



16-Channel High Accuracy Constant Current LED Driver With MY-Semi 16bits Adaptive Pulse Density Modulation and Power Saving Control

General Description

The MY9262, 16-channel constant current LED driver with 16bits grayscale Adaptive Pulse Density Modulation (APDM) and power saving control, supports high quality LED video display applications. This distinctive APDM technology abates the non-ideal IOU distortion due to non-symmetric transient responses and enhances the refresh rate by separating efficiently the frame waveform.

The MY9262 features a fast 30MHz DCK input, allowing a wide LED dimming (on/off) range to be implemented. This 4-wire serial interface allows a microcontroller to configure the output channels using four inputs (DI, DCK, LAT, and GCK) and a data output (DO). DO allows multiple drivers to be cascaded and operated together.

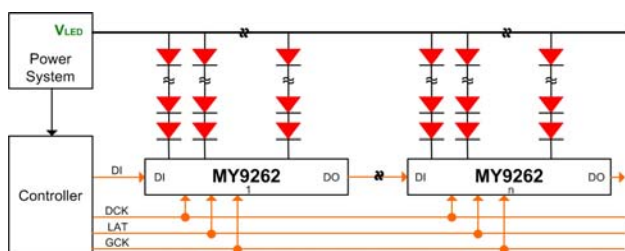
The device operates over a 3V to 5.5V input voltage range and provides 16 open-drain constant current sinking outputs that are rated to 17V and delivers up to 55mA of high accuracy current to each string of LED. The current at each output is programmable by means of an external current-sensing resistor and could be adjusted by 6bits global current control. Furthermore, the MY9262 also supports the grayscale synchronization by two functions of counter reset and data synchronization. And the sleep mode could efficiently lower down the supply current in power saving applications.

The MY9262 is available in a 24-pin SOP/SSOP/TSSOP/QFN package and specified over the -40°C to +85°C ambient temperature range.

Applications

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

Typical Operating Circuits



Features

- ◆ 3V ~ 5.5V Operating supply voltage
- ◆ 2~55mA/5V Constant current output range
- ◆ 2~35mA/3.3V Constant current output range
- ◆ 17V Rated output channels for long LED strings
- ◆ ±1.5% (typ.) LED Current accuracy between channels
- ◆ ±3% (typ.) LED Current accuracy between chips
- ◆ ±0.1% Output current regulation capability
- ◆ 16bits grayscale resolution with Adaptive Pulse Density Modulation control [patent pending]
- ◆ Traditional non-scramble waveform for high power LED applications
- ◆ Grayscale counter reset selection
- ◆ Grayscale data synchronization selection
- ◆ 6bits global current control: from 12.5% to 200%
- ◆ Sleep mode to lower down the supply current to 0.1uA
- ◆ 30MHz Clock frequency for data transfer
- ◆ 30ns fast current transient response
- ◆ Current setting by one external resistor
- ◆ Schmitt trigger input
- ◆ Power on reset
- ◆ -40°C to +85°C Ambient temperature range

Order information

Part	Package Information	
MY9262SA	SOP24-236mil-1.0mm	2000 pcs/Reel
MY9262SS	SSOP24-150mil-0.635mm	2500 pcs/Reel
MY9262TE	TSSOP24-173mil-0.65mm (Exposed Pad)	2500 pcs/Reel
MY9262QF	QFN24-4mmx4mm-0.5mm	3000 pcs/Reel

Pin Configuration

