



MY9161

16-Channel High Accuracy Constant Current LED Driver

General Description

The MY9161 16-channel constant current LED driver operates over a 3.3V / 5V input voltage range. The device provides 16 open-drain constant current sinking outputs that are rated to 17V and delivers up to 55mA of high accuracy current to each string of LED. The current at each output is programmable by means of an external current-sensing resistor. The MY9161 features a fast 25MHz DCK input, allowing a wide LED dimming (on/off) range to be implemented. The MY9161 offers a 4-wire serial interface, a 16-bit shift register, and a 16-bit transparent latch. The serial interface allows a microcontroller to configure the output channels using four inputs (DI, DCK, LAT, and ENB) and a data output (DO). DO allows multiple drivers to be cascaded and operated together.

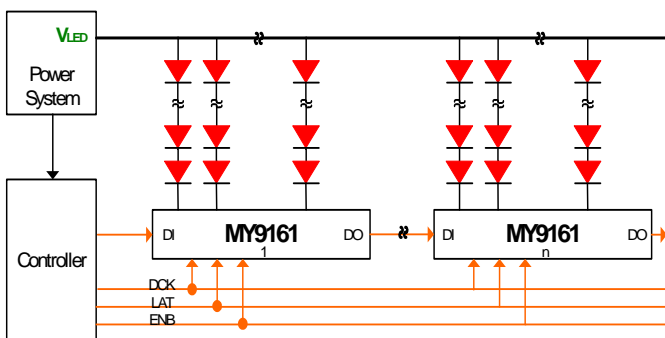
The MY9161's on-board pass elements minimize the need for external components, while at the same time, providing $\pm 0.7\%$ LED current accuracy. Additional features include a $\pm 0.1\%$ regulated output current capability and 50ns fast output transient response.

The MY9161 is available in a 24-pin SOP/SSOP/QFN package and specified over the -40°C to $+85^{\circ}\text{C}$ ambient temperature range

Applications

- Indoor and Outdoor LED Video Displays
- Variable Message Sign (VMS)
- Dot Matrix Module
- Architectural and Decorative Lighting
- Industrial Lighting
- LCD Display Backlighting

Typical Operating Circuits



Features

- ◆ 3.3V / 5V Operating supply voltage
- ◆ 3~55mA/5V Constant current output range
- ◆ 3~30mA/3.3V Constant current output range
- ◆ 17V Rated output channels for long LED strings
- ◆ $\pm 0.7\%$ (typ.) LED Current accuracy between channels
- ◆ $\pm 0.9\%$ (typ.) LED Current accuracy between chips
- ◆ $\pm 0.1\%$ Output current regulation capability
- ◆ 25MHz Clock frequency for data transfer
- ◆ 50ns fast current transient response
- ◆ Current setting by one external resistor
- ◆ Schmitt trigger input
- ◆ Power on reset
- ◆ Stagger output delay for EMI reduction
- ◆ -40°C to $+85^{\circ}\text{C}$ Ambient temperature range

Order information

Part	Package Information	
MY9161SA	SOP24-236mil-1.0mm	2000 pcs/Reel
MY9161SB	SOP24-300mil-1.27mm	1000 pcs/Reel
MY9161SS	SSOP24-150mil-0.635mm	2500 pcs/Reel
MY9161ST	SSOP24-150mil-0.635mm	2500 pcs/Reel
MY9161QT	QFN24-4mmx4mm-0.5mm	3000 pcs/Reel

Pin Configuration

