



# New Product Announcement

## AL3065A

## Boost Controller with Four High-Precision Current Sinks

The AL3065A is a highly integrated 4-channel sink boost controller with wide voltage operating ranged from 4.5V to 33V.

The current of each channel is simply programmable from 20mA to 400mA with an external resistor. The current match between any channels is  $\pm 0.5\%$  (typical). Its operating frequency can be adjusted from 0.1MHz to 1MHz.

The AL3065A can be dimmed through three different modes: direct PWM dimming, PWM to analog dimming or DC to analog dimming.

The AL3065A has full protection functions including cycle-by-cycle current limit, soft-start, UVLO, programmable OVP, OTP, open/short LED protection, Schottky diode short and open protection, inductor short-circuit protection and  $V_{OUT}$  short protection.

Applications for the AL3065A are LCD monitors, TVs and LCD display modules.



### The Diodes Advantage

**The AL3065A provides a cost-effective LED backlight solution for LED TVs and monitors.**

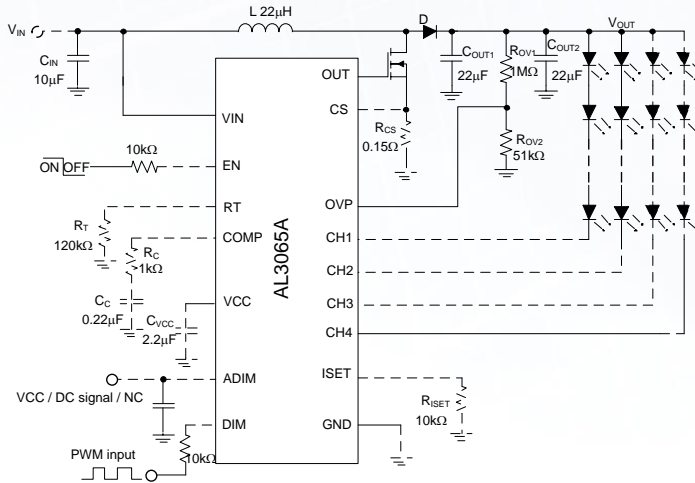
- **Input Voltage Range: 4.5V to 33V**  
Operates from 5V, 12V and 24V power supply rails
- **Drive 4 LED strings at 250mA per string, 400mA Pulse Current Max**  
Drive multi-channels up to 4 strings; the 400mA pulse current and wide dimming capability
- **Operating frequency adjustable from 0.1MHz to 1MHz**  
Supports flexible operating frequency to choose suitable inductor and optimize EMI solution
- **Best-in-class channel matching**  
Current match between any channels is  $\pm 0.5\%$  @  $I_{OUT} = 55\text{mA/CH}$ .  
Current match between any channels is  $\pm 1.5\%$  @  $I_{OUT} = 5.5\text{mA/CH}$ .
- **Supports Analog and Direct PWM (10,000:1) Dimming Controls**  
Versatile and wide dimming range for large panel brightness variations
- **Full Protections**  
Built-in soft-start, UVLO, programmable OVP, OCP, OTP, open/short LED protection,  $V_{OUT}$  short, Schottky diode open/short protection and inductor short-circuit protection



# New Product Announcement

## AL3065A

### Typical Applications Circuit



### Product Portfolio

Part Number	Min. Input Voltage	Max. Input Voltage	Max. Output Voltage	Output Current per CH	Accuracy	Current Matching	Switching Freq (Max)	LED Dimming Control		Operating Temp Range	Package Outline
	V	V	V	mA	+/- %	+/- %	kHz	DC to Analog	PWM	°C	
AP3041	5	27	External MOSFET	External MOSFET	2.0	N/A	100 ~ 500	N	Y	-40 ~ 85	SO-16
AP3064	4.5	33	60	220	8.0	1.5	100 ~ 1000	N	Y	-40 ~ 85	SO-16
AL3065	4.5	33	60	400	3.0	1.5	100 ~ 1000	Y	Y	-40 ~ 85	SO-16
<b>AL3065A</b>	<b>4.5</b>	<b>33</b>	<b>60</b>	<b>400</b>	<b>3.0</b>	<b>0.5</b>	<b>100 ~ 1000</b>	<b>Y</b>	<b>Y</b>	<b>-40 ~ 85</b>	<b>SO-16</b>

### Ordering Information

Part Number	Package Code	Packaging	13" Tape and Reel	
			Quantity	Part Number Suffix
AL3065AS16-13	S16	SO-16	2,500/Tape & Reel	-13

For more information: [www.diodes.com/part/AL3065A](http://www.diodes.com/part/AL3065A)