Contact sales@powerx-ic.com for Full Datasheet

POWER X
博尔芯半导体科技

PXL5520D-8

High-Speed Eight-Channel Laser Driver IC
55V, 20A

1 Features

- 1-ns typical minimum input pulse width
- V_{LASER} operating range up to 55V
- 20A peak current
- 5-V nominal logic power supply
- 1.8V/3.3-V/5-V logic compatible input control
- UVLO and over-temperature protection
- 3-ns delay time from input to output
- 350um pitch between each channel
- Integrated peak current sensing and laser turn-on feedback
- Integrated 3-to-8 decoder

2 Applications

- 1D/2D VCSEL Driver

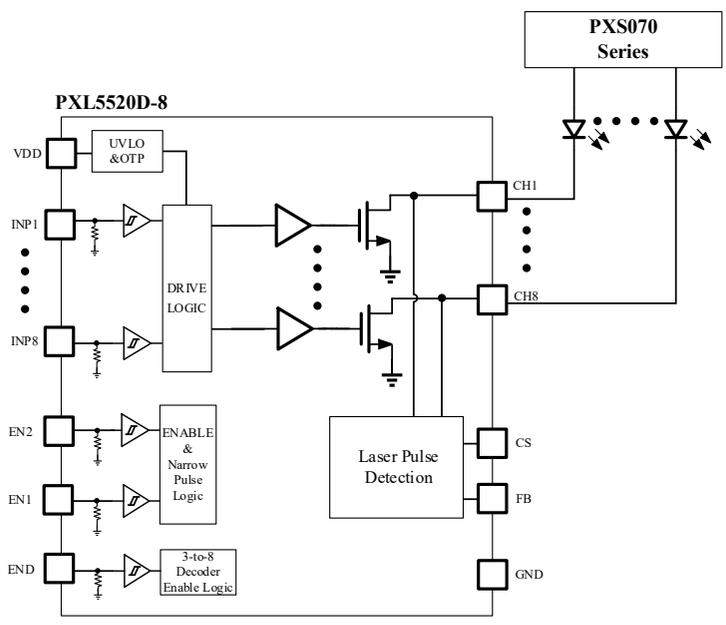
3 Description

The PXL5520D-8 is a multi-channel laser driver for 1D and 2D LiDAR application. The combination of very fast switching speed, ultra-narrow pulse width, high voltage, and high current capability significantly enhances the performance of Lidar.

The driver features undervoltage lockout (UVLO) and over-temperature protection (OTP) to ensure the device is not damaged in overload or fault conditions. In addition, the driver integrates peak-current-sensing that converts the peak current to voltage. The driver's laser turn-on feedback function helps reduce the ranging error caused by propagation delay.

PXL5520D-8 is available in 3.5mm*3.5mm LGA package to meet the size and gate loop inductance requirements for high-speed switching applications. There is only 350um pitch between each channel.

Typical (Simplified) System Diagram



Simplified VCSEL Driver Stage Diagram