

专业防伪炫彩镭射机

Professional anti-counterfeiting color laser machine

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★ 设备外观 Equipment appearance



★ 激光全息防伪市场发展现状及前景分析

Laser holographic anti-counterfeiting market development status and prospect analysis

激光全息技术在当前所有的激光技术应用中占的比重不大，但全息技术与我们的生活却息息相关，比如医药、食品、轻工产品、化妆品、银行证券等的防伪商标，立体感更好的全息影像、立体电影、VR、AR、展览等，同时在军事侦察、科研等方面也有重要的应用。随着激光全息防伪企业公布各自财报，OFweek激光网将对这一行业概况进行讲解与分析。

Laser holographic technology accounts for a small proportion in all current laser technology applications, but holographic technology is closely related to our lives, such as medicine, food, light industrial products, cosmetics, bank securities and other anti-counterfeiting trademarks, three-dimensional hologram, three-dimensional film, VR, AR, exhibition, and so on, while in military reconnaissance, scientific research and other aspects also have important applications. As laser holographic anti-counterfeiting companies announce their financial reports, OFweek laser network will explain and analyze the general situation of this industry.

★ 激光全息防伪市场发展现状及前景分析

Laser holographic anti-counterfeiting market development status and prospect analysis

激光防伪又称激光全息防伪，其技术包括激光全息图像防伪、加密激光全息图象防伪和激光光刻防伪技术三方面。其主要的产品有防伪膜和防伪纸两类，具体可将防伪膜细分为激光全息防伪转移膜、复合膜两类，防伪纸可细分为激光全息防伪转移纸、复膜卡两类。

Laser anti-counterfeiting, also known as laser holographic anti-counterfeiting, includes three technologies: laser holographic image anti-counterfeiting, encrypted laser holographic image anti-counterfeiting and laser lithography anti-counterfeiting. Its main products are two categories of anti-counterfeiting film and anti-counterfeiting paper, which can be subdivided into two categories of laser holographic anti-counterfeiting transfer film and composite film, and anti-counterfeiting paper can be subdivided into two categories of laser holographic anti-counterfeiting transfer paper and laminated film card.

★ 激光全息防伪市场发展现状及前景分析

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激光全息防伪技术已升级至第四代。第四代技术制作的激光模压全息图系列产品是一种技术与艺术相结合的高科技产品，目前主要用于商品的防伪标贴、防伪包装以及身份证、信用卡、护照、货币、重要文件等的防伪标签。我国激光全息防伪技术起步较晚，但近年来在生产和使用上有了很大的突破“应用防伪商标，保护企业产品”、“应用防伪材料，提高产品档次”已被越来越多的企业所接受。

Laser holographic anti-counterfeiting technology has been upgraded to the fourth generation. The fourth generation technology produced by laser molding hologram series products is a combination of technology and art of high-tech products, currently mainly used for anti-counterfeiting labels, anti-counterfeiting packaging and identity cards, credit cards, passports, currency, important documents and other anti-counterfeiting labels. China's laser holographic anti-counterfeiting technology started late, but in recent years, there has been a great breakthrough in the production and use of "application of anti-counterfeiting trademarks, protect enterprise products", "application of anti-counterfeiting materials, improve product grade" has been accepted by more and more enterprises.

★ 激光全息防伪市场发展现状及前景分析

Laser holographic anti-counterfeiting market development status and prospect analysis

激光全息防伪膜的下游包括公共安全防伪、包装材料、新能源等领域，其中包装材料市场规模最大、需求最旺，影响最为显著。对卷烟、酒、化妆品、药品、食品等日用消费品生产企业而言，为应对日益激烈的市场竞争，产品的包装设计也愈发需要重视。 The downstream of laser holographic anti-counterfeiting film includes public safety anti-counterfeiting, packaging materials, new energy and other fields, of which packaging materials market is the largest, the most demanding, and the most significant impact. For the manufacturers of daily consumer goods such as cigarettes, wine, cosmetics, medicines and food, in order to cope with the increasingly fierce market competition, the packaging design of products needs more and more attention.

★ 激光全息防伪市场发展现状及前景分析

Laser holographic anti-counterfeiting market development status and prospect analysis

外观靓丽多彩的包装能吸引顾客，激发顾客的购买欲望，促进产品的销售，同时，企业也可将各类复杂图案和光变色信息印制在包装中，增强产品的防伪性能。此外，在新能源、新材料等领域，利用全息光学防伪产品制造技术，在太阳能电池表面形成纳米深纹结构，可减少反射作用，提高能量转化效率。

Beautiful and colorful packaging can attract customers, stimulate customers' desire to buy, promote product sales, at the same time, enterprises can also print all kinds of complex patterns and light discoloration information in the packaging, enhance the anti-counterfeiting performance of the product. In addition, in the fields of new energy and new materials, the use of holographic optical anti-counterfeiting product manufacturing technology to form nanoscale deep grain structures on the surface of solar cells can reduce reflection and improve energy conversion efficiency.

★ 优势 Advantage

激光幻彩打标是利用超快激光器的高峰值功率，在空气中产生电离效应，使金属表面产生干涉条纹，并作用到金属表面上，使表面产生致密的物理条纹，当这些条纹反射可见光时，会产生光的色散，呈现五颜六色的幻彩效果，色彩随观察角度变化，如彩虹般璀璨，具有极强的视觉冲击力，其变换多端的色彩和角度互异性也具有一定的防伪属性。

Laser phantom marking is produced in the air using the peak power of an ultrafast laser Ionization effect, causing interference fringes on the metal surface, and acting on the metal surface, Causes the surface to produce dense physical streaks that, when reflected by visible light, produce the dispersion of the generated light, presenting a colorful magic color effect, the color changes with the viewing Angle, As bright as a rainbow, with a strong visual impact, its changing colors and angular reciprocity also has certain anti-counterfeiting properties

★ 优势 Advantage

特殊光路设计和定制激光器，具有优异的光束质量；

- 1、 聚焦光斑小，提供精细镭射效果，镭射效果幻彩美观且有一定的防伪性；
- 2、 幻彩可视角度跟随镭射方向旋转功能；
- 3、 强大的控制卡和软件，使光路可动态控制幻彩效果，幻彩在多角度下都可视；
- 4、 适用于不锈钢，模具钢、镍片、金属PVD等镜面材料；
- 5、 幻彩镭射效果可以从模具上转印到产品上，适用于珠宝、金属钞，纪念币等行业；
- 6、 根据客户需求可以定制专业防伪方案。

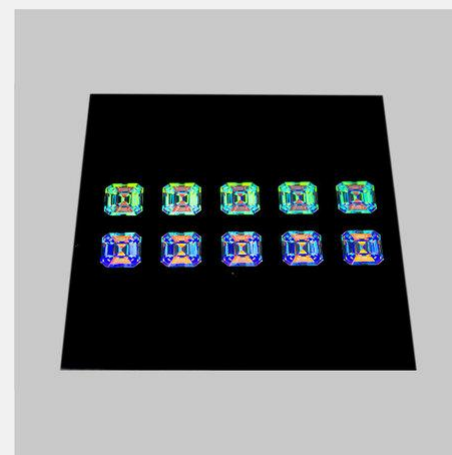
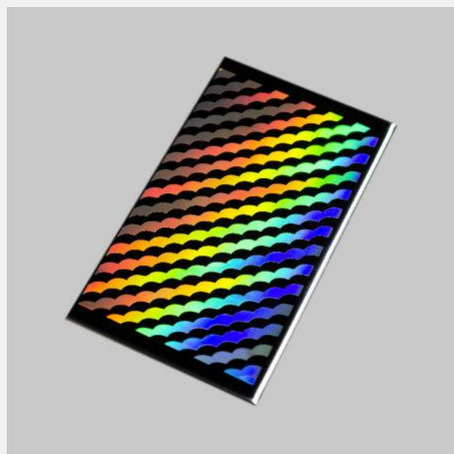
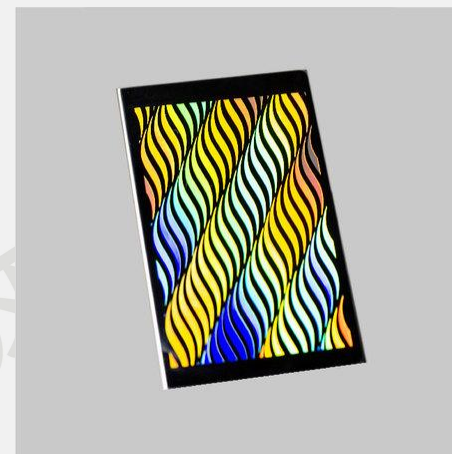
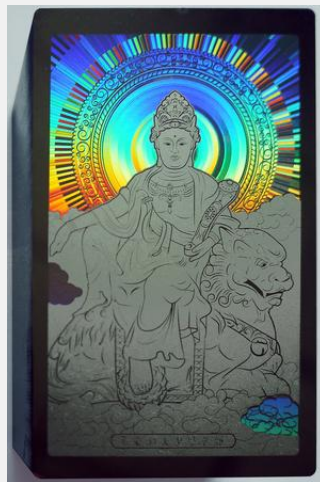
Special optical path design and custom laser, with excellent beam quality;

- 1, small focus spot, provide fine laser effect, laser effect beautiful and have a certain degree of anti-counterfeiting;
- 2, the magic color viewing Angle follows the laser direction rotation function;
- 3, powerful control card and software, so that the optical path can dynamically control the magic effect, magic color can be visible in multiple angles;
- 4, suitable for stainless steel, die steel, nickel sheet, metal PVD mirror materials;
- 5, the magic laser effect can be transferred from the mold to the product, suitable for jewelry, metal banknotes, Commemorative coins and other industries;
- 6, according to customer needs can be customized professional anti-counterfeiting solutions.

★ 技术参数 Technical parameters

技术参数 Technical Parameters	
激光输出平均功率/Laser output average Power	20 W
激光波长/Laser wavelength	1060 nm
激光重复频率/Laser repetition frequency	1-1000 KHZ
峰值功率稳定性/Peak power stability	< 5% rms
平均功率稳定性/Average power stability	< 1% rms
光束质量/Beam quality	M2 ≤ 1.2
雕刻范围/Marking area	100mm × 100mm (可定制/Can be customized)
最小线宽/Minimum line width	0.01 mm
雕刻线速/Marking speed	≤ 3000 mm/s
视觉定制系统/Visual customization system	专业贴图对应软件/Professional CCD map alignment system
冷却方式/Cooling method	水冷/Water cooling
运行环境温度/Operating environment temperature	15 – 35 °C
输入文君格式支持/input file formats	BMP、JPG、PNG、PLT等各种格式

★ 镭射加工效果图 Laser processing effect drawing



质量保障及售后服务 Quality assurance and after-sales service

- 1** 提供整机一年的免费保修服务（包括所有零配件及人工费用），终身维护；
Quality assurance and after-sales service. Quality assurance and after-sales service
- 2** 接到报修电话后1小时内做出响应，省内24小时内上门处理；
Response within 1 hour after receiving the repair call, door-to-door processing within 24 hours in the province;
- 3** 免费培训多名买方技术人员操作机器；
Free training of several buyer technicians to operate the machine;
- 4** 终身免费升级控制软件。
Free lifetime upgrade of control software.