

# FIRECREST

LASER RANGEFINDER TRANSMITTER



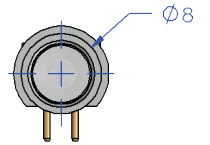
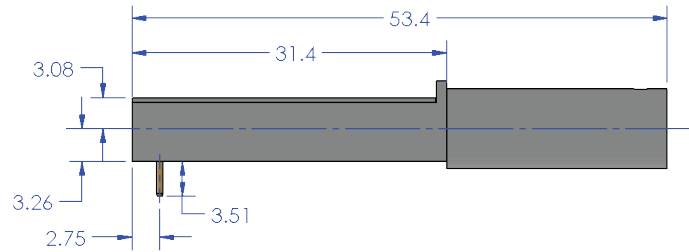
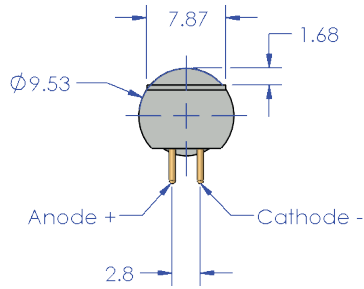
**YOUR SINGLE SHOT SOLUTION**

The Firecrest transmitter is a solid-state laser that operates at 1534 nm and is designed to deliver high pulse energy in a compact and efficient package. It utilizes a single spatial mode that provides superior performance with a narrow divergence and the smallest possible output aperture. The use of single-shot operations reduces target acquisition time while enabling the end-user to engage targets confidently and reducing false returns. The integrated beam expander enables long-distance and high-fidelity range with TEM<sub>00</sub> beam quality and narrow divergence. The Firecrest undergoes extensive testing to ensure it can withstand harsh operating environments, including a temperature range of -40 to 60°C and exceeding MIL-STD vibration and shock standards for standard platforms.

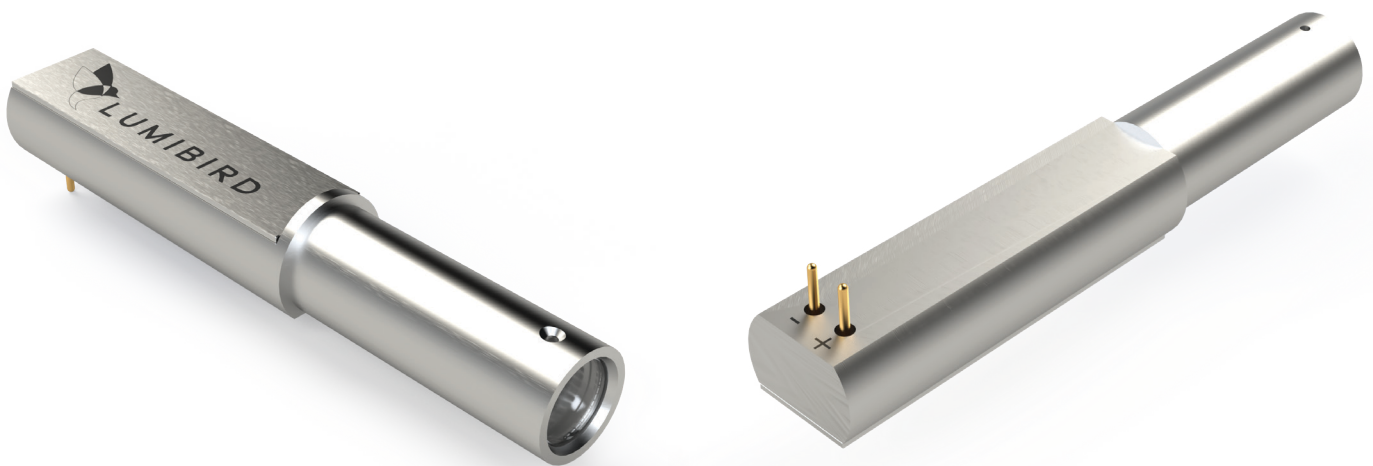
Lumibird has developed automated assembly processes for laser diodes that can be used in the production of solid-state lasers, which can be integrated into LRF systems that were previously only served by laser diodes due to cost and size constraints. With a dedicated production line and high-volume procurement, the high brightness source can be integrated into various low-cost, lightweight, and SWaP-C optimized systems for airborne, vehicle, and ground-based commercial and military applications. This approach enables Lumibird to offer highly efficient and cost-effective solutions that can meet the needs of a wide range of customers in various applications.



\*actual size



\*in millimeters



## Technical Data and Specifications

Pulse Energy	>200 uJ over temp
Peak Power	> 35 kW
Wavelength	1534 nm
Spectral width	0.3 nm
Temperature Dependence	+ - 0.03 nm/°C
Divergence	< 1.0 mrad
Pulse width	3-5 ns
Pulse Repetition Frequency	3 Hz
Pulse Energy stability RMS	< 3%
Operating Temp	-40 to +60°C
Storage Temp	-54 to +71°C
Shock	1500 G 0.5ms sine
Input Pump Duration	1 ms typical
Electrical Input	10 A, 2 V
Typical Weight	12.7 g

## Quality

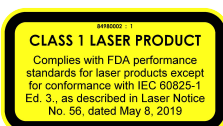
The Firecrest is qualified against:

- MIL-STD-461
- MIL-STD-810

The transmitter is verified for harsh environmental applications. An all solid-state diode-pumped Erbium glass transmitter ensures a long lifetime and low maintenance cost.

>50 million laser shot lifetime

Non-ITAR (EAR99)



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