

Newsletter September 2011

Laser Beam Products

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Laser Beam Products celebrates 21 years in business

Laser Beam Products is an independently owned business. Our older customers will know MD Mark Wilkinson from Mirror Technique Ltd, part of ElectroX, then a pioneering CO₂ laser manufacturer.

In 1990 we purchased the assets of Mirror Technique, who had been trading many years, to set up Laser Beam Products.

Our heritage in infra red mirrors goes back to the early 1980s, and occasionally we see parts from those days still working.

In the meantime dozens of CO₂ laser manufacturers and laser system builders have come and gone, and the market has matured into a handful of global laser OEMs.

Our expertise has seen us diverge into other markets such as medical, dental, military and research. We manufacture optics for use in the UV through to TeraHertz.

Yes, we still manufacture nearly everything we sell, and nearly every manufacturing process is done "in house". Long may it continue to be so.

Packing

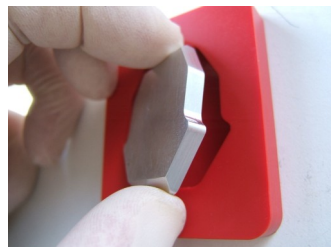
We take packing seriously at Laser Beam Products. We've designed, tested and evaluated our packing over the years in conjunction with customers to ensure that all the parts we send out arrive in perfect condition, untouched and free of all environmental contaminants.

You can read more about our practices on our blog at laserbeamproducts.wordpress.com

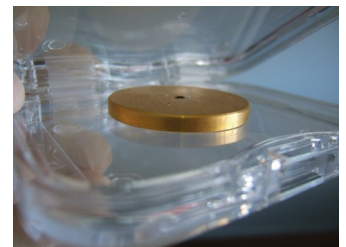
Here are a few examples of protective packaging that we regularly use.



Clear cap



Red cap



Membrane box

Rotating Mirrors



Half way through the rework

We worked with a customer recently to repair a mirror that was used with rotational speeds of up to 15,000rpm. The mirror was Aluminium based, and operated in the near infra red for the high speed engraving of printing plates.

The mirror had been carefully balanced and weighted as an individual component by the OEM, to rotate without run out. Buying a new one would be costly, but our repair technique returned the mirror to its original optical specification, and maintained the balancing needed for high speed use.



LBP blog and Facebook

We've recently expanded the ways in which you can keep up to date with our latest news and product developments.

We are on Facebook as Laser Beam Products Ltd—feel free to 'like' us if you're a regular user.

You can also follow our blog at laserbeamproducts.wordpress.com



Beam burn marks

Playing with fire!

Using Glass mirrors with CO₂ lasers...doesn't sound a good idea, and it isn't! If the mirror heats up for any reason, it is easy to see that the mirror will crack, fall apart, and allow the laser beam to go somewhere it shouldn't. For one of our customers this meant an 80W beam hit the outside of his toolbox, and set it alight.

We have seen several low power Chinese made CO₂ laser systems fitted with what appears to be gold coated Pyrex mirrors. Even at low powers, this is a very dangerous way of saving a few pounds. I can't find any legislation that prevents this, apart from good engineering practice, and simple self-preservation.

Personally I prefer being the safe side of a big lump of Copper.

Help us to help you...

Recently we were aligning our CO₂ laser calorimeter, this can measure reflectivity of mirrors to an accuracy of around 0.01%. We used some white card on the entrance aperture of the mirror mount to centre the beam with a brief burn. After alignment the mirror that was in situ during the alignment showed a low level of reflectivity 98%. Examination under a microscope showed a small amount of debris and smut on the mirror. When cleaned the mirror returned to within specification.

So...do you make low power beam burns onto adhesive tape, business cards, etc at the entrance and exits of mirrors mounts? We want to study the effects of this practice on the mirror inside the mirror mount.

So please share your experiences with us, all information will be treated in confidence.

Mark Wilkinson to address AILU forum

On 11 October Mark will be presenting at this year's AILU (Association of Laser Users) Job Shop business meeting at Trumpf's Service Centre in Luton. The theme of the day is 'How to make the best of the economic recovery'.

These meetings are always an excellent opportunity to discuss the key issues affecting our industry. We hope to get some real feedback on how others are faring in the current economic climate.

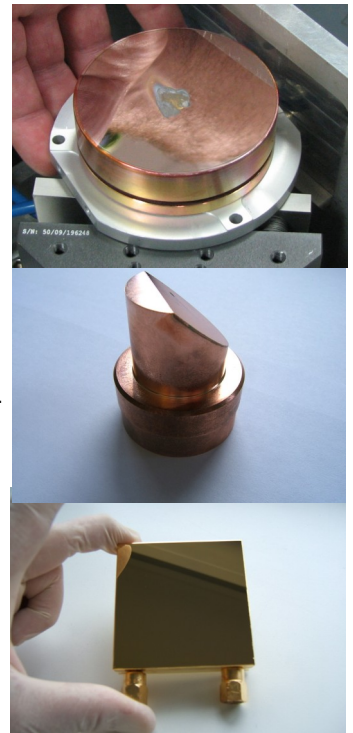
The atmosphere at the Laser Show in Munich this year was largely positive and optimistic, but has this translated in to real business? I'll be interested to find out and I'm looking forward to taking part in the fibre laser vs. CO₂ debate.

Our presentation this year is titled '**Looking after and repairing your laser optics**', something we have a lot of experience with.

We regularly repair our customers own used mirrors that we return to them as good as new. If we can't repair them for any reason there's no charge.

As far as we know this is a unique service and has proved very popular. It is cheaper and often quicker than buying new, but also re-uses valuable materials and therefore reduces waste.

We've saved customers thousands of pounds on the cost of new parts, and this part of our business continues to grow.



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