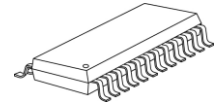
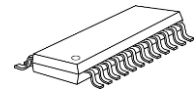


**16 Channel Constant Current LED Driver  
with Ghosting Elimination****Features**

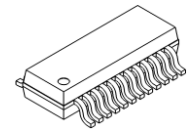
- 16 constant-current output channels
- Constant output current invariant to load voltage change:  
Constant output current range:  
1-25mA@V<sub>DD</sub>=5V;  
1-10mA@V<sub>DD</sub>=3.3V
- Excellent output current accuracy:  
between channels: ±1.5% (typ.) and ±2.5% (max.)  
between ICs: ±1.5% (typ.) and ±3% (max.)
- Output current adjusted through an external resistor
- Fast response of output current,  $\overline{OE}$  (min.): 50ns with good uniformity  
between output channels
- Integrating ghosting elimination
- Staggered delay of output
- 25MHz clock frequency
- Schmitt trigger input
- 3.3V/ 5V supply voltage
- "Pb-free & Green" Package

**Small Outline Package**

GF: SOP24L-300-1.00

**Shrink SOP**

GP: SSOP24L-150-0.64

**Mini SOP**

GM: mSSOP24L-100-0.5

**Product Description**

With PrecisionDrive™ technology, MBI5124 is designed for LED displays which require to operate at low current and to match the luminous intensity of each channel. It provides supply voltage and accepts CMOS logic input at 3.3V and 5.0V to meet the trend of low power consumption. MBI5124 contains a serial buffer and data latches which convert serial input data into parallel output format. At MBI5124 output stage, sixteen regulated current ports are designed to provide uniform and constant current sinks for driving LEDs within a large range of  $V_F$  variations. Besides, MBI5124 integrates the pre-charge circuit which can relieve the ghosting.

MBI5124 provides users with great flexibility and device performance while using MBI5124 in their system design for LED display applications, e.g. LED panels. It accepts an input voltage range from 3.3V to 5V and maintains a constant current up from 1mA to 25mA determined by an external resistor,  $R_{ext}$ , which gives users flexibility in controlling the light intensity of LEDs. MBI5124 guarantees to endure maximum 17V at the output port. The high clock frequency, 25 MHz, also satisfies the system requirements of high volume data transmission.