

PRODUCT DATA SHEET

09/09/15

I-LITE, 5.6 WATT LED DRIVER

(+5V Vin, 28V, 6 Channels ¹, 0-33mA per Channel)

GENERAL DESCRIPTION

The ACI-A028033-2409 LED Driver is a true constant current source capable of driving up to 6 parallel channels of series connected LEDs with a forward voltage drop up to 28V.

This driver provides a complete integrated solution that operates over an input voltage range from +4.5V to +9.0V.

Simple to connect and operate, this driver is capable of providing precise control to support dimming applications with a minimum of 3000:1.

¹Please refer to Table 1 on page 3, for the maximum output current per channel, based on the number of channels connected.

This unit features enable and intensity control inputs.

MECHANICAL/ENVIRONMENTAL

Weight = 7.2 grams

Altitude = 35,000 ft max.

Humidity < 95% non-condensing

Size (L x W x H) = 2.0 IN x 0.95 IN x 0.285 IN

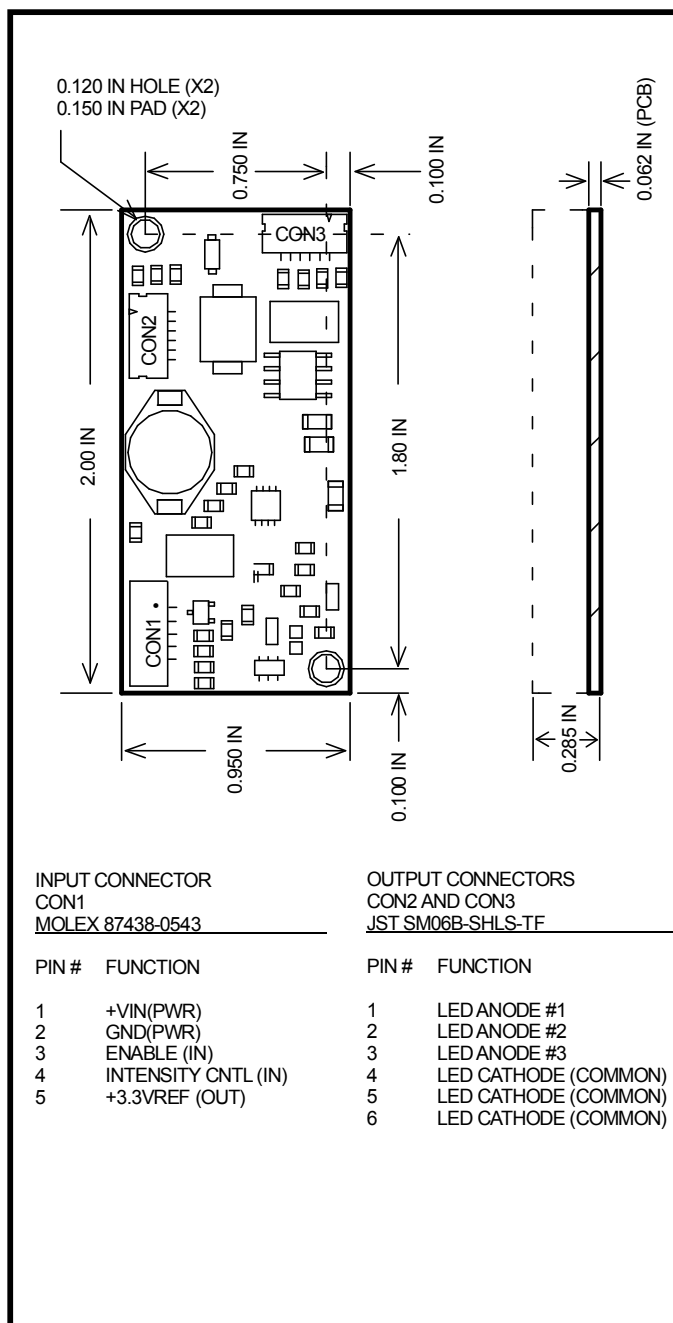
PCB thickness = 0.062 IN

Mounting Holes = 0.120 IN diameter (X2)

Input Power & Control Connector = CON1

LED Output Connectors = CON2 and CON3

RoHS Compliant



MAXIMUM RATINGS*

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.3 to 12	Vdc
Vip	Voltage applied to any Input Pin (Referenced to Ground)	-0.3 to 3.6	Vdc
Iop	Current sourced or sinked from any Output Control Pin	+/- 10	mAdc
Pin	Input Power (DC Input Voltage x DC Input Current)	7.8	W
Top	Operating Temperature (Still air ambient around Driver)	-30 to +70	°C
Tstg	Storage Temperature	-40 to +105	°C

*Maximum Ratings are those values beyond which damage to the LED driver may occur.

RECOMMENDED OPERATING CONDITIONS

Symbol	Parameter	Min	Max	Unit
Vin	Supply Voltage (Referenced to Ground)	4.5	9.0	Vdc
Vf	Series Connected Cumulative LED Forward-Drop Voltage	**Vin + 1	28	Vdc
Icntl	LED Intensity Control Voltage	0.25	3.0	Vdc

**Vin must be less than the minimum Forward-Drop Voltage (Vf).

ELECTRICAL CHARACTERISTICS

Vin = +5.0V, Vf = 28V, Number of Channels = 6, Icntl = +3.0V, Enable = +3.0V, unless otherwise specified.

Symbol	Parameter	Test Conditions	Min	Nom	Max	Unit
OCV	Open Circuit Voltage	No Load	30	35	40	Vdc
Iout	Output Current per Channel		30	33.3	36	mAdc
Iadj	Brightness Intensity Adjustment Range	Icntl (Pin4) <= 0.25V	0			mAdc
		Icntl (Pin4) >= 3.0V			33	mAdc
ENoff	Enable Control, Unit Off	Enable (Pin 3)			0.4	Vdc
ENon	Enable Control, Unit ON	Enable (Pin 3)	1.8			Vdc
+3.3Vref	+3.3V Output Reference Voltage	1K Ohm Load to Ground (Pin 5)	3.13	3.3	3.47	Vdc
Iin	Input Current Draw			1.4		Adc
Iind	Input Current Draw (Disabled)	Enable (Pin 3) = 0V		0.002	0.1	Adc
Eff	Electrical Efficiency			82		%

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Number of Channels Connected	1	2	3	4	5	6
Maximum Output Current per Channel (mA)	200	100	66.7	50	40	33.3

Table 1 - Maximum Output Current per Channel, based on the number of channels connected.

