Advanced Application Notes

SOLARA™ UV2

User Notes 6.0

Controllable Variables in UV Printing

Fact: Solara UV2 utilizes two 500 watt mercury-vapor lamps to cure UV ink instantly upon contact. These lamps generate a considerable amount of heat. Depending on a material's composition, it sometimes can react (expand, bow, etc.) under these lamps. There are, however, certain variables that can be controlled to lessen this thermal impact.

The three variables are:

Lamp Height:	Low or High (manual adjustment)
Lamp Power:	Low or High (controlled in ImageRIP (ONYX) software)
Dwell time:	Zero ms (mili-seconds) to unlimited

Lamp Height: Standard rule—high lamp height for rigid materials, low lamp height for roll-to-roll. Lamp height is manually adjusted on the Solara UV2 using the prescribed method.

Lamp Power: In any given profile, a specific lamp power is assigned for optimal cure. This also takes into consideration the thermal reaction of the specific media being printed. In order to view/modify lamp power settings, do the following:
Open Gerber ImageRIP and click on "Configure Printer", click OK in the dialog box that opens (it will take printers offline). Click on the "media" tab. Select the desired pass mode from the first toggle switch (2 pass, 3 pass, 6 pass). Select the desired material. Click on the "options" button. Bullet the desired lamp power (either low or high). Click OK out of all menus
Fact: High lamp power may give a stronger cure, but also generates considerable heat and may cause the material to react.
Fact: 6-pass mode usually uses lamps on low power.

Dwell Time:
If you are continuing to experience heat related problems in printing and have lamps at high height and low power, there is a third controllable variable which will help dissipate heat—adding a dwell time.
To add a dwell time, do the following:
Open Gerber ImageRIP and click on "Configure Printer", click OK in the dialog box that opens (it will take printers offline). Click on the "media" tab. Select the desired pass mode from the first toggle switch (2 pass, 3 pass, 6 pass). Select the desired material. Click on the "options" button. Locate the dwell setting (lower left). Enter a numeric value in mili-seconds (1000 ms=1 second) (the value entered will cause the Solara print carriage to dwell the specified amount of time on both sides of the print. Evaluate Ink cure and adhesion.

Hullabaloo:

When printing any unqualified material, safety to both you and your Solara is of primary concern. Gerber cannot predict or support results obtained on non-tested media and materials. Users are urged to be aware of material flashpoints (in a momentary carriage pass, the heat under the SOLARA lamps can approach 500˚ F). Users are also warned not to use materials that are bowed, warped, or otherwise do not display lay-flat characteristics.