

# UV Cure

## Spot and Flood Applications

### APPLICATIONS

***There can be considerable savings in material and labor costs when choosing to automate with UV materials.***

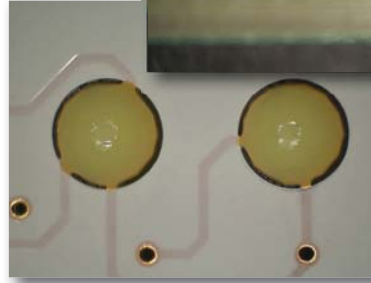
UV curable materials come in a wide variety of formulations; most common are Silicone, Acrylics, and epoxies. There are many UV applications that require dispensing including Potting, Masking, Gasketing, Encapsulation, and Dam & Fill.

These materials cure under Ultraviolet light and/or visible light in a particular portion of the light spectrum, typically in the wave length range of 200 nm to 400 nm.

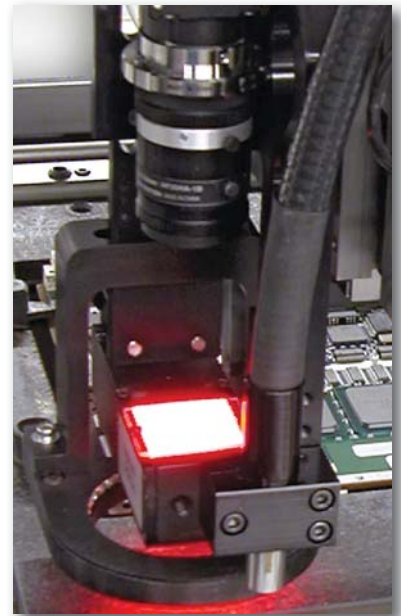
***Advantages to using these products are that typically no mixing is required, and you get the added convenience of curing on demand with a low temperature and short cure time.***

**Spot Cure Process** For dispensed UV materials, curing may be accomplished by the spot cure method where a light wand and controls are integrated into the GPD system. Once the material is dispensed, the UV wand is moved over the material at a programmed height and speed for a "spot cure". Common applications include curing a dam before applying the fill. In spot cure applications, the material is supplied from syringes up to 55 cc in volume.

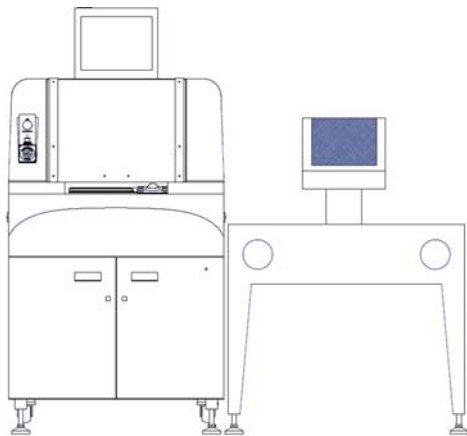
**Flood Cure Process** For quicker cycle times, an inline dispenser may be coupled with a conveyerized light tunnel. The light tunnel has the advantage of curing multiple parts at one time. These tunnels offer safety shielding for the operator. In many cases, the intensity of the light and size of the conveyor tunnel can be optimized for a balanced dispense and cure process. Typical applications for the flood cure process, in addition to the above mentioned application, include large area gaskets. This configuration usually calls for a bulk feed system to be integrated into the GPD dispenser which can be accommodated with ease. Larger volumes require the material to be bulk fed from an external reservoir. External reservoirs provide material at a constant pressure and incorporate level sensors to notify the operator that it is time to add material.



LEDs after dispense and cure



Spot Cure Wand configured to a DS Series System



Flood Cure for quicker cycle times with GPD Dispenser inline with conveyerized light tunnel

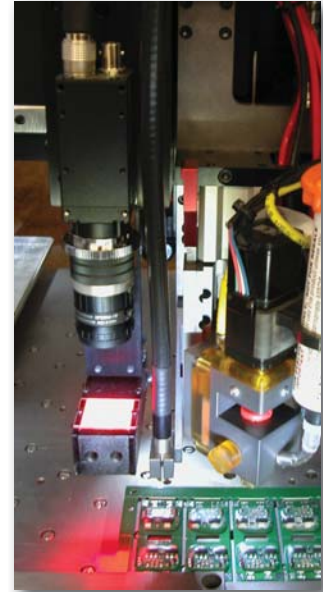
GPD's flexible platform and versatile software make the UV dispense process painless. Additional features contributing to a successful process are UV windows, automatic needle wipe, material timers to prevent a premature cure, and a calibration station for repeatable setup. A weight scale is available for volume verification.

## EQUIPMENT

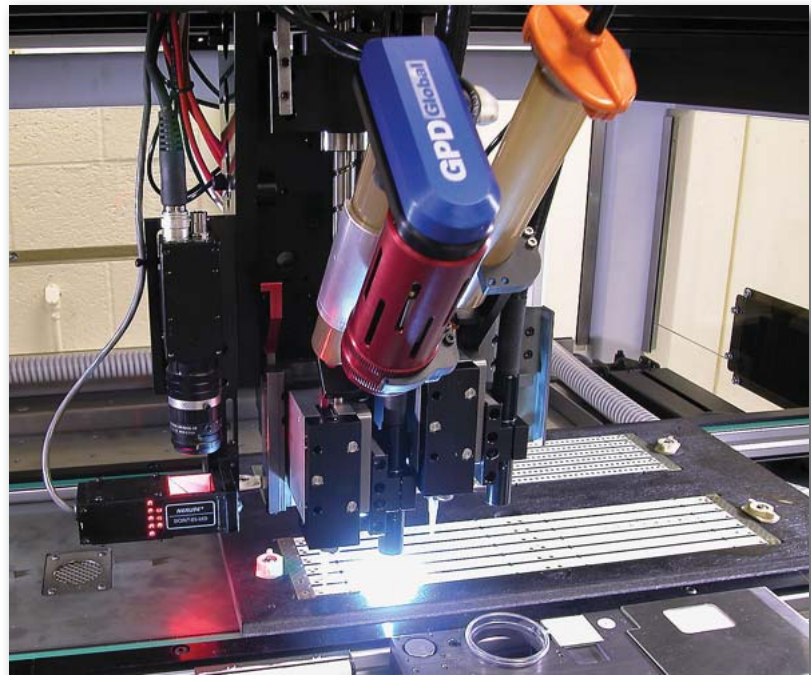
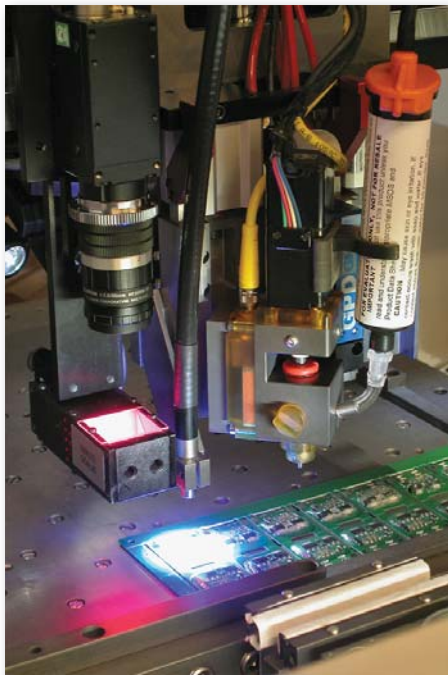
The GPD Global® MAX Series and DS Series™ dispense systems are well suited for UV dispensing; both systems are available in standalone or inline configurations.

The **DS Series™** equipment is recommended for products that require a work area up to 24" x 24" (609 mm x 609 mm) and offers capability for 3 valves. The **MAX Series** offers 14" x 12" (356 mm x 305 mm) work area and can accommodate up to 2 valves. GPD Global has an assortment of valves suitable for UV materials including Auger, HyFlo, and Needle Valve. Valves are chosen based on the application requirements.

Incorporation of UV curing systems into GPD Global® dispensers is a cost effective way to achieve accurate, repeatable results. GPD will integrate the system of your choice into our MAX or DS Series of dispensers with the GPD Global® FLOWare® software operating system. With a complete package solution, you are ensured of a successful process.



Two-step process completed using a single system



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**GPD Global**