



PERSEUS-TS™ 1.5 MICRON PULSED FIBER LASERS

For Airborne Lidar Mapping Applications

Imagine the ability to generate precise light in a compact, environmentally hardened package.

Aculight's Perseus-TS™ does just that. As one of the industry's leading laser development centers, Lockheed Martin Aculight is recognized around the world for its robust, reliable and innovative lasers. And Perseus-TS™ is no exception. The 1.54 micron, high-power, pulsed fiber laser generates short pulses, 2.5-4 ns, over a wide range of repetition rates from 6-750 kHz.



Applications

- Laser Detection and Ranging (LADAR)/Rangefinding
- Surveillance
- Mapping
- Sensing
- Seed for power amp

Features

- Fully self-contained
- High beam quality
- Optical trigger out (T_0)
- Ultra low jitter
- -10°C to 55°C operation
- Compact package

Enabling Technology

Perseus-TS™ offers exceptional beam quality and is fully self contained, making it ideally suited for deployment in ground or aerial vehicle sensors. Up to 6W of average power and 60 μ J of pulse energy are available in a fiber output with $M^2 < 1.3$.

Typical Performance and Characteristics

- **Wavelength:** 1.541 μ m
- **Average power:** Up to 6W
- **Pulse energy:** Up to 60 μ J
- **Pulse width:** 2.5 to 4ns
- **Peak power:** Up to 15 kW
- **Beam quality:** $M^2 < 1.3$
- **Polarization:** Random
- **Pulse repetition frequency:** 6-750 kHz
- **Electrical power:** 24 VDC
- **Trigger:** TTL or LVDS
- **Dimensions:** 2"H x 6.3"W x 5.5"D
- **Weight:** < 3.3 lb
- **Cooling:** Conduction
- **Operating temperature:** -10°C to 55°C

Interfaces

| Item | Specification |
|---------------------------|---|
| Delivery fiber connector | FC/APC |
| Delivery fiber length | 30 cm standard, Optional 1.0 m (limited availability) |
| Optical trigger (T_0) | FC/UPC |
| Collimator | Optional 4.5 mm, 7.8 mm or 9.0 mm |
| Power conditioning | 24 +/- 0.5 VDC, 250 mV pk-pk ripple |
| Power & Control | Micro-D, 37 pin |
| Cooling | Optional heat sink and fans available |

Lockheed Martin

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Mechanical Dimensions (Inches)

