



Laser Driver for Projectors

General Description

The MAX3600 laser driver for projectors supports video imaging with red, blue, and green lasers. Each output includes a 10-bit video digital-to-analog converter (DAC) with programmable gain and offset. For operation with synthetic green lasers, the driver includes a periodic off function and a fourth output with a random-noise generator.

The MAX3600B/R/G are monochrome drivers for blue, red, and green lasers. The MAX3600A guarantees higher full-scale output currents than the MAX3600, and is recommended for new designs.

Applications

- RGB Pico Laser Projector
- Up to WXGA and 1080p Resolution Projectors
- Monochrome Blue, Green, or Red Pico Laser Projector

Typical Operating Circuits and Pin Configuration appear at end of data sheet.

Features

- ◆ Integrates Four Current-Output Laser Drivers
- ◆ Compatible with Red, Blue, and Green Lasers
- ◆ 10-Bit Video DACs, $f_{CLK} = 1\text{MHz to } 160\text{MHz}$
- ◆ 8-Bit Gain and Offset DACs
- ◆ 2ns Output Switching Time
- ◆ Serial Port Control
- ◆ Laser Enable
- ◆ Random-Noise Generator and Periodic Off
- ◆ 5mm x 5mm, 40-Pin TQFN Package (0.4mm Pitch)

Ordering Information

PART	TEMP RANGE	PIN-PACKAGE
MAX3600CTL+†	0°C to +70°C	40 TQFN-EP*
MAX3600ACTL+	0°C to +70°C	40 TQFN-EP*
MAX3600RCTL+††	0°C to +70°C	40 TQFN-EP*
MAX3600GCTL+††	0°C to +70°C	40 TQFN-EP*
MAX3600BCTL+††	0°C to +70°C	40 TQFN-EP*

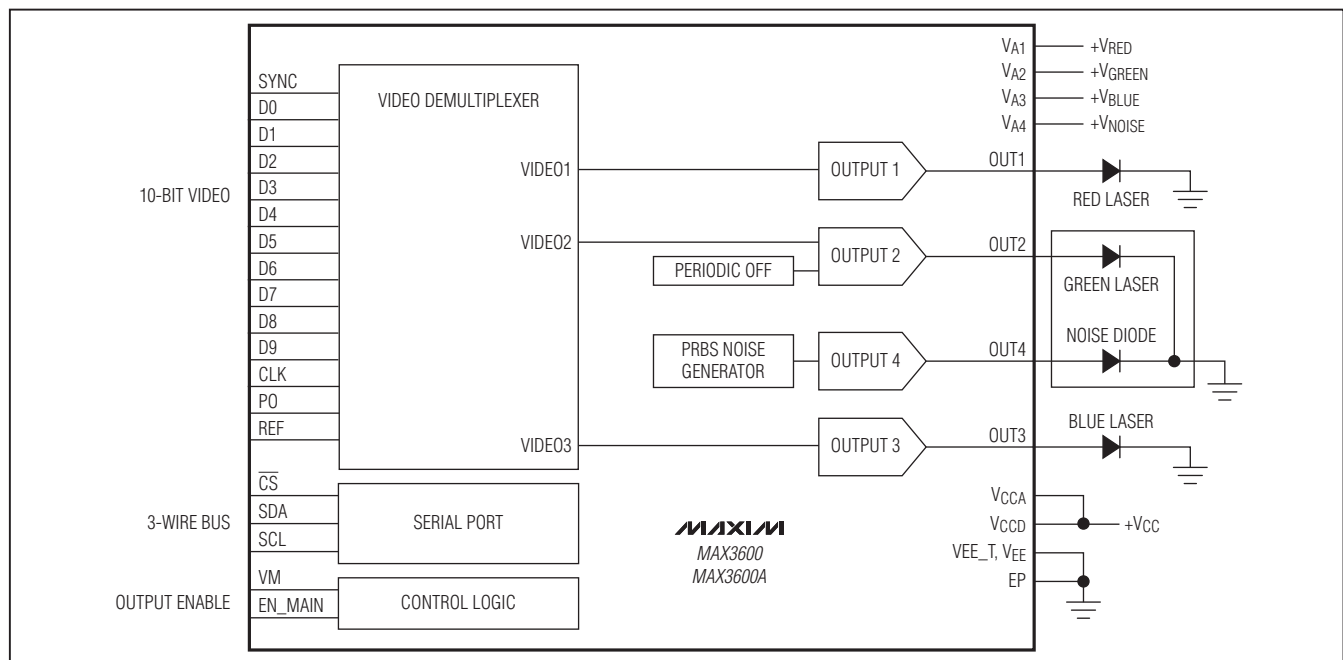
+Denotes a lead(Pb)-free/RoHS-compliant package.

*EP = Exposed pad.

†Not recommended for new designs.

††Future product—contact factory for availability.

Simplified Functional Diagram



Note to readers: This document is an abridged version of the full data sheet. To request the full data sheet, go to www.maxim-ic.com/MAX3600 and click on **Request Full Data Sheet**.

