipation device has a U-shaped structure, wherein at least one of the closed-loop shunting heat conductive structure and the distal heat dissipating segment comprises at least one airflow aperture, and wherein a top edge of the distal heat dissipating segment is formed with a multiple-surface or annular or tooth-like crown or fork-like structure.

16. The heat dissipation device according to claim 1, wherein the heat dissipation device has a U-shaped structure, wherein at least one of the closed-loop shunting heat conductive structure and the distal heat dissipating segment comprise a radial grid heat dissipation space.

17. The heat dissipation device according to claim 1, wherein the heat dissipation device has a tubular structure, wherein at least one of the closed-loop shunting heat conductive structure, the distal heat dissipating segment, and the heat dissipation device has at least one airflow aperture.

18. The heat dissipation device according to claim 17, wherein the heat dissipation device having the tubular structure has an opened or sealed or semi-sealed top structure, wherein the lateral-spreading heat dissipating structure is formed as a round plate-like structure as a bottom of the heat dissipation device, wherein the distal heat dissipating segment extends upwardly away from the top surface of the base structure of the lateral-spreading heat dissipating structure forming walls of the heat dissipation device, wherein airflow apertures are

radially-arranged around a periphery of the walls of the heat dissipation device at a center area of the distal heat dissipating segment, and wherein the heat generating unit is provided at a center portion of the bottom surface of the base structure.

19. The heat dissipation device according to claim 1, wherein the heat dissipation device has a tubular structure having a top formed as an opened or sealed or semi-sealed structure, a bottom thereof formed by the lateral-spreading heat dissipating structure, said lateral-spreading heat dissipating structure being formed as a round plate shaped bottom, and walls formed by the distal heat dissipating segment, said distal heat dissipating segment formed to extend upwardly away from the top surface of the base structure,

wherein at least one of the closed-loop shunting heat conductive structure and the distal heat dissipating segment is formed with a radial grid heat dissipation space,

wherein airflow apertures are formed on at least one of the closed-loop shunting heat conductive structure, the lateral-spreading heat dissipating structure, and the distal heat dissipating segment, and

wherein the heat generating unit is disposed at a center area of the base structure.

20. A LED lamp comprising: ~~the heat dissipation device according to claim 1,~~

a heat dissipation device comprising a lateral-spreading heat dissipating structure (102) having a base structure, said base structure having a top surface and a bottom surface, a closed-loop shunting heat conductive structure (103) having a first end and a second end, a distal heat dissipating segment (104) configured to dissipate heat to an exterior of the heat dissipation device, said distal heat dissipating segment (104) connected to at least one end of the lateral-spreading heat dissipating structure, and a heat generating unit (101), said heat generating unit (101) connected to the top surface or the bottom surface of the base structure, wherein the first end of the closed-loop shunting heat conductive structure (103) is connected on the opposite surface of the base structure than the heat generating unit (101) and the second end of the closed-loop shunting heat conductive structure (103) is connected to the distal heat dissipating segment (104) so that heat generated from the heat generating unit (101) is conductable through the closed-loop shunting heat conductive structure (103) and through the

lateral-spreading heat dissipating structure (102) to the distal heat dissipating segment (104) to be dissipated to the exterior of the heat dissipation device, and wherein the lateral-spreading heat dissipating structure (102) comprises a different heat-conductive material than the closed-loop shunting heat conductive structure (103),

wherein the lateral-spreading heat dissipating structure (102) is formed as a round plate structure and comprises a central airflow aperture (1022) at a center of the round plate structure,

wherein said heat generating unit comprises light emitting diodes (111) arranged annularly around a periphery of the central airflow aperture (1022) on the bottom surface of the base plate,

wherein the distal heat dissipating segment (104) extends upwardly from the top surface of the base structure to form walls of the LED lamp, said distal heat dissipating segment (104) extending upwardly from the top surface of the base structure in a way such that the heat dissipating segment curves inwardly towards a center axis of the lateral-spreading heat dissipating structure (102) from a first end of the distal heat dissipating segment (104) connected to the base structure to a second end of the distal heat dissipating segment (104) away from the base structure, said second end of the heat dissipating segment being closer to the center axis of the lateral-spreading heat dissipating structure and forming an open, sealed, or semi-sealed top structure of the LED lamp for connecting with a fastening and electric conducting interface,

wherein at least one of the lateral-spreading heat dissipating structure (102) and the distal heat dissipating segment (104) comprises at least one airflow aperture, and

wherein the first end of the closed-loop shunting heat conductive structure (103) is connected to the base structure of the lateral-spreading dissipating structure around a periphery of the central airflow aperture.

21. The LED lamp according to claim 20, further comprising a secondary optical device, said secondary optical device comprising a structural device configured to condense, defuse, reflect or refract optical energy from the light emitting diodes to project light to an exterior of the LED lamp.

22. The LED lamp according to claim 20, further comprising a light pervious lamp cover made of a light pervious material configured to cover the light emitting diodes so as to protect the light emitting diodes.

23. The LED lamp according to claim 20, further comprising the fastening and electric conducting interface, wherein one side of the fastening and electric conducting interface is connected to the distal heat dissipating segment and the other side is formed as a screw-in type, mount type, or lock type lamp head or lamp seat, or an electric conductive interface structure composed of conductive wires or electric conductive terminals, said fastening and electric conducting interface being configured to serve as a connection interface to an external electric power, and provided with an electric conductive member configured to connect the light emitting diodes for supplying electric power.

24. The LED lamp according to claim 23, further comprising a drive circuit device composed of a solid-state electronic device and/or electromechanical device configured to convert the electric power from the fastening and electric conducting interface into the electric power for driving the light emitting diodes, and configured to set and control voltage and current of the electric power used for driving the light emitting diodes.

25. The LED lamp according to claim 24, further comprising a conductive wire composed of a conductive member having an insulation surface, said conductive wire configured to transfer the electric power from the drive circuit device to the light emitting diodes.

26. The LED lamp according to claim 20, wherein the closed-loop shunting heat dissipating structure is formed as a strip-shaped radial structure, an oblique conical surface, or an oblique conical surface having airflow apertures.

27. A LED lamp comprising the heat dissipation device according to claim 1, wherein the lateral-spreading heat dissipating structure forms a bottom of the LED lamp and said base

structure forms a convex structure,

wherein said heat generating unit comprises at least one light emitting diode disposed at a center of the bottom surface of the base structure,

wherein the distal heat dissipating segment extends upwardly from the top surface of the base structure to form walls of the LED lamp, said distal heat dissipating segment extending upwardly from the top surface of the base structure in a way such that the heat dissipating segment curves inwardly towards a center axis of the lateral-spreading heat dissipating structure from a first end of the heat dissipating segment connected to the base structure to a second end of the heat dissipating segment away from the base structure, said second end of the heat dissipating segment being closer to the center axis of the lateral-spreading heat dissipating structure and forming an open, sealed, or semi-sealed top structure of the LED lamp for connecting with a fastening or electric interface,

wherein the first end of the closed-loop shunting heat conductive structure is connected to the top surface of the base structure proximate a center of the base structure, and

wherein at least one of the lateral-spreading heat dissipating structure, the closed-loop shunting heat conductive structure, and the distal heat dissipating segment comprises airflow apertures.

28. The LED lamp according to claim 27, wherein the closed-loop shunting heat conductive structure is integrally formed with the heat dissipating device.

29. A LED lamp comprising the heat dissipation device according to claim 1, wherein the lateral-spreading heat dissipating structure is formed as a round plate structure and comprises a central airflow aperture at a center of the round plate structure and peripheral airflow apertures annularly arranged around a periphery of the central airflow aperture,

wherein said heat generating unit comprises light emitting diodes arranged annularly around a periphery of the central airflow aperture and annularly around the peripheral airflow apertures on the bottom surface of the base plate,

wherein the distal heat dissipating segment extends upwardly from the top surface of the base structure to form walls of the LED lamp, said distal heat dissipating segment extending

upwardly from the top surface of the base structure in a way such that the heat dissipating segment curves inwardly towards a center axis of the lateral-spreading heat dissipating structure from a first end of the heat dissipating segment connected to the base structure to a second end of the heat dissipating segment away from the base structure, said second end of the heat dissipating segment being closer to the center axis of the lateral-spreading heat dissipating structure and forming an open, sealed, or semi-sealed top structure of the LED lamp for connecting with a fastening or electric interface,

wherein at least one of the lateral-spreading heat dissipating structure and the distal heat dissipating segment comprises at least one airflow aperture, and

wherein the first end of the closed-loop shunting heat conductive structure is connected to the base structure of the lateral-spreading dissipating structure around a periphery of the central airflow aperture.

30. The heat dissipation device according to claim 1, wherein the heat generating unit comprises at least one of a semiconductor having heat loss, a central process unit, memory, power semiconductor, rectifier, a power-type IC in which heat loss is generated, and a heater, oven, or cooking ware operated through electric power or thermal combustion.