



# Title: **Best Printing Environment for the Gerber Solara ion™ & CAT | UV™**

Product: Gerber Solara ion and Gerber CAT | UV

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Summary: This document provides the environmental specifications required for the Gerber Solara ion, Gerber CAT | UV and GerberCAT™ inks. Printers that are maintained in a consistent environment that meets Gerber's specifications for power, temperature and humidity function better and have fewer problems.

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## Ambient Conditions

The Gerber Solara ion and Gerber CAT | UV 12 Month Product Warranties require the printers to be maintained in specific environmental conditions. If the systems are operating outside of the environmental specifications, system errors and/or shutdown may result. During the colder months of the year, especially in drier climates, be cognizant of the required environmental conditions. The operating environment must meet the following STRICT conditions:

- ◆ **Temperature: 65°F to 75°F (18.5°C to 24°C)**
- ◆ **Humidity: 20% - 60%RH, non-condensing** (take precautions against static electricity effects at lower humidity)
- ◆ Ventilation: no special ventilation required
- ◆ Avoid using printer near open windows, outside doors, or heating/cooling systems
- ◆ Protect printer and ink pouches from moisture, dust, drafts, and direct sunlight

## Temperature

- ◆ If you turn down the heat at night to a lower temperature than the specified operating temperature, allow time for the printer, ink and its internal components to warm to the proper temperature before printing.
- ◆ Depending on the ambient environment, it can take several hours for the dense metal components and ink in the system to warm to the specified operating temperature.
- ◆ Ensure the substrate to be printed is also at the proper temperature, as the size of the substrate is affected by temperature changes. See the application note: *Preparing Substrates for Printing with the Gerber Solara ion and Gerber CAT | UV.*

### **Faded prints due to low temperature**

- ◆ Operating the printer in an environment which is below the temperature specification can increase ink viscosity and inhibit ink flow.
- ◆ High viscosity due to cool temperatures can result in prints that appear to fade during printing. See “Ink Storage” requirements later in this document.

### **Static Electricity**

- ◆ Installations in which the printer will be placed on carpeting require the use of industrial rubber mats under and around the printer to guard against excessive static electricity which can potentially interrupt system operation.
- ◆ You must maintain proper humidity levels to minimize static electricity, especially in drier climates.

### **Humidity**

The Gerber Solara ion and Gerber CAT | UV both have strict humidity requirements of 20-60% non-condensing. If the humidity of the environment falls below 20-60%, which is common in winter months when heat is being used, it can cause excessive static electricity and system errors.

#### **Improper printing due to low humidity**

- ◆ Ink droplets can be attracted by static and result in ink printing in the wrong location or ink misting in non-printed areas.

#### **Print errors due to low humidity**

- ◆ Humidity that falls below 20% has been known to produce “Print Errors” and cause a job to abort.

#### **Improper ink curing due to high humidity**

- ◆ If the humidity is above 60%, which can occur in environments without air conditioning, it can inhibit proper curing of the ink.

#### **Registration issues due to humidity levels**

- ◆ Humidity affects material size:
  - ◆ High humidity can cause material to expand in size.
  - ◆ Low humidity can cause material to contract in size.
- ◆ Differing levels of humidity in the printing and cutting environments can cause imperfect print-to-cut results.

### **Power Requirements**

The Gerber Solara ion and Gerber CAT | UV both require a 230V dedicated circuit. 208V lines, while seemingly within the specification range shown below, are not as robust as 230V lines and are also subject to the +/- 10% current fluctuations. These below-specification fluctuations of 208V lines do not provide adequate power to consistently cure ink. **YOU MUST PROVIDE A 230V LINE.**

## Domestic

**Dedicated 230/240 VAC circuit at 50-60Hz, single phase, 20 Amps continuous. Measured at the Solara ion and CAT | UV: 230 VAC +/- 10%.**

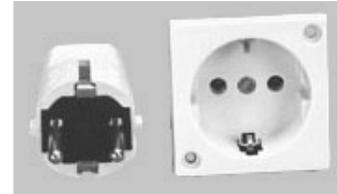
The Gerber Solara ion and Gerber CAT | UV power cord comes with a NEMA 6-20P plug and requires the matching NEMA 6-20R receptacle.



## International

**Dedicated 230/240 VAC circuit at 50-60Hz, single phase, 15 Amps continuous. Measured at the Solara ion: 230 VAC +/- 10%.**

The Gerber Solara ion and Gerber CAT | UV come with a European CEE 7/7 plug and require the matching CEE 7 receptacle.



The UK requires that an electrician to fit a Blue Ceeform (Commando) socket (IEC 60309), and terminate the cable to the Gerber Solara ion with the appropriate plug supplied by the customer.



## Consistent power

- ◆ Gerber recommends that you leave the Gerber Solara ion and Gerber CAT | UV powered on at all times.
- ◆ Do not turn the printer off, even for extended periods of down time.
- ◆ If the printer will not be in use for longer than four weeks, you **MUST** follow the special procedures described in “Shutting down the printer for more than two weeks” in the *Gerber Solara ion and Gerber CAT | UV Owner’s Guides*. This procedure includes special instructions for:
  - ◆ Clearing ink from the ink lines
  - ◆ Filling the ink lines with GerberCAT Flush
  - ◆ Clearing GerberCAT Flush from the ink lines

The manual also includes instructions on preparing the printer for use after it has been shut down for more than four weeks.

## Sleep/Idle mode

Instead of shutting the printer down when not in use, it has a special sleep/idle mode which ensures that the printer is properly maintained and ready to print.

### After 10 minutes of idle time

- ◆ When the Solara ion and CAT | UV are idle for 10 minutes they will automatically go into idle mode.
- ◆ During idle mode the UV lamps, vacuum blowers, and roll-to-roll fans turn off and the gantry rises to its home position.

### After two hours of idle time

- ◆ When the printer has been idle for two hours it enters sleep mode. The print head heaters automatically turn off and the printer ceases to spit ink.

- ◆ The Clean Head LED blinks to indicate that you should perform the Clean Heads sequence before printing.
- ◆ Every thirty minutes when the printer is in sleep mode it automatically reestablishes vacuum pressure to ensure that no excess ink drips from the print heads.

## GerberCAT UV Ink Storage

- ◆ Ink shelf life is approximately 12 months from date of manufacture when stored as recommended. See following specifications.
- ◆ Operating temperature and humidity ranges of the Gerber Solara ion and Gerber CAT | UV are tighter than the storage range for the ink pouches.
- ◆ If stored outside of operating temperature, wait for the ink to normalize before using.
- ◆ Note the “Use by” date printed on the ink pouch and replace any ink beyond that date.

***Note: The guaranteed term of ink is 12 months from date of manufacture when it is kept or used without exposure to air at 41°F -77°F (5°C-25°C).***

## GerberCAT Ink storage specifications

- ◆ Temperature: 41° F to 86° F (5° C to 30° C)
- ◆ Humidity: 20% - 75% RH non-condensing

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