



MY9181

8-Channel High Accuracy Constant Current LED Driver

General Description

The MY9181, 8 channel constant current LED driver operates over a 3 ~ 5.5V input voltage range. The device provides total 8 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 one external resistor. The MY9181 features the fast 25MHz DCK input, allowing large amount data transfer and a wide LED dimming (on/off) range to be implemented. The MY9181 also offers 4-wire serial interface, 8-bit shift registers, and 8-bit latches. 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 MY9181'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 MY9181 is available in a 16-pin SOP/SSOP package and operating over the -40°C to $+85^{\circ}\text{C}$ ambient temperature range.

Features

- ◆ 8 Constant current output channels
- ◆ 3 ~ 5.5V 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
- ◆ $\pm 1.5\%$ (typ.) LED Current accuracy between chips
- ◆ $\pm 0.1\%$ Output current regulation capability
- ◆ 25MHz Clock frequency for data transfer
- ◆ 50ns fast current transient response
- ◆ Output current setting by external resistor
- ◆ Schmitt trigger input
- ◆ Power on reset
- ◆ Stagger output delay for EMI reduction
- ◆ -40°C to $+85^{\circ}\text{C}$ Ambient temperature range

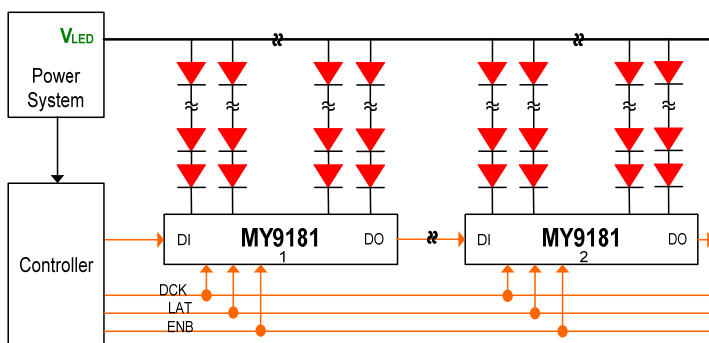
Applications

- Dot Matrix Module
- Variable Message Sign (VMS)
- Public Transportation (Train, Bus, Underground)
- Indoor and Outdoor Video Display
- LCD Display Backlighting

Order information

PART	PACKAGE INFORMATION	
MY9181SB	SOP16-300mil-1.27mm	1000 pcs/Reel
MY9181SS	SSOP16-150mil-0.635mm	2500 pcs/Reel

Typical Operating Circuits



Pin Configuration

