Precision Dispensing Systems for LED Assembly Applications

Light-emitting diode (LED) products are used in indicator lamp products, and have progressed for use in many commercial and residential lighting applications.

LED applications include aviation lighting, vehicle and truck lighting, signs, flashlights, traffic signals, solar lamps, appliance lighting and home lighting. This list continues to grow as efficiencies for LEDs increase.

Nordson Sealant Equipment produces precision dispensing equipment for LED manufacturers. Two- and one-part adhesives and sealants, such as epoxies, silicones and polyurethanes are used in product assembly applications using LEDs. These applications include potting the LED lamp modules, bonding the LED module components together, sealing the LED module and gasketing the LED components.

Additional products supporting LED lighting also require precision dispensing equipment. Electrical cables and PC boards have potting requirements, and storage or power batteries also require adhesive and sealant dispensing.

When manufacturing LED products, two dispensing systems are most common. For one-part materials, a precision metering valve is usually used. For example, we recommend multiple 2600-003 Series Meter Valves or Micro-Meter valves, supplied by a single pressure tank with low-level material sensors.

Customers dispensing two-part adhesives and sealants in small volumes at low, medium or high cycle rates often opt for the Nordson Sealant Equipment Micro-Meter 2 Series Dispensing System. This system offers three selections of drive motors for meeting process requirements – pneumatic, air-over-oil and servo motor. Two-part valves are available with standard and bayonet disposable static mixers for automatic or manual dispensing.