LUMISSIL Microsystems
A Division of ISSI

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40V output, 18 Channel LED Drivers for Automotive and Industrial Applications

8bit Dot Correction, Grayscale PWM with Noise Reduction Technology

MILPITAS, Calif., April 21, 2020 -- Lumissil Microsystems today introduced the IS3xFL3265x family of LED drivers that feature high voltage LED channels with electromagnetic compatibility (EMC) reduction capabilities. The devices are designed for harsh and demanding environments, they integrate registers to adjust thermal protection levels with fault detection and reporting, and operate across the wide temperature range of -40°C ~ +125°C. This family of LED drivers are suitable for automotive and industrial applications requiring high voltage LED outputs to support a multi-count stack of LEDs per channel.

The drivers support 18 high voltage LED outputs which can be individually configured for optimal light output, whether performing RGB color or white illumination lighting. The high voltage outputs enable design engineers to stack multiple LEDs on the same channel for an increase in light output using a given LED current. This is a useful feature for applications such as industrial lighting which require individual control of 18 light zones. For example, a 16V LED supply voltage is sufficient to drive 4 white LEDs per channel (i.e. zone) at up to 60mA. These zones in turn can be independently adjusted with ON/OFF and dimming controls making for an exceptionally accurate light source.

Additionally a flexible bus architecture and built-in EMI suppression technology make these drivers ideal for automotive LED lighting designs; whether interior or exterior. The I2C or SPI bus protocols are supported by selecting the corresponding part number, IS32FL3265A for I2C or IS32FL3265B for SPI bus. The core functionality of high voltage outputs, individual channel (zone) lighting control, EMI suppression, fault protection and AEC-Q100 is common for either bus interface. For interior ambient lighting designs the 18 high voltage channels can be configured for 6 RGB zones or 18 high brightness lighting zones. For exterior applications the 18 individually controllable LED channels can be configured to create lighting effects for 'welcome light' or animated tail light applications.

"Our latest product release highlights Lumissil's commitment to LED driver innovation that is second to none," said Ven Shan, Vice President of Lumissil. "This newly introduced family of high voltage LED drivers enhances our portfolio of feature-rich offerings for a broad range of applications such as industrial signage, automotive interior and exterior lighting."

Key features and benefits of the family of LED drivers:

- 40V high voltage outputs to enable stacking of multiple LEDs
- 60mA outputs for high brightness
- Programmable spread spectrum and selectable 9 phase delay for reduced electromagnetic emissions
- Selectable thermal roll-off set points for customized thermal protection and long term reliability
- Individual channel dot correction and grayscale PWM for accurate color rendition
- Shared clock I/O and synchronized group blink frequency for multi-chip operation

The IS3xFL3265x family of devices are available in the following configurations:

- 'IS31' prefix (IS31FL3265x) are industrial grade
- 'IS32' prefix (IS32FL3265x) are automotive AEC-Q100 qualified and PPAP capable
- 'A' suffix (IS3xFL3265A) have a 1Mhz I2C bus interface
- 'B' suffix (IS3xFL3265B) have a 12MHz SPI bus interface

Availability, packaging and pricing

The IS3xFL3265A/B family comes in a thermally enhanced eTSSOP-28 package operating over the temperature range of -40°C to +125°C. The parts are available now for sampling and production with 10k pricing starting at $1.00 for the industrial version IS31FL3265A/B and $1.20 for the automotive version IS32FL3265x.

About Lumissil Microsystems

Lumissil Microsystems is the Analog & Mixed signal division of ISSI. We develop innovative analog and mixed-signal IC solutions for use in the consumer appliance, IoT, gaming, industrial, communications and automotive markets. Our wide range of IC solutions include LED drivers for low to mid-power RGB color mixing and high power lighting applications as well as audio, sensors and application specific microcontrollers and networking semiconductor ICs. Our network of worldwide employees are committed to engineering innovation, design in of quality, sales support and long term availability for our IC solutions. Learn more at www.lumissil.com.

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