

Technote #027

How the IRt/c is manufactured for reliability

Our IRt/cs are designed and manufactured to provide a lifetime of reliable operation under the most demanding service conditions. To assure this performance, every IRt/c is put through a rigorous process of manufacture, including seven separate test stages. At the end of this process, the IRt/c is ready to be installed, to provide you with many years of reliable infrared temperature data. As an additional reliability feature, all IRt/cs are manufactured with a Xenon gas bubble, which is hermetically sealed into the sensing system. If the hermetic seal is broken by mechanical or thermal damage to the sensor, the Xenon immediately escapes, triggering a noticeable change. Upon breakage of the seal, the IRt/c radiation sensitivity (difference between target and sensor temperature) immediately drops by more than a factor of two. This signals a clear and instant indication of sensor failure, which can be then acted upon and a replacement quickly installed. This method of instant alert is greatly preferred over the alternative, since a damaged sensor could cause poor quality output for a long period of time before a failure is detected.

