



# Detector Handling Manual

**Static Discharge:** Protect detectors from electro-static charges.

**Removal of Detectors from Package:** The detectors are shipped in transparent electrostatic-charge-defeating plastic trays.

**DO NOT REMOVE DETECTORS WITH FINGERS!**

Turn tray over and place on a lint-free towel. Hold the tray with one hand and push against the tray directly behind the detector flange. The detector will POP out. Alternatively, face the open tray and slightly flex the tray upward to relieve clamping tension. Then lift the detector out with tweezers on the leads (pins). Be careful not to bend the leads. If the detector has an opaque filter, DO NOT TOUCH! This is an expensive optical interference filter.

**Cleaning:** If the detector has a sapphire filter, it is remarkably strong and scratch resistant, however other filters are not. If you inadvertently get fingerprints or other contaminants on the filter, rub the filter lightly with a dry cotton Q-Tip. If that is not effective, wet the Q-Tip with alcohol or acetone and rub the filter applying appropriate pressure. Be careful when cleaning opaque filters because some coatings are extremely fragile.

**Mounting:** Avoid mechanical stresses on case and leads.

**Soldering:** Detectors must be hand soldered to minimize the chance of destroying the internal components. Avoid machine or hot air soldering. Recommend using a small 15W pencil soldering iron and a solid copper or copper-plated toothless micro alligator clip (example: Mueller BU-34C) as a heat sink to perform soldering. Leave lead length as is (un-cut) until after soldering. When soldering to detector leads, use a heat sink between the case and leads. When soldering detector flush to PC board, place heat sink onto lead as close as possible to where the solder joint will be made. Beware that the new RoHS compliant solders require a higher soldering temperature making heat sinking the detector extremely important.

**Soldering Temperature (max):** 260°C for 10 seconds. Longer times or higher temperatures can cause detector failure.

**Clipping Detector Leads:** When clipping the detector leads, it is recommended to NOT use a pinching-type cutter / tool - this can induce a mechanical shock, traveling directly up the lead, of sufficient magnitude to cause damage to the internal sensing element. Instead, it is recommended to use a shearing-type cutter / tool - an example of the recommended type of shear-type cutter is given below, for your reference:

SOURCE: Grainger

DESCRIPTION: Shear Cutter, General Purpose (Static Dissipative)

MFGR: XCELLITE, Model 170D #4CP17

**Thermal Shock:** Temperature changes and rate of change must be kept to a minimum (<50C°/min.) to prevent damage.

**Light Leakage:** Slight sensitivity to visible light leaking through the glass-to-metal seal on the base may be observed. Mount detector in a way to avoid visible light exposure to base of detector.

**NOTICE:** The information provided herein is believed to be reliable. However, ELTEC Instruments, Inc. assumes no responsibility for inaccuracies or omissions. Due to industry components being incorporated into ELTEC's devices and ELTEC continually striving for product improvement, specifications may change without notice.



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