DLS-ECO SERIES

Heating and Drying Diode Laser Solutions

EXCEPTIONALLY EFFICIENT
HEATING & DRYING INDUSTRIAL SYSTEMS

NEW

FEATURES

- > 52% Energy Efficient
- Compact Footprint
- Long-life IPG Components
- Simple Water Cooliing
- Low Carbon Footprint

APPLICATIONS

- Drying: Li-ion Battery Slurry, Paint, Powder Coating
- Annealing/Curing: Industrial Coatings
- Semiconductor: Wafer Heating

The NEW DLS-ECO Series announces the arrival of solid-state heating to replace less efficient infrared bulbs and environmentally unfriendly gas fired furnaces. Extremely high power conversion efficiency along with exceptionally low impact on the ambient factory environment make the Cost-of-Ownership and Return-on-Investment of a diode heater compelling.

A diode heater operates cold, wasting no energy warming insulating walls or the factory floor. Rather, **all energy is highly directed as laser light onto the media being processed**. Between batches the diode heater is off, not idling, so no energy is consumed when it is not needed.

Laser light dries below the surface providing a more efficient process than is possible in a thermal convection oven, meaning a **DLS-ECO solution is up to 4X smaller and up to 4X faster**. The open and cold environment is inviting to thermal metrology enabling tighter process control benefitting from instantaneous, on-the-fly temperature adjustments. The DLS-ECO is best suited to dry industrial coatings such as battery slurries, paint or powder coatings, and are employed when extremely tight process control is needed, such as semiconductor wafer heating.

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Optical Characteristics	DLS- 22000-ECO	DLS-30000-ECO	DLS-40000-ECO
Wavelength, nm	960-985		
Mode of Operation	Continuous Wave/Modulated		
Modulation Frequency, kHz	0-5		
Max. Average Power, W	22000	30000	40000
Power Tunability, %	10-100		
Power Stability*, %	<±2		
Laser Illumination Area**, mm	1300 × 780		
Power Density Uniformity, %	±5		

* Over 2 hours
** Illumination area may be tailored to meet customer requirements.

General Characteristics	DLS- 22000-ECO	DLS-30000-ECO	DLS-40000-ECO
Cabinet Dimensions (W × D × H), mm	1007 × 806 × 805		1007 × 806 × 1055
Supply Voltage, VAC	400-480 3-phase, 50/60 Hz		
Weight, kg	400	500	650
Cooling	Water		
Energy Efficiency, %	52 Typical		

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