



ACE7163N

30V High Current Boost LED Driver

Description

ACE7163N is DC/DC step-up converter that deliver an accurate constant current for driving LEDs. Operation at a fixed switching frequency of 1MHz allows the device to be used with small value external ceramic capacitors and inductor. LEDs connected in series are driven with a regulated current set by the external resistor. The ACE7163N is ideal for driving up to eight white LEDs in series or up to 30V.

Features

- Input voltage range: 2.8 to 30V
- Switch current limit 2A
- Drives LED strings up to 30V
- 1MHz fixed frequency minimizes the external components
- Dimming frequency for EN/PWM pin: 20kHz~1MHz
- Internal softstart limits the inrush current
- Open LED over voltage protection
- RoHS Compliant and Halogen Free

Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Players



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Absolute Maximum Ratings (Note 1)

Parameter		Value
IN, EN		32V
LX, OVP		36V
All other pins		4V
Power Dissipation, P_D @ $T_A = 25^\circ\text{C}$		0.6/0.55 W
Package Thermal Resistance (Note 2)	θ_{JA}	170/180 $^\circ\text{C}/\text{W}$
Junction Temperature Range		125 $^\circ\text{C}$
Lead Temperature (Soldering, 10 sec.)		260 $^\circ\text{C}$
Storage Temperature Range		-65 to 150 $^\circ\text{C}$

Recommended Operating Conditions (Note 3)

Parameter		Value
Input Voltage Supply		2.8 to 30V
Junction Temperature Range		-40 to 125 $^\circ\text{C}$
Ambient Temperature Range		-40 to 85 $^\circ\text{C}$

Note:

1: Stresses beyond the "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only. Functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

2: θ_{JA} is measured in the natural convection at $T_A = 25^\circ\text{C}$ on a low effective single layer thermal conductivity test board of JEDEC 51-3 thermal measurement standard. Test condition: Device mounted on 2" x 2" FR-4 substrate PCB, 2oz copper, with minimum recommended pad on top layer and thermal vias to bottom layer ground plane.

3: The device is not guaranteed to function outside its operating conditions.

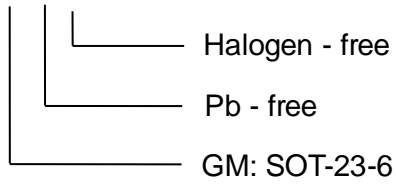


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Ordering information

ACE7163N 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 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.

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