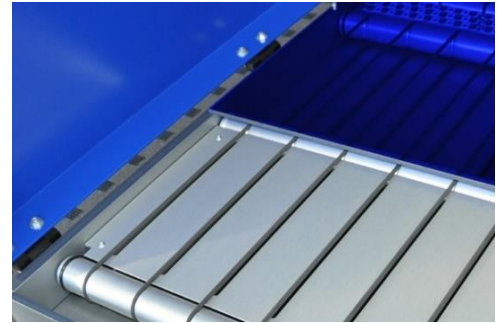


UV-LED Curing System U-200 & U-300



The POWATEC **U-series** are the ideal solutions for curing UV-sensitive tapes/foils. Our customers have relied on these devices for over 20 years to give them high quality results, a great degree of flexibility, and minimal maintenance requirements which is what makes them international industry standards in clean room applications.

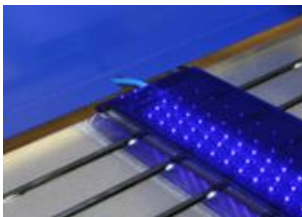
The POWATEC Curing systems are built to cure wafers mounted to frames up to 300 mm in diameter. By using LEDs instead of traditional means, there are numerous advantages that are gained including longer lifetime, lower maintenance costs, no warm-up time, and no ozone gas or dangerous mercury gas generation. Simply open the cover and put the wafer on the left side of the conveyor. Push the start button and the wafer will be transported across the LED unit. By means of a digital potentiometer, the conveyor speed can be adjusted in small intervals ranging from 0 to 25 mm/s enabling fully adjustable curing times between 10 seconds and 3 minutes. The required energy dosage is derived from a conversion table and allows for values between 145 mJ/cm² to 1520 mJ/cm².



Key Product Features

- ✓ Table-top device
- ✓ Applicable for clean room applications
- ✓ Minimal maintenance (< \$100/year)
- ✓ Lifetime of over 10 years
- ✓ No IR emission, no warm-up time, and no ozone gas or dangerous mercury gas generation
- ✓ Range of energy dosage: 145 mJ/cm² to 1520 mJ/cm²
- ✓ Fully adjustable curing time range from 10 seconds to 3 minutes
- ✓ 365 nm in UVA range
- ✓ Output of up to 200 wafers/hour, depending on type of UV foil

Additional Options



Nitrogen Supply

Originally, nitrogen was used to avoid ozone formation with mercury vapor lamps. However, experience shows that regardless of the exposure technology, the adhesion tape at the tape edge provides better curing results at reduced oxygen concentration. The nitrogen supply is provided by an optionally installed Plexiglas directly above the LED bar. There are no special requirements for the nitrogen supply (max 6 bar).



UV Measurement Tool

The disc-shaped measuring device is optimized for the application of the U-Series by placing it on the conveyor like a wafer. During the exposure process, the intensity is integrated and displayed in radiant flux in mJ/cm². The measurement allows a relative comparison over time.



Safety bridges for small substrate < 6" & Distance plates

The safety bridges ensure that the substrate does not touch the sensitive LED's and the Distance plates allow to increase the Gap between the conveyor and the blue protection glass to allow substrates of 6mm or Grip Rings to be conveyed.

Technical Specification

	U-200	U-300
Frame size	up to Ø8" (DTF 2-8-1)	up to Ø 300mm (DTF 2-12)
Wafer size	up to Ø 8" (with frame) up to Ø 300mm (without frame)	up to Ø 300mm (with frame) up to Ø 400mm (without frame)
Wavelength	365 nm ± 3nm	365 nm ± 3nm
Maximum substrate thickness	5mm (standard) >5mm (possible with distance plates)	5mm (standard) >5mm (possible with distance plates)
Dose	165 - 825 mJ/cm ²	145 - 1520 mJ/cm ²
Homogeneity of dose	+/- 10%	+/- 10%
Radiant flux per LED	750 mW	750 mW
Num. of LEDs	48	72
Width	691 mm (27.20")	996 mm (39.21")
Depth	354 mm (13.94")	456 mm (17.95")
Height	163 mm (6.42")	173 mm (6.81")
Weight	18.2 kg (40.12 lbs)	25 kg (55.11 lbs)
Input voltage/frequency	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz
Clean Room Application	Up to ISO 4-5	Up to ISO 4-5
Conformity	CE Certified	CE Certified

Related Products from POWATEC



Manual Wafer Mounter P-300

Mounting of up to 300mm Wafers onto 300mm Film Frames



Vacuum Wafer Mounter V-300

Mounting of up to 300mm Wafer onto 300mm Film Frames



Manual Wafer Laminator L-300

Laminating of up to 300mm wafers with protective and back grinding film



Manual Wafer Expansion ETM-300

Wafer expander up to 300mm wafer, frame, and grip ring.