



New product
Announcement

AL3065

Simple Cost Effective Solution for TV and Monitor Backlight

The AL3065 is a high efficiency boost controller with 4-string current sources for driving LED backlight.

The current of 4 strings is simply programmed from 20mA to 400mA with an external resistor. The current match between any strings is $\pm 1.5\%$.

The AL3065 can support both PWM/DC input to analog dimming and direct PWM dimming; the dimming mode can be set in applications.

The protection features include soft-start, cycle by cycle current limit, UVLO, programmable OVP, OTP, open/short LED protection, VOUT Short/ Schottky Diode Open Protection and Schottky, Diode/Inductor Short-Circuit Protection.

The AL3065 is used to drive TV/Monitor LCD panel backlight, and DC-DC boost LED



The Diodes Advantage

The AL3065 provides a simple cost effective solution with minimal external components for TV and Monitor backlight.

- **Input Voltage Range: 4.5V to 33V**
Operates from 5V, 12V and 24V rails
- **Drives 4 LED strings at 250mA per string, 400mA Pulse Current**
Can drive multi-channels and up to 4 strings; the 400mA pulse current capability can be used in 3D panel TVs
- **The operating frequency can be adjusted from 0.1MHz to 1MHz**
Supports flexible operating frequency to choose suitable inductor and EMI solution
- **High LED current precision ($\pm 3\%$) and channel matching**
Guarantees the consistency of the panel brightness
- **Supports both Analog and Direct PWM (10,000:1) Dimming Controls**
Versatile and wide dimming range for large brightness variations
- **Robust protections**
Built-in soft-start, UVLO, programmable OVP, OCP, OTP, open/short LED protection, VOUT Short/Schottky Diode Open Protection and Schottky Diode/Inductor Short-Circuit Protection

Applications

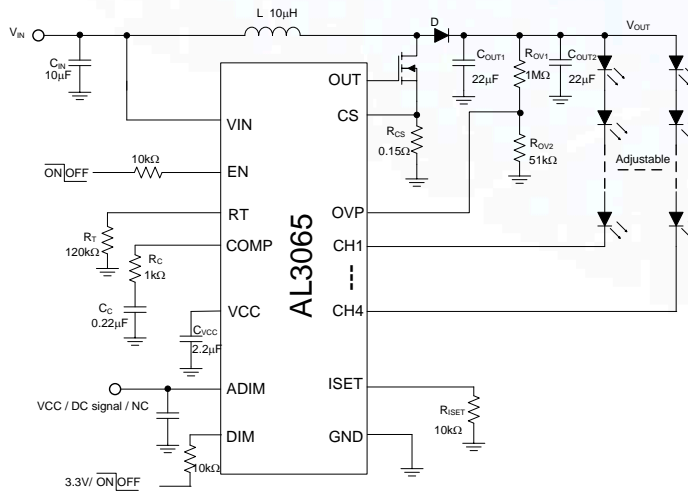
- TV/Monitor LCD panel backlight
- DC-DC boost LED Lighting



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Typical Application: TV 4-channel LED backlight



Diodes TV and Monitor Backlight

Part Number	Min. Input Voltage	Max. Input Voltage	LED Channel Number	Max. LED Voltage	Max. LED Current	LED current accuracy	LED Freq (Max)	LED Dimming control		Operating temp range	Package Outline
	V	V						Analog	PWM		
AL3022	4	18	1	External MOSFET	External MOSFET	3	140	Y	Y	-40 ~ 85	SO-8
AP3064	4.5	33	1-4	100	220	8	100-1000	N	Y	-40 ~ 85	SO-16
AL3065	4.5	33	1-4	100	400	3	100-1000	Y	Y	-40 ~ 85	SO-16
AP3041	5	27	1	External MOSFET	External MOSFET	2	100-500	N	Y	-40 ~ 85	SO-16

Ordering Information

Part Number	Package	Package code	Packing Type
AL3065S16-13	SO-16	S16	2500/13" Tape & Reel