



# NEWS RELEASE

## GLF's Ultra-Low-Power Switch Features "Deep Sleep" Function to Hold Battery Charge

*New IQSmart™ IC load switch enables wearables, mobile and IoT devices to be shipped and stored with charged batteries so they can operate right out of the box*



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Santa Clara, CA.— April 26, 2018 — [GLF Integrated Power](#), a leading producer of innovative ultra-low-power battery protection ICs for portable and wearable electronics, introduces the [GLF76321 IQSmart™ IC](#) with "Deep Sleep" power conservation mode. While in this mode, the device operates with a typical standby current ( $I_{SD}$ ) of just 7nA – which is negligible compared to the typical self-discharge of Li-ion batteries. By virtually disconnecting the battery during shipment and storage, the GLF76321 enables products to operate immediately out of the box without the need for recharging.

The prolonged idle state of an electronic product during shipment and storage is one of the major contributors to battery discharge and sometimes of its rechargeable battery's longevity. Some vendors prefer to ship their products without batteries or to insert a mechanical barrier to prevent discharge. Nevertheless, many products are shipped with batteries pre-installed and charged. Self-discharge for Li-Ion batteries is 5% in first 24 hours and approximately 1-2% per month. Without disconnecting the battery, the system leakage can contribute an additional 3-5% (and up to 10 % per month) to the discharge. For this reason, most pre-installed battery-powered devices require an initial recharge by the customer upon opening the product. GLF solves this battery-life issue by offering an ultra-low leakage current that is up to 50 times lower than similar devices.

"The GLF76321 IQSmart IC completely changes the battery-charging scenario for mobile, wearable and IoT device OEMs," said Eileen Sun, President, and CEO at GLF Integrated Power. "Now they can store and ship their devices with confidence. The GLF76321's Sleep Mode basically disconnects the battery from the system during storage and shipping – and then reconnects and enables operation with a simple push of a button."

The GLF76321 supports two methods for entering/leaving Deep Sleep mode. User operation can be initiated or exited by pulling the SRO pin to LOW for a predefined delay; or for logic or interrupt control by a signal to the OFF pin. The GLF76321 includes an integrated 1ms slew rate control and output discharge functions. The GLF76X21 family also includes devices with True Power Reset option.

The GLF76x21 is available in 0.97mm x 1.47mm x 0.55mm wafer level chip scale package (WLCSP).

**Price:** \$0.19 (in OEM quantities)  
**Lead Time:** In-stock

### About GLF Integrated Power.

GLF integrated Power is a fabless semiconductor company based in Santa Clara, California. Founded in 2013, the company is a supplier of breakthrough, ultra-efficient, ultra-small, silicon power control and protection ICs. When the IoT, ultra-portable and wearable revolution was starting, the GLF founding team saw the need for a new generation of more efficient power switch devices. This was when GLF Integrated Power was born. The company has developed new IP that enable cost-effective, efficient and differentiated power management solutions.

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