

PowerSeal - Chip Module Encapsulation Machine

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Automatic chip module encapsulation with unbeaten quality and highest throughput

The **PowerSeal** sets new benchmarks for **high-speed encapsulation of chip modules**: extremely compact and powerful, with a throughput of up to 40,000 modules/hour using two 16-fold dispensing heads and UV LED curing technology.

UV LED curing saves production cost by lower energy consumption and long LED lifetime without aging. The curing is much faster compared to standard UV discharge lamps and the start-up time is reduced by providing full power directly after switching on. This enables high-speed production with significantly lower cost per module, resulting in an **unsurpassed value for money**.

Alternatively, the machine can also be equipped with UV discharge lamps or heating units. Diverse nozzle plates are available for the different module tape pitches. Thermal curing resins such as black epoxy can be processed optionally. Reliable process stations and **automated inline quality control** ensure **highest quality at a minimum of cost per module**.



Advantages:

- High-speed chip module encapsulation with up to 40,000 modules/hour
- The flexible machine design and the powerful software allow different process modes such as fill, dam & fill, or fill & fill
- Various solutions for curing of the cast resin can be integrated, such as UV discharge lamps, heating units, or power saving UV LEDs
- The use of UV LEDs is environmentally friendly because they produce much less heat and no ozone compared to UV discharge lamps
- Graphical user interface with touch screen for easy operation
- Easily accessible components, less wearing parts and the use of standard parts reduce the cost of service and maintenance
- Cast resin preparation for fill material can be done by an optionally available external preparation unit for mixing, evacuation and heating of special resins
- Small footprint

Features:

- Automatic spooling system for standard 35 mm module tapes with double input reel for continuous production without interruptions caused by module tape change
- Optional module tape splicer
- 12-fold and 16-fold dispensing heads are available. A maximum of two heads can be installed
- High dispensing accuracy: dispensing parameters and movement of dosing heads are programmable
- Heating of module tape and dispensing heads

- Automated inline quality control along with long lifespan and long-term stability of the UV LEDs ensure highest quality of glob top encapsulation without operator intervention
- Control systems for module height and geometry are optionally available
- Faulty modules can be marked with a reject punch hole
- Process data acquisition and statistics

Applications:

Fully automatic encapsulation of wire-bonded chips on 35 mm module tapes, including UV curing and inline quality control. IC module production for smart cards, ID cards, banking cards, GSM / SIM cards, and dual interface cards.

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