UV post-cure for 3D printing

Recent developments in 3D printing (also known as additive manufacturing or rapid prototyping) have popularised the SLA (stereolithography) methodology of laser printing in a bath of UV light curable photopolymer resin. This process effectively “grows” a component in the bath so that as it is withdrawn, each successive layer is light cured. It is a process which can be many times faster than other 3D printing technologies, but does frequently need an additional UV post-cure to ensure the component attains full strength and that any excess polymer that does not drain away in the build or growth process is completed cured.

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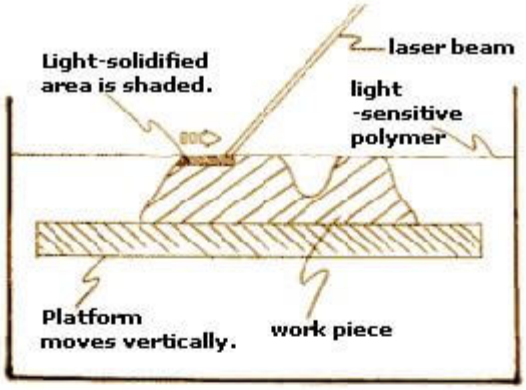

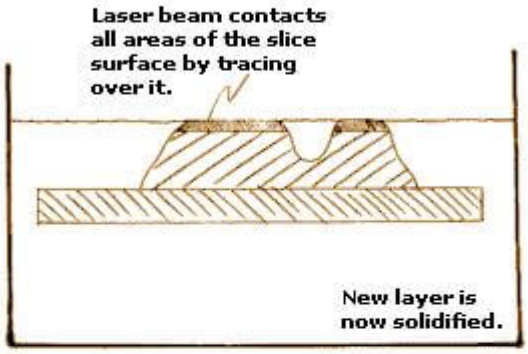

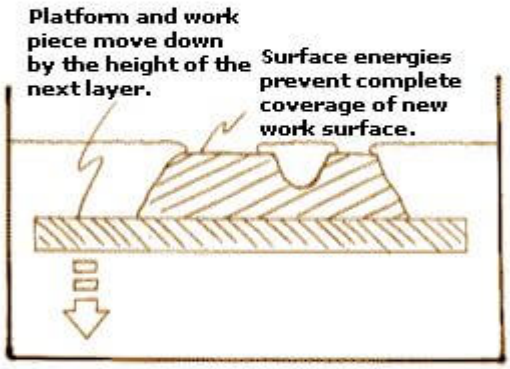

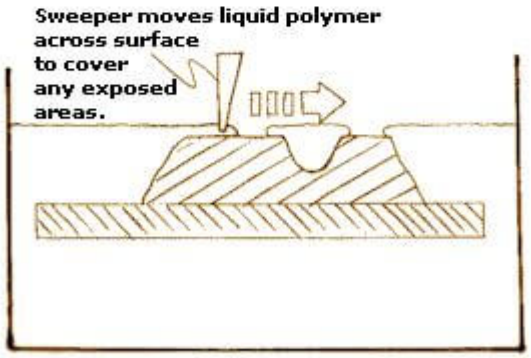

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Dymax UV flood lamp and spot curing systems are ideal, both for this post-curing application, and also for subsequent re-working and repair.

Dymax UV light-curing flood lamp systems are designed for area curing or for curing multiple assemblies at once. These flood lamp models use a powerful UV light curing lamp (up to 225 mW/cm2) for fast curing over a 13 cm x 13 cm area. For rework or repair, such as curing drain-hole fills, assembling larger assemblies, or repairing cracked or broken models, the BlueWave® 200 3.0 spot-lamp system is an ideal solution. This unit is a high-intensity lamp that emits energy in the UVA and visible portion of the spectrum (300-450 nm) and is well suited for either manual or automated processes.

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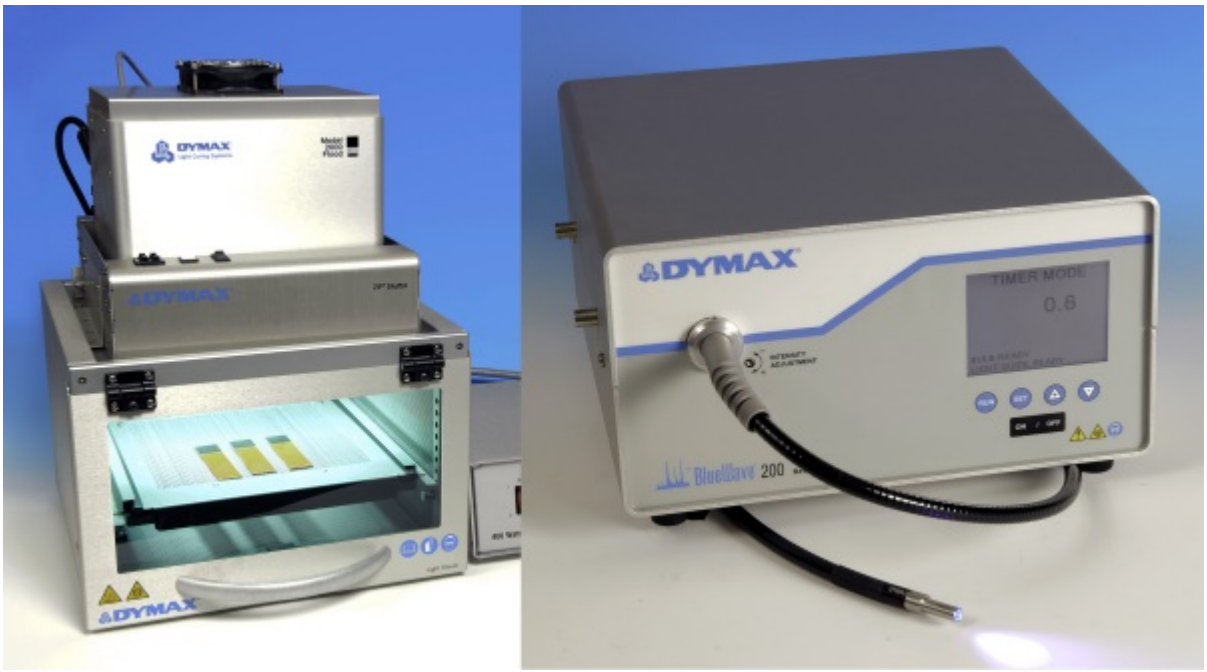

Dymax UV flood and spot lamps may be used as bench-top curing systems or integrated into automated production lines where they provide the industry’s most consistent light intensity over their 2000 hour bulb warranty.

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