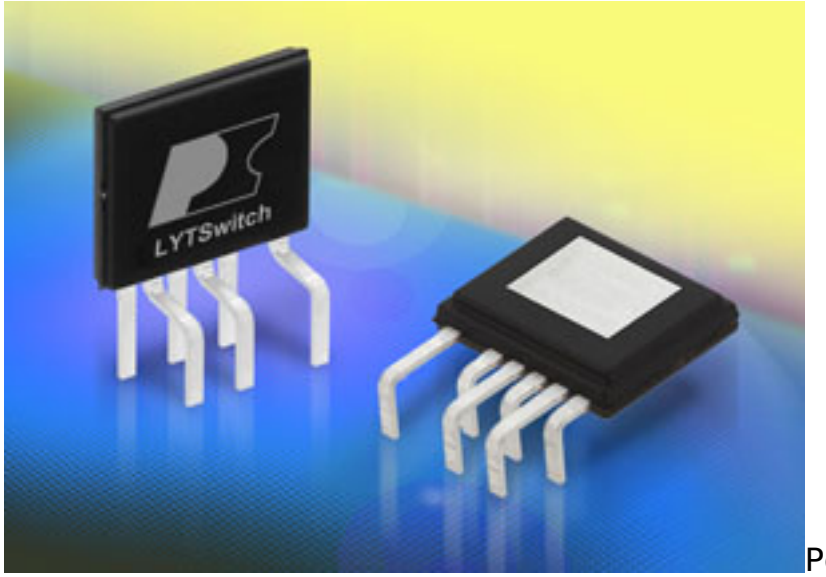
LED-driver IC family offers fast start-up with no pop-on, no dead travel



Power Integrations introduced its latest family of LED-driver ICs, aimed at consumer, commercial and industrial lighting applications. The new LYTSwitch IC family offers tight regulation and high efficiency for tube replacements and high-bay lighting, while providing exceptional performance in TRIAC-dimmable bulb applications. These ICs combine PFC and CC into a single switching stage, increasing driver efficiency to more than 90 percent in typical applications, delivering a power factor greater than 0.95 and meeting EN61000-3-2C requirements for total harmonic distortion (THD). Optimized designs deliver less than 10 percent THD, according to the company. The combined single-stage converter topology also eliminates high-voltage electrolytic bulk capacitors, leading to extended driver lifetimes even in high ambient temperatures. Accurate primary-side control yields true tight CC performance with better than +/-5 percent regulation across load, a wide temperature range and production variation enabling tighter design margins and reduced system cost. High switching frequency of 132 kHz means that small, low-cost magnetics can be used in space-constrained bulb applications, while frequency jittering ensures reduced EMI filter requirements. LYTSwitch devices also offer overvoltage, overcurrent and over-temperature protection.

The LYTSwitch family of LED-driver ICs enables excellent dimming performance when used with leading-edge and trailing-edge TRIAC dimmers, even at low conduction angles, easily complying with NEMA SSL6. Start-up is very fast, typically less than 500 ms, even when dimmed to less than 10% output. Bulbs using LYTSwitch ICs will turn on at almost the same dimming angle as it was at turn-off, virtually eliminating pop-on. Dead band in TRIAC dimming is also eliminated as the LYTSwitch controller ensures that dimming occurs as soon as the dimmer is operated.

Comments Andrew Smith, senior product marketing manager for Power

Integrations: “LYTSwitch ICs enable small, longer-lasting lamps for a wide range of applications including consumer bulbs, commercial lighting and T8 tubes, industrial, high-bay and exterior lighting. Tight CC performance across a wide range of operating conditions greatly simplifies design and reduces cost while ensuring that lamps deliver uniform light output.”

LYTSwitch IC samples in eSIP-7C (E package) and eSIP-7F (L package) are available now, priced from $0.70 to $1.60 in 10,000-piece quantities.

Power Integrations
408-414-9200, www.powerint.com [1]

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