SBIR
SANTA BARBARA INFRARED, INC.
a HEICO company

Laser Range Test Module

FEATURES

- 1.06µm, 1.54µm and 1.57µm Laser Sources
- Continuous Pulsed Mode
- Electronically Triggered Mode
- Optically Triggered Mode
- First/Last Pulse Control
- Easy Alignment to UUT

OVERVIEW

The Laser Range Test Module (LRTM) from Santa Barbara Infrared comprises a Precision Pulsed Laser Source (PPLS) and a collimated optical delivery system. It features a touchscreen display controller that supports remote computer control via an Ethernet (LAN) or RS-232 (Serial) connection. An optional IEEE-488 (GPIB) interface is also available.

The PPLS provides pulsed laser output for up to three wavelengths. The pulsed laser source simulates the return for range pulse from a Laser Rangefinder (LRF) or Laser Target Designator (LTD).

The LRTM employs high resolution, large dynamic range attenuators which combined with an in-fiber calibrated photo-detector allows calibrated amplitude setting of the laser diode pulse power from 0.5nW to 1000nW. The laser pulse is delivered via a fiber coupled collimator providing a projected beam diameter of 0.3 inches at the center of the 5 inch LRTM collecting aperture. In addition the LRTM incorporates a ½ waveplate which allows rotation of the laser diode beam polarity. With this system accurate and repeatable measurements can be performed on receivers for such functions as sensitivity and time programmable gain.

Solutions

for Every EO Test Requirement

30 S. Calle Cesar Chavez, Suite D • Santa Barbara, Ca. 93103
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SYSTEM SPECIFICATIONS

Wavelength	1.064µm, 1.540µm, 1.570µm
Bandwidth	≤ 10nm Full-Width Half-Maximum
Maximum Pulse Power	>1.5uW
Power Dynamic Range	>40dB
Power Amplitude Accuracy	+/-10%
Pulse Width	20ns +/- 10ns
2nd Pulse Ratio Accuracy	+/-10% of set value
Simulated Range	50 to 60,000 meters
Simulated Range Accuracy	+/-1.5 meters or 0.01% whichever is greater
2nd Pulse Delay Range	+/-60 to +/-2,000ns
Optical Trigger Sensitivity	Input Pulses of ≥ 150kW
Pulse Period Range (in Free Run Mode)	50msec to 1 sec (20Hz to 1Hz)
Pulse Period Accuracy (in Free Run Mode)	<+/-100nsec
LRTM Beam Divergence	<2.5mrad
Maximum Input Fluence	1.25 J/cm2 @ 1064nm 30nsec Pulse Width
Alignment Gimbal Travel	>+/- 2mrad
Alignment Gimbal Step Resolution	< 65urad
Laser Beam Output Alignment to Reference Flat Mirror	< 100urad

ORDER INFORMATION

Please contact the SBIR sales team at (805) 965-3669 to receive more information about this product.

** Specifications are subject to change without prior notice*

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