

WRAP Prime

Unused & Expired Resin Printing
with DLP Curing



Solving Industry Gaps

When using DLP technology, parts are only partially cured as printed. The printed parts require a secondary UV exposure to fully cure and adhere to the material manufacturer's specifications. Onulis has identified the following critical gaps in the UV post-curing systems currently available.

Industry Gap	Description	Onulis' Solution
Unwanted Heat Generation	Some solutions use broad spectrum bulbs, which provide unwanted, uncontrolled heat that can warp parts. Manual part rotations are required to avoid warpage.	Onulis' system uses high-powered, focused UV lights, fully curing parts per manufacturer's specifications without emitting infrared rays that give off uncontrolled heat.
Incomplete UV Part Exposure	No current market offerings provide UV exposure to the bottom of parts, so manual rotation is required.	Onulis' unique system architecture simultaneously exposes all sides of a part to UV light.
Manual Intervention Required	All current solutions require users to manually rotate a part to cure all sides, and avoid warpage.	Onulis provides fully automatic operation.
Lack of Certification, Auditing, & Corrective Action	Today's offerings do not support ISO 9000 Certified users by providing per unit documentation with each system to define wavelength, irradiance values, and consistency across the curing platform. There are no means to audit the system's performance over time or a solution for corrective action.	Onulis provides three key elements to ensure lifetime compliance with material manufacturer's specifications: 1. <u>Certification</u> Each WRAP Prime is measured, calibrated, and documented with individual specifications provided with each unit shipped. 2. <u>Auditing</u> A Self Audit Kit is available for users to complete in-house audits of their system's performance. Measurement instrumentation, documentation, and a custom fixture included. This is particularly essential for companies that are ISO 9000 Certified. 3. <u>Corrective Action</u> A UV Recharge Pack is available to easily replace a system's lights and drivers in the event a system falls out of specification.
Incomplete Workflow	Today's offerings do not offer a comprehensive solution for the DLP workflow.	Onulis provides a bundle solution for the complete DLP post-processing workflow: <ul style="list-style-type: none">• Cleanpoint - Sequential Wash Station• WRAP Prime - UV Post-Processing• Crosslink - Thermal Post-Processing



WRAP Prime

RESIN PRINT MODE

In Print Mode, the Onulis WRAP Prime automatically converts unused UV resin into fully cured plastic stock for a variety of uses and is safe for disposal as standard household waste.¹

Using our patented WRAP® (Waste Resin Axial Printing) technology, the system is the first technology-driven solution for handling UV waste resin, allowing users to avoid time-consuming homespun curing solutions and expensive hazardous waste outsourcing that can draw unwanted oversight from the EPA.

DLP CURE MODE

In Cure Mode, the WRAP Prime post-cures DLP parts at production speeds. Using high-powered UV lamps and a transparent rotating curing table, WRAP Prime offers automatic and complete part curing. To ensure that the material manufacturer's specifications will be met, each WRAP Prime unit goes through a multi-step calibration, inspection, and documentation process. The process is validated by major material manufacturers, with recommended cure times easily available through a QR code on the system's curing apparatus.

FEATURES

RESIN PRINT MODE

- Automatic timing function and integrated safety features enable unattended operation.
- WRAP Prime's axial printing architecture minimizes overall size and cost.
- Through leveraging used or expired resin, operation costs are virtually zero.
- Patent pending drip comb produces individual droplets for efficient curing.
- Simple gravity-driven drip system avoids use of pumps, valves, and hoses, which are susceptible to clogs.
- Onboard carbon filtration system controls fumes.

DLP CURE MODE

- Curing process validated by major material manufacturers.
- Fully automatic, hands-free operation.
- Microprocessor controlled temperature and duration avoids part warpage.
- High irradiance LED light arrays.
- Converts from Print to Cure in < 60 seconds.
- LCD user interface.
- Adjustable timing functions.

RELATED PRODUCTS

CLEANPOINT
Sequential Wash Station

CROSSLINK
Thermal Post-Processing

**SELF AUDIT KIT &
UV RECHARGE PACK**

SPECIFICATIONS

Print Mode Specifications

Resin Printing Compatibility ²	PolyJet, Stereolithography, & DLP
Vat Capacity	7.5L
Resin Throughput	Cures 30 days' worth of waste resin in 6 hrs.
Printed Plastic Stock	14 in. dia. x 8 in. dp. cylinder

Cure Mode Specifications

Maximum Part Size	Automatic Rotation: 9.5 x 4 x 6 in. Manual Rotation: 9.5 x 11.5 x 5 in. ³
Cure Time	5 - 30 minutes; material dependent. All recommended cure times available on the Onulis website. Process validated by major material manufacturers.
Irradiance Values	± 5 mW/cm ² from 78 mW/cm ²

System Specifications

System Size ⁴	Standard: 26.5 x 16.5 x 28.7 in. Extended: 26.5 x 16.5 x 39.2 in.
System Weight	60 lbs.
Operating Conditions	Temperature: 65 - 95°F (18 - 35°C)
Power Requirements	100 - 120 VAC, 50 - 60 Hz, 6A, 1 phase

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¹ Consult your local municipality to confirm disposal of hard plastic waste.

² Inquire regarding unspecified materials.

³ Larger parts require manual rotation with optional curing table.

⁴ Clearance above machine required for loading.

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