SEPTEMBER NEWSLETTER

Laser cleaning on battery cell

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The cleaning of a battery of the electrode /electrolyte injection hole is an important process of battery module assembly. Laser cleaning can remove impurities on the electrode surface and residual electrolytes in the injection hole, creating good conditions for welding, and thus improving welding quality.

Why use a laser for cleaning?

Less damage: Lasers are environmentally friendly and safer for employees when guarded properly. Laser cleaning is a non-contact process, that produces little to no damage to the part being cleaned.

Quality improvements: Laser cleaning of the battery anode and cathode before welding makes an extremely clean surface for joining helping to ensure quality, repeatable results. Traditional cleaning techniques may leave debris if not properly used.

Faster and safer: Laser cleaning is a significantly faster process than traditional cleaning. Reports suggest that it can be up to 15 times faster. In addition, the traditional technique produces debris that may be harmful to breathing requiring additional equipment or cleaning steps.

Examples of laser cleaning on battery cell lid

It is necessary to use high frequency parameters for efficiency requirements.

Parameters: JPT M7 200W laser

Lens: F160, Speed: 5000mm/s, Pulse width: 200ns, Frequency: 200kHz

Specification of M7 200W

Parameter Unit	Unit	M7 200W
M^2		<1.6
Average Output Power	W	>200
Maximum Pulse Energy	mJ	1.5
Pulse Repetition Rate Range	kHz	1-4000
Pulse Width	Ns	2-500
Output Power Instability	%	<5
Cooling Method		Air-cooled
Power Supply Voltage(DC)	V	48
Power Consumption	W	<880
Central Wavelength	Nm	1064
Emission Bandwidth@3dB	Nm	<20
Polarization		Random
Anti-Reflection Protection		Yes
Output Beam Diameter	Mm	7.0±0.5
Output Power Tuning Range	%	0 ~ 100
Ambient Temperature Rang	℃	0 ~ 40
Storage Temperature Range	℃	-10 ~ 60
Dimensions	mm	430*351*133
Weight	Kg	24.8

This table is for reference only, please contact us for more details.

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