

Marking

Marking Electronics Epoxy

Our range of redENERGY Pulsed Fiber Laser can be used to lightly mark the black electronic grade epoxy used on a variety of components. The material is widely known to burn and bubble under most Laser marking applications. However, our MOPA design allows just the right energy to be applied to this material.

In this case the pulse duration was just 50 nanoseconds and the pulse energy only 0.26mJ. A Low Mode redENERGY L-type 20W Laser utilised Wave Form 26 at 26kHz to gently bleach the plastic. Scan speeds were 2000mm/second to enable minimal spot overlap leaving little surrounding burn or melt area. This created an evenly marked surface that followed the texture contours of the plastic as molded.

A typical mark with logo and graphics is performed in just a few seconds or less. The process uses a standard 10mm scanhead with a FT254 F-Theta. The L-Type Low Mode beam, combined with standard F50 Beam Expanding Collimator creates a large 100 micron spot with sufficient power density to gently bleach the plastic. Only a single pass proved necessary for this operation. Fill density was set at 90 microns.

This technique generates almost no debris nor does it etch deeply into the package, therefore minimising risk of damage to any underlying components.

Related Product



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redENERGY G4



Application Parameters

Type	G4 20W HS-L
Power	6W
M ²	1.8
Beam Ø	6mm
Scanner/Lens	10mm aperture / 254mm F – theta
Energy	WF26 0.26mJ @25kHz

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