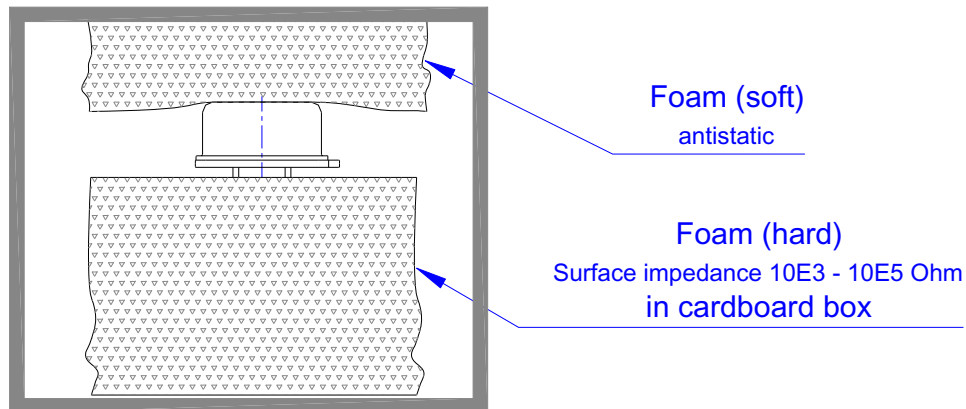


# Handling Precautions for Pyroelectric Detectors

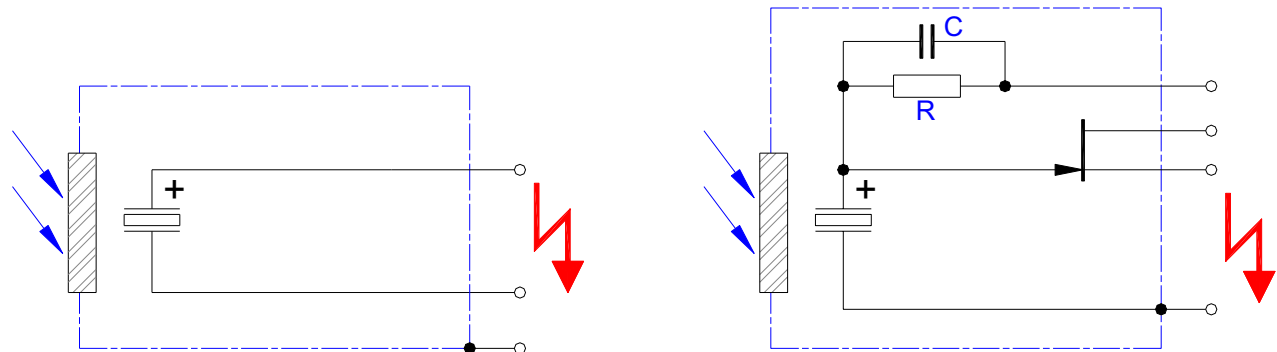
DO NOT REMOVE PYROELECTRIC DETECTORS FROM SHIPPING BOXES UNTIL YOU HAVE READ AND ARE THOROUGHLY FAMILIAR WITH THE FOLLOWING INSTRUCTIONS:

## Electro-static discharge (ESD) sensitivity and protection

All InfraTec detectors are shipped in boxes containing two types of foam:



The reason such precautions are taken is that an open circuit pyroelectric chip can generate a voltage of 600 V from a temperature change of 50 deg C. This is particularly true of detectors designed to operate in the current mode. Current mode detectors can produce high voltages between pins:



This internal charge and an additional static discharge by unsuitable handling can destroy the detector and / or other electronic devices of wiring.

- Handle detectors in an ESD Protected Area (EPA)
- Transport and store detectors in their original packaging, otherwise connect ( $<10$  MOhm) all leads of the unprocessed detectors during transport and storage.
- Avoid exposing unassembled detectors to temperature ramps  $>1$  deg C/sec or  $<-1$  deg C/sec. The high voltage produced in the pyroelectric chip can destroy the pyroelectric crystal material but semiconductor devices.

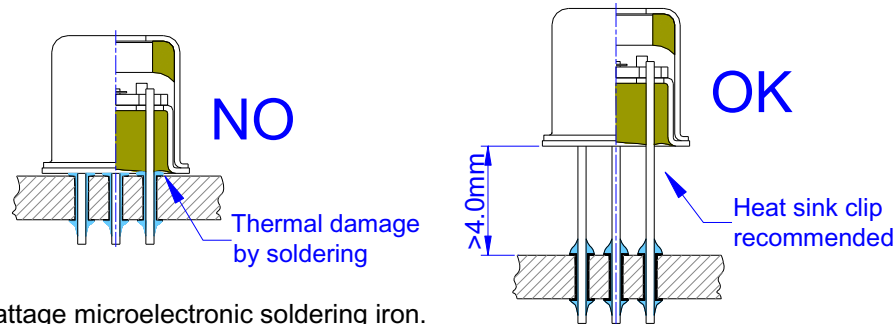


# Handling Precautions for Pyroelectric Detectors

## Soldering

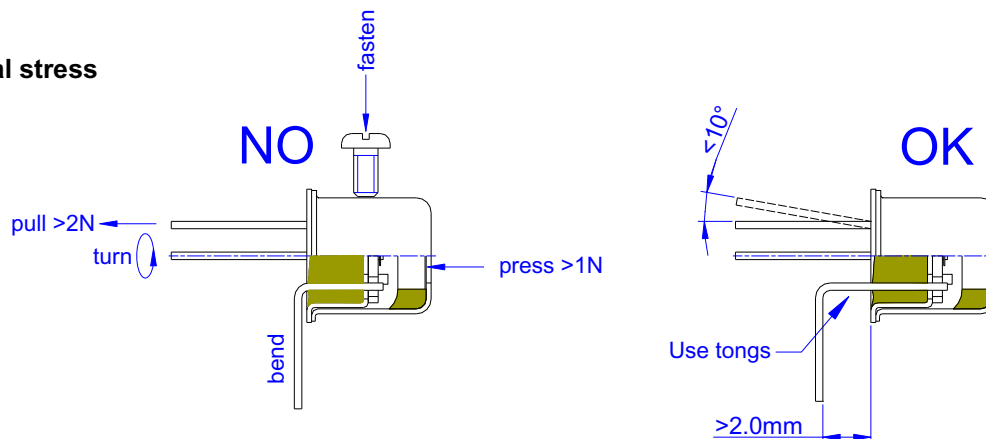
Inadequate heat sinking during soldering operations can damage a pyroelectric detector.

- DO NOT use wave or machine soldering. Use hand soldering ONLY.
- When hand soldering, strictly observe the following precautions:



- Use a low wattage microelectronic soldering iron.
- Use heat sink clips or pliers on lead wires between the soldering joint and the base of the package.
- If heat sinking is not possible, then use minimum soldering iron tip temperature and time.
- Soldering temperatures should not exceed 280 deg C for more than 2 seconds or 240 deg C for more than 4 seconds.

## Mechanical stress



All detector packages are hermetically sealed and bending or inducing a stress at the pin feed through(s) will damage the glass seals in these areas.

## Cleaning

- Clean the package window with pure isopropyl alcohol or with a 50/50 mixture of isopropyl alcohol and water
- Either rinse the package gently or use light strokes with a cotton tipped applicator. Avoid pressing on the window as this may damage or destroy the hermetic seal.
- DO NOT USE acetone, benzene or halogenated solvents and NEVER use an ultrasonic cleaner.

IF YOU HAVE ANY QUESTIONS OR NEED ADDITIONAL INFORMATION, CONTACT US IMMEDIATELY!

