

## Product release

Freiburg, 13<sup>th</sup> February 2014

### Laser projector LP-HFD is now available with ZFSM (fibre-coupled laser technology)

**Freiburg, Germany.** As of March 2014, the manufacturer of laser systems **Z-LASER** will equip all **LP-HFD** laser projectors with its fibre-coupled laser systems **ZFSM**. The recently developed ZFSM systems utilize the inherently superior optical properties of optical fibres. This new product is especially suitable for applications with the highest requirements in projection accuracy.

The ZFSM system separates the optics from the laser source via an optical fibre with an electronics harness. The heat generated by electronics and the laser source has no more direct influence on the optics, which results in a higher projection stability.

Optical properties of optical fibres are superior compared to bare laser diodes in terms of the beam profile ( $M^2 \sim 1.05$ ) and the geometry of the dispersion. ZFSM yields small and perfectly round spots for point projection optics (e.g. 8 $\mu$ m at 30mm working distance).

#### Benefit for LP-HFD laser projectors

- Perfect circular beam quality
- Better laser power distribution within projection area
- Optics and electronics are separate parts  
→ Less thermal drift
- Standard optics focusable up to 7m;  
Tele-optic allows focussing range up to 15m (available soon)
- All LP-HFD models will now use the same galvo set with smaller mirrors  
→ LP-HFD green has now same speed as the former LP-HFD red

#### Main features of fibre-coupled laser technology:

- Supports laser diodes with red (638nm), green (520nm)
- Fibre length: 500mm by default
- Perfect beam quality:
  - Point optics PZ: Standard < 7m, Tele < 15m
  - Pointing stability: < 3 $\mu$ rad / °C
  - Spot width: down to 15 $\mu$ m at 100mm working distance
- High power stability
- Digital Modulation: up to 100 kHz



#### About **Z-LASER**

Founded in 1985, **Z-LASER** is well-known as a manufacturer of industrial laser systems for manufacturing, machine vision, measurement and medical applications as well as appliance in analysis and science. The team has its own large development department that utilizes our expertise in optoelectronics and laser technology to come up with innovative solutions. For further company details please go to [www.z-laser.com](http://www.z-laser.com).