LiDAR Pulse Laser Diode



Overview

LiDAR systems for autonomous driving require fast pulse laser diodes (PLDs) with ever-improving resolution and range. For reliable 3D distance measurements based on the time-of-flight (ToF) principle, they must guarantee high pulse frequencies and have sophisticated control. This paper proposes a nanosecond-level pulse laser diode array drive circuit for LiDAR, primarily aimed at addressing the issue of high-speed scanning drive for the laser diode array at the emission end of solid-state LiDAR. This application note will introduce ROHM's LD line-up and show how to design the drive circuits of ROHM LDs. In addition, ROHM provides an evaluation board and a Spice model for evaluating LDs and will show how to use them and. LiDAR systems are important components used for environment perception in autonomous driving or robotics. The shape and distance of these objects can be determined via. A pulsed laser diode is useful in LiDAR because it emits short bursts of coherent light that can be launched toward a target, reflected back, and measured as a time delay. A triple-junction quantum well.



© 2026 CJC FIBRE CONSULTANTS - All rights reserved

Article Content

Design of Nanosecond Pulse Laser Diode Array Driver

This article proposes a nanosecond-level pulsed laser diode array drive circuit to address the laser drive issue at the laser emission end of a solid

(PDF) Design of Nanosecond Pulse Laser Diode Array

This paper proposes a nanosecond-level pulse laser diode array drive circuit for LiDAR, primarily aimed at addressing the issue of high-speed

Laser Diode for LiDAR Drive Circuit Design Method and Spice Model

Laser Diode Drive Circuit Design Method and Spice Model ROHM offers laser diodes (LDs) for Light Detection and Ranging (LiDAR). This application note will introduce ROHM''s LD line-up and show

Pulse Laser Sources for LiDAR | Ferdinand-Braun-Institut

Our laser diode portfolio for LiDAR pulse source applications includes high brilliance and high power broad-area lasers as single emitters or laser bars - also with on

How to Use Pulsed Laser Diodes for Accurate LiDAR Distance Sensing

A practical guide to pulsed laser diodes in LiDAR: ToF basics, emitter selection, wavelength choice, and system-level factors behind accurate distance sensing.

Pulse laser diodes for LiDAR

LiDAR systems for autonomous driving require fast pulse laser diodes (PLDs) with ever-improving resolution and range. For reliable 3D distance

905 TO-Packaged LiDAR Laser Diodes

Use our pulsed 905 nm laser diodes as compact, economical, and reliable sources for LiDAR in automotive, industrial, and consumer applications. Housed in a TO

Nanosecond Laser Driver Reference Design for LiDAR

This LiDAR (Light Distancing and Ranging) reference design showcases the low-side nanosecond GaN gate driver LMG1020, which is capable of driving a FET to produce a 1-ns laser optical pulse in

Design of High Current Nanosecond Resonant Pulse Drivers for Laser ...

While this article will focus on laser diode drivers for lidar applications, the design methods are suitable for any application where high current nanosecond pulses are needed.

© 2026 CJC FIBRE CONSULTANTS - All rights reserved

Evolase PLD-NS-GSS Gain-Switching Suppression Short-Pulse Laser Diode ...

The Evolase PLD-NS-GSS is a compact, high-stability short-pulse laser diode driver engineered for precision seeding applications in ultrafast amplifier systems, time-resolved spectroscopy, and LIDAR

PCO-7121 Laser Diode Driver Module | BNC

1 Overview The PCO-7121 is a compact and economical OEM pulsed-current laser diode driver module. It is designed to provide extremely fast high-current pulses for driving laser diodes in range finder,

Evolase PLD-PS Compact Short-Pulse Laser Diode Driver

Overview The Evolase PLD-PS is a compact, high-performance short-pulse laser diode driver engineered for precision seeding applications in ultrafast optical systems. It employs a fast-switching,

QSLS Series Passively Q-Switched DPSS UV Lasers

QSLS Series passively Q-switched UV DPSS lasers deliver 266nm and 355nm wavelengths with up to 30mW average output power, pulse energies up to 30µJ, and ultra-short 0.4ns pulse durations for

48 Laser Diode Manufacturers in 2026

48 Laser Diode Manufacturers in 2026 This section provides an overview for laser diodes as well as their applications and principles. Also, please take a look at the list of 48 laser diode manufacturers and

Evolase PLD-NS Compact Nanosecond Pulsed Laser Diode Driver

Overview The Evolase PLD-NS is a compact, high-performance nanosecond pulsed laser diode driver engineered for precision seeding and time-resolved optical systems. It operates on the principle of

DFB Laser Diodes, Distributed Feedback Lasers | Innolume

Our lasers are ideal for telecommunications, spectroscopy, LIDAR, and quantum technologies. We offer affordable prices for DFB lasers with different wavelengths, assembled in various housings, suitable

List of laser types

Wavelengths of commercially available lasers. Laser types with distinct laser lines are shown above the wavelength bar, while below are shown lasers that can emit in a wavelength range. The height of the

Chinese Startup Using AI & LiDAR to Kill Mosquitoes Raises Millions

© 2026 CJC FIBRE CONSULTANTS - All rights reserved

How the AI Mechanism Works LiDAR scanning: Maps the environment, locks onto mosquito positions within a 6-meter range. Millimeter-wave radar: Detects motion and flight speed

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

Contact Us

Continue your research online:

Website: https://cjcconsultants.co.za
Technical inquiry: https://cjcconsultants.co.za/contact.html

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 CJC FIBRE CONSULTANTS - All rights reserved