Claims

1. A process chamber, comprising:

a chamber body including an optically transparent window;

a lamp housing disposed adjacent to the optically transparent window, the optically transparent window and the lamp housing having a gap therebetween and one or more cooling channels disposed below a top surface of the lamp housing a plurality of lamps located below the top surface of the lamp housing and accommodated within the lamp housing; and

a plurality of compliant conductors disposed within the gap between the lamp housing and transparent window and in contact with the top surface of the lamp housing and transparent window, at least some of the compliant conductors including a coating thereon, the coating comprising one or more of a fluorocarbon, silicone, or a polyimide.

2. The process chamber of claim 1, wherein each of the compliant conductors has a length that is+/- 50 percent of a mean length of the compliant conductors.

3. The process chamber of claim 1, wherein the coating is a fluorocarbon.

4. The process chamber of claim 1, wherein the coating is silicone.

5. The process chamber of claim 1, wherein the coating is a polyimide.

6. The process chamber of claim 1, wherein the compliant conductors include a fluid, wax, or polymer encapsulated therein.

7. The process chamber of claim 6, wherein each of the compliant conductors has a length that is+/- 50 percent of a mean length of the compliant conductors.

8. The process chamber of claim 1, wherein the compliant conductors include a fluid encapsulated therein.

9. The process chamber of claim 1, wherein the compliant conductors include a wax encapsulated therein.

10. The process chamber of claim 1, wherein the compliant conductors include a polymer encapsulated therein.

11. The process chamber of claim 1, wherein the optically transparent window is a dome.

12. A process chamber, comprising:

a chamber body including an optically transparent window;

a lamp housing disposed adjacent to the optically transparent window, the optically transparent window and the lamp housing having a gap therebetween and one or more cooling channels disposed below a top surface of the lamp housing a plurality of lamps located below the top surface of the lamp housing and accommodated within the lamp housing; and

a plurality of compliant conductors disposed within the gap between the lamp housing and transparent window and in contact with the top surface of the lamp housing and transparent window, the compliant conductors comprising one or more of porous silicone rubber, carbon nano-tubes, carbon nano-whiskers, or carbon nano-fibers.

13. The process chamber of claim 12, wherein the optically transparent window is a dome.

14. The process chamber of claim 12, wherein each of the compliant conductors has a length that is+/- 50 percent of a mean length of the compliant conductors.

15. The process chamber of claim 12, wherein the compliant conductors are carbon nano-fibers.

16. The process chamber of claim 12, wherein the compliant conductors are carbon nano-tubes.

17. A process chamber, comprising:

a chamber body including an optically transparent window;

a lamp housing disposed adjacent to the optically transparent window, the optically transparent window and the lamp housing having a gap therebetween and one or more cooling channels disposed below a top surface of the lamp housing a plurality of lamps located below the top surface of the lamp housing and accommodated within the lamp housing; and

a plurality of compliant conductors disposed within the gap between the lamp housing and transparent window and in contact with the top surface of the lamp housing and transparent window, wherein the plurality of compliant conductors are bonded to, brazed to, or grown on the lamp housing.

18. The process chamber of claim 17, wherein the optically transparent window is a dome.

19. The process chamber of claim 17, wherein each of the compliant conductors has a length that is+/- 50 percent of a mean length of the compliant conductors.

20. The process chamber of claim 1, wherein the compliant conductors comprise one or more of porous silicone rubber, carbon nano-tubes, carbon nano-whiskers, or carbon nano-fibers.