

Best-in Class Family of 1 to 3 RGB LED Drivers

Compact 3,6,9 Channel, Micro Power, 12-bit Color Resolution with Pattern Sequencing

MILPITAS, Calif., October 31, 2022: Lumissil Microsystems, a division of Integrated Silicon Solution, Inc. (ISSI), announced its latest family of multi-channel LED drivers designed to meet today's energy efficient requirements. The newly announced IS31FL3293, IS31FL3296, and IS31FL3299 offer best in class low power consumption, high color resolution, pre-established pattern sequences and space-saving package options. These devices are designed to address the needs of battery powered IoT applications such as wearables, Bluetooth appliances, AI speakers, personal grooming, and medical devices.

The IS31FL3293/6/9 devices address the critical challenges of minimal board space and low power consumption required by IoT devices. They consume less than 200uA when fully operational and only 0.3uA when placed into sleep mode, making them ideal for applications requiring long battery life. The LED channel currents can sink up to 40mA with an accuracy of $\pm 5\%$ between channels and between parts. Device registers can further fine tune the channel currents. A 6-bit global current register will adjust all the channel currents to a value lower than the default 40mA. An 8-bit register will individually tune each Red, Green or Blue LED current for an added level of current control. Furthermore, a 12-bit register can be programmed to output a precise PWM (Pulse Width Modulation) on each LED channel yielding the best possible color mixing for the Red, Green and Blue LEDs.

The IS31FL3293/6/9 serve as a technology refresh for the popular IS31FL3193/6/9 devices which remain in volume production. "ISSI/Lumissil has been a leading supplier of multichannel LEDs for the past 10 years," said Ven Shan, Lumissil's Vice President of Analog Marketing. "Our strategy is to continuously update our LED drivers to keep them relevant for our growing customer base. The IS31FL3293/6/9 devices are an example of integrating advanced technology into already popular product offerings."

Key Features and Benefits

Power Saving: The devices take advantage of latest silicon design processes to dramatically reduce operating current from 3mA (previous generation) to 0.2mA; a greater than 10x reduction. Device shutdown current is also reduced from 2 μ A (previous generation) to 0.3 μ A; a 6x reduction.

High Resolution: The devices integrate programming registers that result in high resolution color mixing. A programmable 12-bit, 23 kHz PWM generator operating above the human-audible frequency, along with an 8-bit per channel current register enable brightness and contrast adjustments for vivid color reproduction and zero audible noise.

Programmable Patterns: The devices integrate an "auto breath" engine to simplify software coding when creating LED fade in and out color pattern sequences. A gamma corrected fade ON/Off is automatically created for a register defined duration to create smooth color transition cycles for a specific period of time or indefinitely.

Ordering Part	Package Type	Number of Channels	Operating Current (typ)	Shutdown Current (typ)	Default Channel Current
IS31FL3293-UTLS4-TR	UTQFN-9	3	100µA	0.3µA	20mA
IS31FL3296-QFLS4-TR	QFN-20	6	200µA	0.3µA	40mA
IS31FL3299-QFLS4-TR	QFN-20	9	200µA	0.3µA	40mA

Availability and Pricing

The IS31FL3293/6/9 devices are available now in production quantities.

The IS31FL3293 is priced at \$0.29 each in 10K pcs quantities.

The IS31FL3296 is priced at \$0.37 each in 10K pcs quantities.

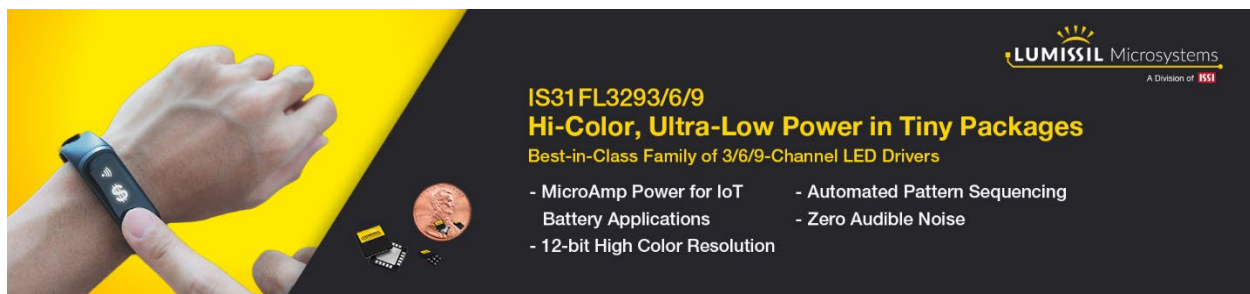
The IS31FL3299 is priced at \$0.40 each in 10K pcs quantities.


About Lumissil Microsystems

Lumissil Microsystems is a division of ISSI specializing in analog/mixed-signal products for automotive, communications, industrial, and consumer markets. Lumissil's primary products are LED drivers for low to mid-power RGB color mixing and high-power lighting applications. Other products include audio, sensors, high-speed wired communications, optical networking and application-specific microcontrollers. ISSI and Lumissil Microsystems have worldwide offices in the US, Taiwan, Japan, and Singapore, mainland China, Europe, Hong Kong, India, and Korea. Website: <http://www.lumissil.com/>

About Integrated Silicon Solution, Inc.

(ISSI) ISSI is a fabless semiconductor company that designs, develops and markets high performance SRAM, DRAM, Flash memory (including NOR flash, NAND flash and managed NAND solutions (eMMC)), and Analog/Mixed-signal integrated circuits. ISSI provides high-quality semiconductor products and has been a committed long-term supplier to its customers. ISSI has worldwide offices in the US, Taiwan, Japan, Singapore, mainland China, Europe, Hong Kong, India, and Korea. Visit our website at <http://www.issi.com/>





IS31FL3293/6/9
Hi-Color, Ultra-Low Power in Tiny Packages
 Best-in-Class Family of 3/6/9-Channel LED Drivers

- MicroAmp Power for IoT Battery Applications
- Automated Pattern Sequencing
- Zero Audible Noise
- 12-bit High Color Resolution