



# ACE7168R

## Asynchronies Boost WLED Driver

### Description

The ACE7168R is a high frequency, asynchronous boost converter. The internal MOSFET can support up to 10 White LEDs for backlighting and OLED power application, and the internal soft start function can reduce the inrush current. The device operates with 1-MHz fixed switching frequency to allow small external components and to simplify possible EMI problems. Moreover, the IC comes with 46V over voltage protection to allow inexpensive and small-output capacitors with lower voltage ratings. The LED current is initially set with the external sense resistor  $R_s$ .

### Features

- VIN Operating Range: 2.5V to 5.5V
- Internal Power N-MOSFET Switch
- Wide Range for PWM Dimming (100Hz to 200kHz)
- 1MHz Switching Frequency
- Minimize the External Component Counts
- Internal Soft Start
- Internal Compensation
- Under Voltage Protection
- Over Voltage Protection
- Over Temperature Protection

### Application

- Cellular Phones
- Digital still cameras
- PDAs and Smart Phones and MP3 and OLED.
- Probable Instruments

### Absolute Maximum Rating

Parameter	Symbol	Ratings	Units
Input Voltage	VIN	-0.3V~6V	V
LX Pin Voltage	LX	-0.3V~42V	V
FB Pin Voltage	FB	-0.3V~6V	V
Operating Temperature Range	TOPR	-40°C~85°C	°C
Storage Temperature Range	TSTG	-65°C~125°C	°C
Lead Temperature (Soldering, 10 sec)	TL	260°C	°C
Internal Power Dissipation	$P_D$	400	mW

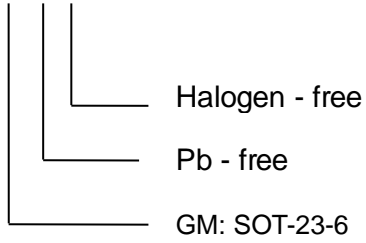


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## Ordering information

ACE7168R XX + H

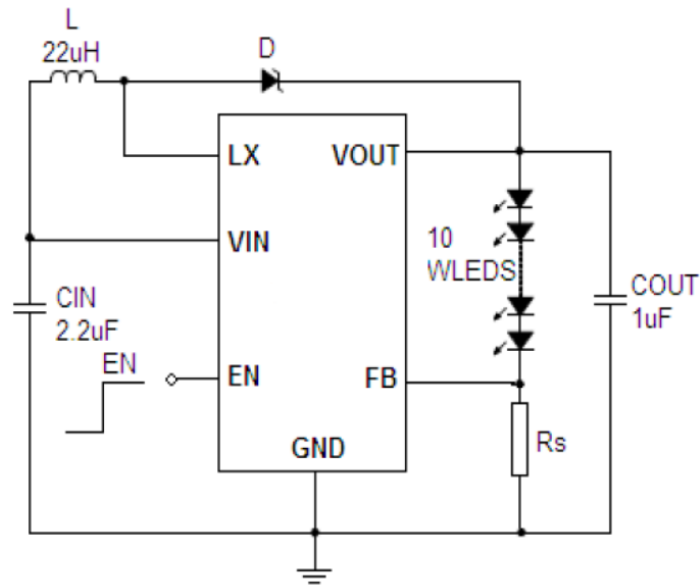




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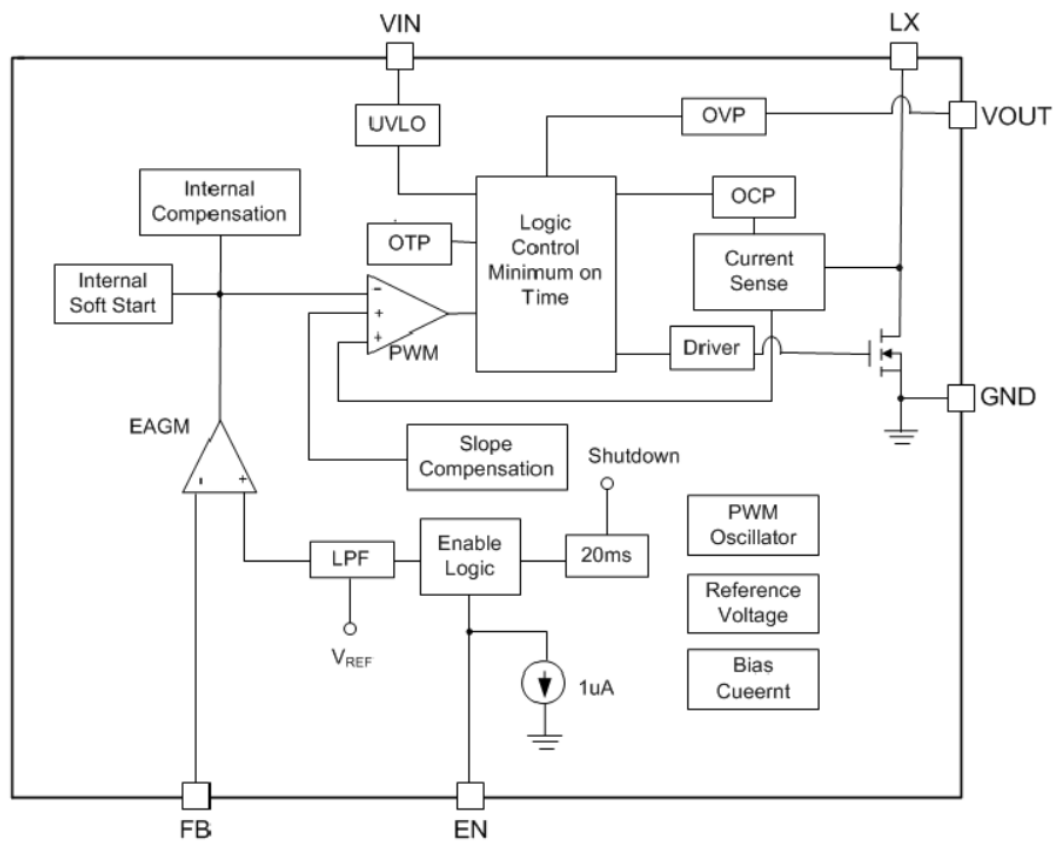
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### Typical Application



$I_{LED} = 20mA$ ,  $R_s = 10\Omega$

### Block Diagram





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### Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Technology Co., LTD.

As sued herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.