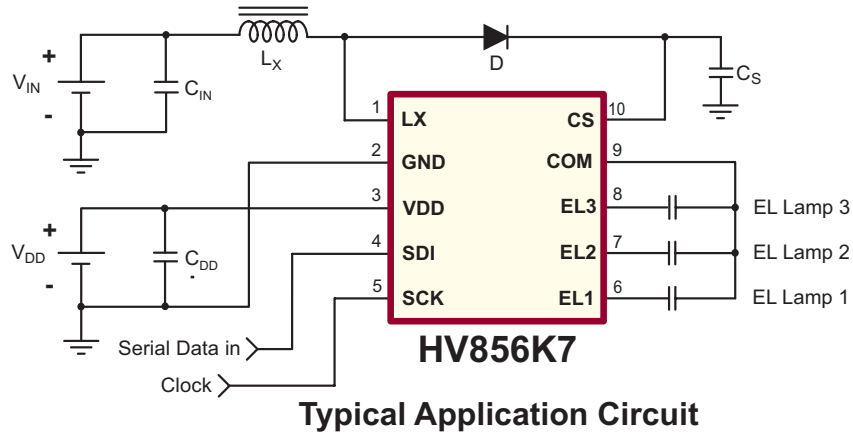


# Product Summary Sheet

# HV856 High Voltage, Tri-EL Lamp Driver IC

## Applications:

- ▶ Multi-segment, variable displays
- ▶ Cell phone keypads and displays
- ▶ MP3 players



## Product Overview:

The Supertex HV856 is a high voltage, triple EL lamp driver designed for driving combined EL lamps of up to 3.0in<sup>2</sup> (1.0 in<sup>2</sup> each). It is a higher voltage version of the HV858. The input supply voltage range is from 1.8V to 6.5V. The device is designed so that the input voltage to the inductor can differ from the input voltage to the device (split supply). The device uses a single inductor and a minimum number of passive components. The nominal regulated output voltage that is applied to the EL lamp is ±105V. The HV856 has two internal oscillators; one for the internal switching MOSFET and the other for the high voltage EL lamp driver. The EL lamp frequency is fixed internally at 500Hz. The power converter oscillator runs 256 times faster than the EL lamp driver at 128kHz.

An external inductor is connected between the LX and VDD pins (or between the LX pin and separate voltage source in the case of a split supply application). A 0.002-0.01μF, 200V capacitor is connected between the CS pin and ground. The switching MOSFET charges the external inductor and discharges it into the capacitor at the CS pin. The voltage at CS will start to increase. Once the voltage at CS reaches a nominal value of 105V, the switching MOSFET is turned OFF to conserve power.

One side of the three EL lamps is connected to the COM pin of the HV856 and the other side to the EL1, EL2, and EL3 pins of the HV856. Each EL lamp output may be independently controlled to have one of the seven brightness levels or can be completely turned OFF by a 10-bit serial data input register. The 10-bit control code has three bits to control the brightness level of each EL lamp and one bit to optionally control the power converter. The 3-bit binary brightness control code controls the number of 500Hz cycles (from 0 to 7) in a group of seven cycles.

| Features:                                   | Benefits:   |
|---|---|
| Dimming control at seven brightness levels  | Variable lighting   |
| Small package                               | Saves board space   |
| Single inductor for driving three lamps     | Saves external components   |
| 210V <sub>PP</sub> regulated output voltage | Uniform brightness over wide input voltage range                          |
| 150nA shutdown current                      | Minimum usage of the battery while the lamps are in stand-by mode         |
| Wide input voltage range: 1.8V - 6.5V       | Ease of design with commonly available supply voltages in cellular phones |



10-Lead DFN (K7)



# HV856

## High Voltage, Tri-EL Lamp Driver IC

### Ordering Information / Availability

| Part Number | Package Option | Samples | Lead Time     |
|-------------|----------------|---------|---------------|
| HV856K7-G   | 10-Lead DFN    | Now     | 4-5 Weeks ARO |

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



### Product Contact

For any questions regarding the HV856, please contact your local area Supertex sales office, or contact the main office in the US at:

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