



The Difference Between Heat and Temperature?

We often refer to infrared radiation as being primarily heat (or thermal) radiation. But what exactly is heat, and how does it differ from temperature? Simply put, heat is a measurement of energy. All molecules contain some amount of kinetic energy, that is to say, they have some intrinsic motion. The hotter an object is, the faster the motion of the molecules inside it. Thus, the heat of an object is the total energy of all the molecular motion inside that object.

Temperature, on the other hand, is a measure of the average heat or thermal energy of the molecules in a substance. When we say an object has a temperature of 100 degrees C, for example, we do not mean that every single molecule has that exact thermal energy. In any substance, molecules are moving with a range of energies, and interacting with each other as well, which changes their energies. But if we average the thermal energies of all the molecules together, we can obtain an object's temperature.

