



Laser Engineer

Working location: Redwood City, California

Full-time employment

About us

TerraBlaster is helping farmers reclaim the value they lose when applying nutrients with imperfect information: billions of dollars in fertilizer that never feeds a crop, missing nutrients that limit yields, and excess nutrients that can leach into waterways. We are the first to deploy technology developed by NASA for Mars to capture precise, real-time, actionable data about plant-available soil nutrients. Soil measurement and application in one pass. Every plant gets exactly what it needs. No extra steps. No wasted time. That's precisely how we build the future of agriculture.

The role

TerraBlaster is seeking a laser engineer to assess, integrate, and test the core light sources that make our technology possible. Do you love working with photons but want to apply your skills to something that directly helps the Earth? This role is a unique opportunity to integrate robust laser systems that shoot into the soil to measure plant nutrients. By creating reliable, field-ready optical sources, you are the foundational step in our mission to reduce fertilizer runoff and greenhouse gas emissions. Join a true Silicon Valley startup to make a difference in the world while literally supplying the "laser" in our laser-focused mission.

What you will be doing

- Test new candidate laser systems and integrate, align, and characterize laser systems and beam delivery modules for our soil Laser Induced Breakdown Spectroscopy (LIBS) hardware
- Conduct rigorous performance testing, including beam profiling, power stability, thermal characterization, and failure analysis
- Collaborate with our mechanical engineers to transition prototype laser designs into scalable, manufacturable modules that can survive harsh agricultural environments (thermal management, vibration, dust)
- Work closely with optical and mechanical engineers to iterate on plasma formation
- Work closely with firmware engineers to integrate new lasers into our software platform

What we need to see

- BS or MS in Optics, Photonics, Physics, Electrical Engineering, or a related field (or equivalent experience)
- Strong foundation in laser physics, beam propagation, and optical component handling
- 2-4+ years of hands-on experience building, aligning, and testing laser systems or complex electro-optical assemblies
- Excitement and willingness to do whatever is needed in the moment, from delicate lab alignments to taking out the trash, assembling mechanical enclosures, and dragging equipment into a farm field for testing
- Familiarity with optical lab equipment (oscilloscopes, power meters, beam profilers)

**Ways to stand out from the crowd**

- Excellent complex system-level debugging and problem-solving skills
- Self-managing and ability to break down complex problems into manageable tasks
- Experience working in the following areas is a plus but not required: spectroscopy (LIBS, Raman, etc.), ruggedizing optics for shock/vibration, laser safety compliance, and thermal management of diode/solid-state lasers

Compensation & Benefits

At TerraBlaster base pay is just one part of compensation. TerraBlaster employees also have the opportunity to become TerraBlaster shareholders by receiving incentive stock options. You will also receive benefits including comprehensive medical and dental coverage.

TerraBlaster is an equal opportunity employer and values diversity at our company. We do not discriminate on the basis of race, religion, color, national origin, sex, gender, gender expression, sexual orientation, age, marital status, veteran status, or disability status.