

## Product Description



MBI6010 is a 3-channel constant-current sink driver for RGB LED cluster, which can be networked to a master controller for scheduled or manual dimming and color control. Each MBI6010 enhances the transmission buffers for data (SDI, SDO), clock (CLK), latch (LE), and output enable( $\overline{OE}$ ) in a cascading system by the unique “self synchronized signal timing” technology. At MBI6010 output stage, three regulated current ports are adjustable with three corresponding external resistors to match

RGB color characteristics. With built-in voltage regulator, MBI6010 provides users with great supply voltage range from 6.0V to 12V, maintains constant current up from 5mA to 60mA and saves the space in a compact cluster. In addition, MBI6010 sustains 17V at output ports. This provides enhanced LED controllability and better mixed-color lighting solution.

## Features

- 3 constant current channels for RGB each
- Output current invariant to load voltage change
- Maximum output current per channel: 60mA
- Range of constant current for every channel: 5~ 60mA
- Cascading buffers for wired transmission
- Self synchronized signal timing of clock (CLK) and data (SDO)
- Low power consumption: 120mW
- Output current accuracy:  
between channels: <  $\pm 6\%$  (max.), and  
between ICs: <  $\pm 6\%$  (max.)
- Sustaining voltage: 17V
- Built-in voltage regulator working with supply voltage ranging from 6.0V to 12V
- 5 MHz clock frequency at 2-meter cable transmission
- Package type: SSOP20, “Pb-free & Green” package