

## Product Summary Sheet

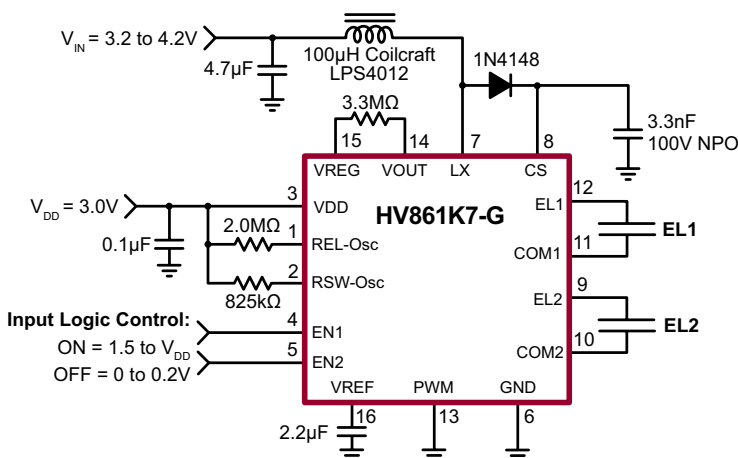
### Dimmable, Dual EL Lamp Driver for Low Noise Applications

#### Applications:

- ▶ Dual display cellular phones
- ▶ Keypad and LCD back-lighting
- ▶ PDAs
- ▶ Handheld wireless communication products
- ▶ Global Positioning Systems (GPS)



16-Lead QFN (K7)



Typical Application Circuit

#### Product Overview:

The Supertex HV861 is a low noise, dimmable, high voltage, dual EL Lamp driver designed for driving two electroluminescent (EL) Lamps with a combined area of 5.0 square inches. The input supply voltage range is from 2.5 to 4.5V. Enable input logic high can go as low as 1.5V, which allows logic interface operating from typical 1.8V supplies. The device is designed to minimize audible noise emitted by the EL Lamps.

The device uses a single inductor and a minimum number of passive components. Using the internal reference voltage, the regulated output voltage is at a nominal value of 90V. The EL Lamps will therefore see ±90V. The two EL Lamps can be turned ON and OFF using two CMOS logic inputs, EN1 and EN2. The driver is disabled when both EN1 and EN2 are at logic low.

The HV861 has two internal oscillators, a switching MOSFET, and two high voltage EL Lamp driver H-bridges. Each driver has its own half bridge common output, COM1 and COM2, which significantly minimizes the DC offset seen by the EL Lamp. The frequency for the switching MOSFET is set by an external resistor connected between the RSW-osc pin and the supply pin VDD. The EL Lamp driver frequency is set by an external resistor connected between the REL-osc pin and the VDD pin. An external inductor is connected between the LX and VDD pins for split supply applications. Depending upon the EL Lamp sizes, a 1.0 to 10.0nF capacitor is connected between the CS and ground.

As the switching MOSFET charges the external inductor and discharges it into the capacitor at CS, the voltage at CS will start to increase. Once the voltage at CS reaches a nominal value of 90V, the switching MOSFET is turned OFF to conserve power.

EL Lamp dimming can be accomplished by applying a PWM logic signal to the PWM pin. The EL Lamp brightness will be proportional to the PWM duty cycle. The HV861 can also slowly turn the EL Lamp ON/OFF giving a fade ON/OFF appearance.

Features:	Benefits:
Adjustable output regulation	Dimming and fading capability for EL Lamps.
180V <sub>pp</sub> regulated output voltage	Higher, uniform brightness over wide input voltage range.
One miniature inductor to power both lamps	Minimal external parts
Audible noise reduction	Low audible noise levels.
Low shutdown current	Conserves power.
1.5V enable input logic high	Ease of logic interface.
Separately adjustable lamp and converter frequencies.	Ease of design
Split supply capability	Improves converter efficiency by avoiding double conversion. Longer battery life.



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### Ordering Information / Availability

<u>Part Number</u>	<u>Package Option</u>	<u>Samples</u>	<u>Lead Time</u>
HV861K7-G	16-Pin QFN (Green)	Now	4-5 Weeks

-G indicates the part is RoHS compliant (Green).



### Product Contact

For any questions regarding the HV861 please contact your local area Supertex sales office, or contact the main office in the US at:

Telephone: 800-222-8888  
 Fax: 408-222-4895  
 EMail: [mktg@supertex.com](mailto:mktg@supertex.com)  
 Website: [www.supertex.com](http://www.supertex.com)

***Supertex inc.***

1235 Bordeaux Drive, Sunnyvale, CA 94089