

Marking

Titanium Colour Marking

Titanium is used within the aerospace, medical and jewellery industries due to the material being lightweight, strong and highly resistant to corrosion. Colour marking of titanium is most commonly used in jewellery applications, as using a laser allows for a permanent mark which is biocompatible and can also mark three-dimensional surfaces.

The challenge with titanium marking is to generate a high contrast mark whilst causing minimal thermal damage to the surrounding surface and also achieve a wide colour spectrum.

By controlling pulse duration, with variations of high frequency and low scanning speed, the user is able to achieve high quality colour marking. Thermal management defines the colour of the mark on the material, and varying the pulse frequency defines the intensity and contrast of the colour.

Depending on the grade of titanium, certain shades of red (magenta) and blue (cyan) are very easy to mark with very high quality.

Related Product



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redENERGY G4



Application Parameters

Type	G4 20W EP-Z
Power	20W
M ²	<1.6
Beam Ø	60um
Scanner/Lens	10mm/254mm FL
Energy	WF10 90kHz @ 50mm/s

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