

12x12 Dot Matrix LED Driver for Gaming and Mini LED Displays **30MHz VSB Bus with 12Bit PWM+ 8 Bit Analog Dimming for high Contrast Ratios**

MILPITAS, Calif., February 7, 2022 Lumissil Microsystems, a division of Integrated Silicon Solution, Inc. (ISSI), announced today the IS31FL3747, a new and advanced Matrix LED Driver for full color gaming accessories displaying brilliant colors with animation and for backlighting with high contrast ratios for Mini LED LCD Display applications.

The IS31FL3747 is a software configurable LED driver in a 12×n (n=1~12) LED matrix configuration with 12 Current Sinks and software selectable 12 Scan switches that allows creation of a 144 LED array. Dual IS31FL3747 in a multiplex connection supports a 24×n (n=1~24) LED matrix configurations to drive a large array of 576 (192 RGB) LEDs. The device features individual 12-bit PWM, 8-bit analog dimming and global 8-bit current setting. The internal Oscillator frequency is selectable from a maximum of 32MHz to a minimum of 4MHz with integrated spread spectrum (SSP) to reduce EMI. A 12MHz SPI or 30MHz VSB option is selectable as an interface for high speed data control and state lookup registers.

The IS31FL3747 is highly configurable Matrix LED driver built on the success of similar matrix drivers such as IS31FL3745 and previous generations but with higher PWM resolution and the high speed interface. “As a leader in LED driver technology, Lumissil Microsystems has raised the performance bar by not only adding noise and EMI reduction, de-ghost and dot correction features but by integrating 12-bit high resolution PWM and 30MHz high speed bus and a configurable input to multiplex 2 ICs to drive a total of 576 LEDs with enhanced color but reduced PCB size and system cost for large LED arrays,” Said Ven Shan, Vice President of Marketing. This makes it a preferred cost effective solution for gaming accessories and backlighting for mini LED displays.

The IS31FL3747 provides system designers with increased reliability and with built-in safety. The device has individual open and short detect function to detect each LED for fault. The product also features LED group delays and clock skewing with 180-degree phase delay operation to reduce power supply stress and transient noise. De-Ghost function with channel to channel matching of ±4% (Max.) and analog & digital dimming helps with device to device accuracy and with high resolution steps to achieve uniform color display compensating luminous mismatch. Spread spectrum technology will further reduce EMI radiation.

The IS31FL3747 has Operating temperature of -40°C to 125°C and is available in a QFN-40 (5mm×5mm) & WLCSP-36 package. The IS31FL3747 targets large LED arrays in digital displays, gaming keyboards, home appliance, smart speakers, mini LED displays and control panels.

Availability and pricing

The IS31FL3747 is priced at \$1.56 each in 1K pcs quantities.

About Lumissil Microsystems

Lumissil Microsystems is the analog/mixed-signal product division of ISSI, a fabless semiconductor company that designs and markets high performance integrated circuits for the following key markets: (i) automotive, (ii) communications, (iii) industrial/medical, and (iv) digital consumer. Lumissil

Microsystems' primary products include LED drivers for low to mid-power RGB color mixing and high power lighting applications, audio, sensor, high-speed wired communications, optical networking ICs and application-specific microcontrollers. ISSI/Lumissil Microsystems is headquartered in Silicon Valley with worldwide offices in Taiwan, Japan, Singapore, China, Europe, Hong Kong, India, and Korea. Visit our website at <https://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 is headquartered in Silicon Valley with worldwide offices in Taiwan, Japan, Singapore, China, Europe, Hong Kong, India, and Korea. Visit our website at <http://www.issi.com/>

CONTACT:

Lumissil Microsystems;
Ven Shan 408.969.4622
vshan@lumissil.com

Allan Chan 408.969.5129
alchan@lumissil.com

