



November 2008

UPDATES

HT9000 Green Laser Series

About us

Hypertronics is a leading manufacturer and integrator of lasers and laser-based solutions. By integrating our expertise in the area of *laser, optics, controls, vision and software*, we offer **high precision, high speed laser systems to meet tough applications worldwide.**

Founded in Singapore in 1991, foreseeing the tremendous potential of the laser technology in many industrial and research arenas, founder Mr. Buk Mum Fatt and his dedicated team have toiled hard to bring the company to where it is today.

Introducing

HT9000 Green Laser Series

Introducing Hypertronics latest *HT9000 Green Laser Series* that comes in 2 power range, 5W and 10W. With a small spot size and small heat affected zone, this laser is very effective in producing small and clean marking. Contact us to find out more!

Green Laser Application

Marking On Wafer

Product identification is important as it aid the manufacturer in tracking back the manufacturing process. With the ability to produce **permanent** and **non-contact** marking, laser is a very suitable solution for product identification. Besides the needs to be able to produce clear, visible marking, wafer marking needs to be carried out in extreme clean room environment. Hence debris-free marking is an important criterion in choosing the right laser.

In this application, Hypertronics HT9000 5W laser is used for marking on a GaAs wafer. Characters of various heights were marked on the wafer. In the image below, 1mm character were marked. The marking was inspected under a **500x** camera and we can see that no particle was generated due to the marking.

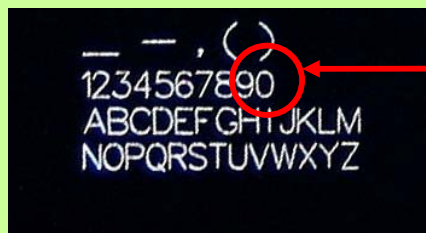


Figure 1: 1mm characters marking

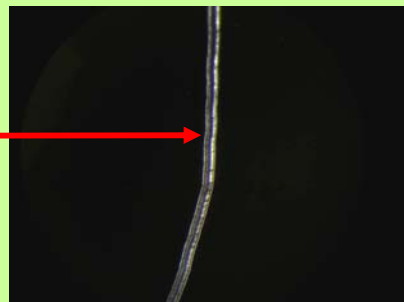


Figure 2: 500x magnification of the marking of the number '0'.
No particle is generated.

Solar Glass Scribing, P2 and P3

Thin Film Solar glass panel are usually subdivided into a large number of individual solar cells by the scribing process of selective layers. These processes also define the electrical interconnects for adjacent cells. There are usually 3 scribe processes, namely P1, P2 and P3 respectively and each process should not harm the glass substrate or the layer underneath it.

In the image below, we can see the scribing result of P3 using a 5W green laser, HT9000 series. With an excellent beam quality, we are able to achieve a uniform and continuous cut across the panel, without harming the layer underneath.

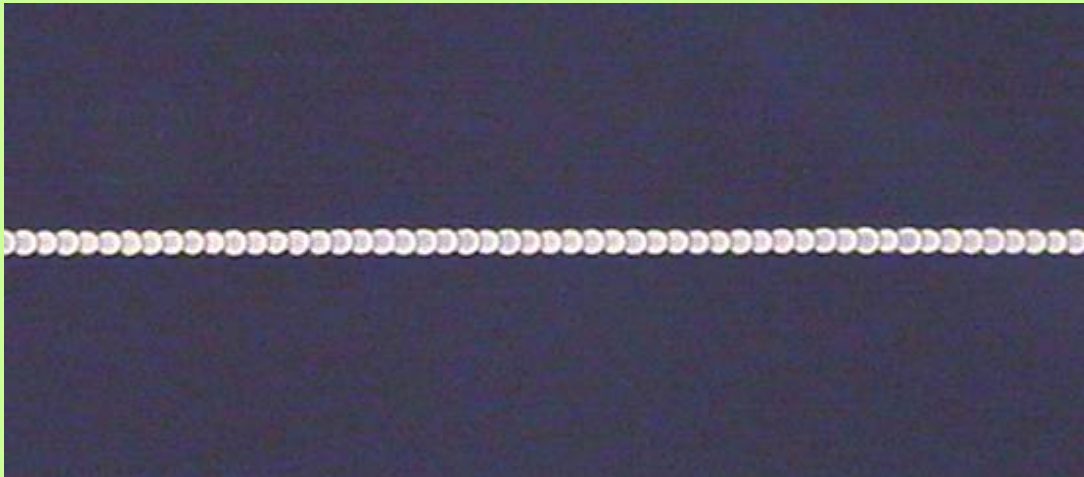


Figure 3: P3 Scribing

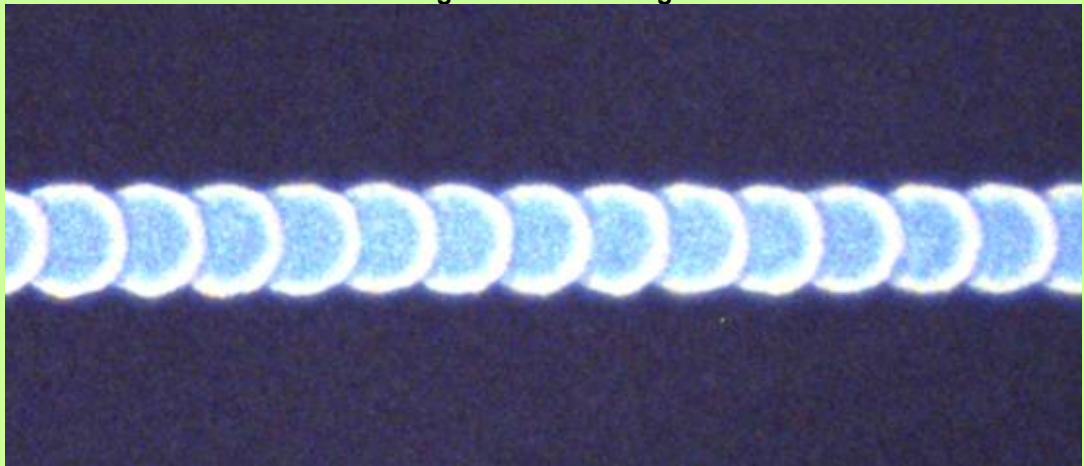


Figure 4: Zoom-in images of P3

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HYPERTRONICS PTE LTD Tel : (65) 6280 0055 Fax : (65) 6284 99101022
1 Kaki Bukit Road 1 #03-09 Enterprise One Singapore 415934

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