NobleLight®

Infradry Protec

Advanced Solutions for Thermal Processes

Numerous manufacturers benefit from the optimization of thermal processes with our infrared technology. For processes in extreme environment such as processes involving solvent based material, we have developed Infradry® Protec to help speed up the heating process while reducing energy consumption.

Key Features

- Dependent on solvent material, adjustable wavelength for best drying result
- Flexible in module length and width based on your process requirements
- Optimized cooling via simulated air management results
- Controls possible dependent on demand



Application Scenario for Battery Cathode Manufacturing

Trends and challenges of current cathode manufacturing process:

- The commonly used cathode electrode material is lithium iron phosphate (LFP), with NMP as solvent
- There is an ongoing trend of increasing thickness of the cathode coating to increase battery capacity
- Small LFP particles, thick coatings, and low latent heat of NMP, often lead to cracking of cathode coatings
- This is mainly due to inter-molecular forces that is impacted by the evaporation time and rate, which can not be controlled accurately if using convection drying
- Another challenge with the traditional convection drying method is the limitation of the line speed

Benefits of using our infrared solutions:

- We can design our infrared solutions to flexibly adjust to the needed evaporation time and rate to prevent the forming of cracks
- It has been proven by theory and practical tests with customers that our solution can effectively prevent cracks in the cathode coatings
- Our infrared solution can shorten heating time, and hence shorten oven length and increase line speed
- When using an infrared product in an NMP atmosphere, anti-explosion precaution is needed - we have working experiences to define the best solution for you

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For a complete listing of our global offices, visit www.excelitas.com/locations

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