

Pavilion Integration Laser Engine Successfully Deployed in Space



Although astronauts receive extensive training before they are sent to the ISS, performing blood analysis can be tricky in space.

The Microflow instrument used fiber optic technology to take a closer look at cells and molecules in small samples of biological liquid. Information gathered by this type of on-board device helps scientists and doctors on the ground respond to astronauts' needs throughout their flights.

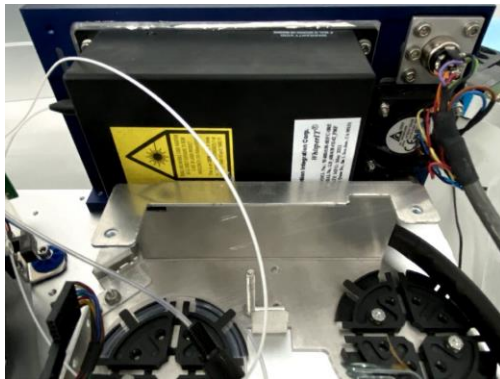


Figure 1: Lapis® Dual-Fiber-Coupled Laser Module

Key Features of *Lapis*® Laser Engine:

- Compact dual-wavelength design
- Robust fiber-coupled output
- Superior beam quality
- Ultra-low rms noise
- Integrated control electronics
- Low power consumption

The technology was tested during expedition 34 during astronaut Chris Hatfield's five-month stay aboard the Station. The Microflow fulfilled two mission objectives: 1) shrink existing lab-grade analysis where storage space is limited, and 2) extend the possibilities of remote medicine. The commercialization of this technology is now helping to reduce health care costs in point of care cytometry systems.

Biomedical and sensing instrumentation increasingly require compact and robust packaging for ruggedized environments. PIC's *WhisperIT*® laser and *Lapis*® engines deliver proven reliable results for demanding OEM customers. For further information, please contact Pavilion Integration Corporation, +1(408)453-8801, sales@pic-us.life or www.pavilionintegration.com.

REFERENCES

1. <https://www.asc-csa.gc.ca/eng/sciences/microflow.asp>
2. Picture: Canadian astronaut Chris Hadfield successfully performed the first activation of Microflow aboard the ISS on March 6, 2013. (Credits: NASA, Canadian Space Agency)