

Technote #13

Controlling vacuum forming and thermoforming processes

For plastics formation, radiant heat with an IRT/c is an excellent combination of heating method and control. They work extraordinarily well together, since both the heating and measuring occur right at the surface, where the plastic is located. The IRT/c reading is unaffected by reflections from the heater, since the spectral response of the 6 to 14 micron IRT/c lens filters out the shorter wavelengths of the radiant heater energy. The IRT/c may be mounted in between ceramic heaters, or in the shroud or reflector of the radiant heater, such that it has visibility between the elements. Select any of our IRT/c

models, depending on the field-of-view required to see past the elements to the painted surface. Care should be taken in mounting the IRT/c in order to keep its temperature below 100°C (212°F) and to keep the lens clean. The IRT/c.3x is the preferred model for this application because of its small physical size and integrated air purge. It can be used in temperatures up to 120°C (248°F) when the air purge system is used. For still narrower fields of view, the IRT/c.5 and IRT/c.10 with 5:1 and 10:1 fields of view respectively are very popular.

