



ACE7D636R

36V/1A Step-down Converter LED Driver

Description

The ACE7D636R is a continuous mode inductive step-down converter, designed for driving single or multiple series connected LEDs efficiently from a voltage source higher than the LED voltage. The device operates from an input supply between 6V and 36V and provides an externally adjustable output current of up to 1A. Depending upon supply voltage and external components, this can provide up to 30 watts of output power. The ACE7D636R includes the output switch and a high-side output current sensing circuit, which uses an external resistor to set the nominal average output current.

Output current can be adjusted below the set value, by applying an external control signal to the VSET pin. The VSET pin will accept either a DC voltage or a PWM waveform. The soft-start time can be increased using an external capacitor from the VSET pin to ground. Applying a voltage of 0.2V or lower to the VSET pin turns the output off and switches the device into a low current standby state. The ACE7D636R is available in SOT-89-5 package, with Internal Switch

Features

- Wide input voltage range: 6V to 36V
- 1A output current
- Internal 40V NDMOS switch
- High efficiency (up to 97%)
- Typical 5% output current accuracy
- Up to 1MHz switching frequency
- Open LED Protection
- Short LED Protection
- Single pin on/off and brightness control Using DC voltage or PWM
- Soft-start
- Simple low parts count

Application

- LED back-side lighting
- Low voltage halogen replacement LEDs
- Low voltage industrial lighting



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Absolute Maximum Ratings

Symbol	Items	Value	Unit
VIN	Input Voltage	38	V
VLED, VCS,	Voltage on LX, ISENSE	-0.3~VDD+0.3	V
VEXT	Voltage on VSET	-0.3~6	V
IOUT	Output Current	1.5	A
PD	Power Dissipation	500	mW
		1300 (PCB mounted) ⁽¹⁾	mW
TOPR	Operating Temperature Range	-40 to 125	°C
TSTG	Storage Temperature Range	-40 to 150	°C
Lead Temperature		300°C, 5sec	

Note: 1. Please refer to the power dissipation figure shown in PCB mounted.

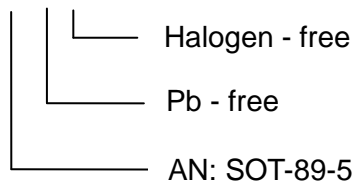


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Ordering Information

ACE7D636R XX + H





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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 used 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.

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