Thermal imaging is an essential tool in a multitude of fields, including machinery/electronics inspection, scientific research, and structural failure analysis. In current thermal imaging devices, the image is viewed on a separate screen or a handheld display. In many situations this can make it difficult to see exactly where the thermal profile is located relative to the object of interest.

The FLIR Lumen is a novel device that combines a pico projector with the FLIR Lepton longwave infrared camera to display the thermal profile of a surface on that same surface. This “thermal flashlight” provides an easy way to quickly view the heat signature of an object without the need for a display screen. The Lumen makes fast and simple the detection of leaks in piping, hot spots on electronics, and inflammation from bodily injuries. Being the first of its kind, the Lumen will change our perspective on infrared imaging and its applications, while its low price and simplicity of operation will make it accessible to a wide range of users compared to other thermal imaging alternatives.