

PRODUCT DATA SHEET

11/22/13

I-LITE, 10.6 WATT LED DRIVER

(Common-Cathode, One to Six Channels, 38V)

GENERAL DESCRIPTION

The ACI-A038047-2445 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 38V.

This driver provides a complete integrated solution that operates over an input voltage range from +10V to +18V.

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

Please 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 and is designed to work with the Digital View LCD Controller and Button Board (see page 3 for more information).

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

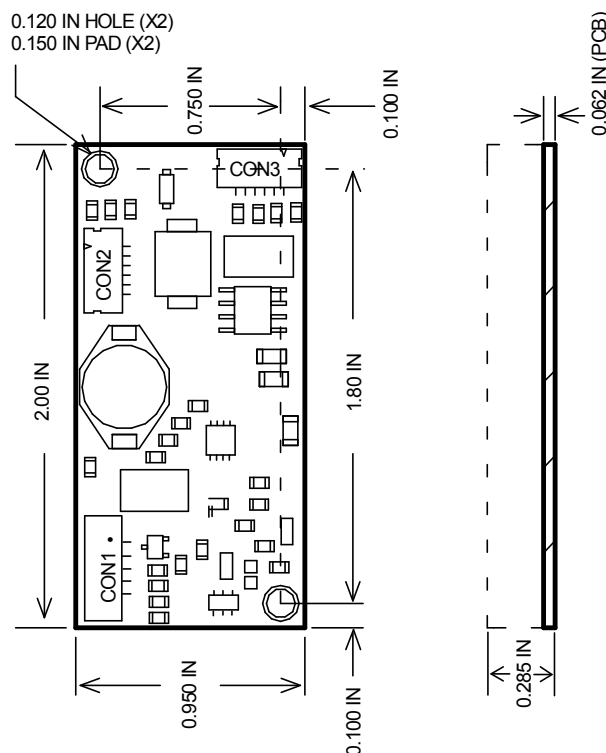
PCB thickness = 0.062 IN

Mounting Holes = 0.120 IN diameter (X2)

Input Power & Control Connector = CON1

LED Output Connectors = CON2 and CON3

RoHS Compliant



INPUT CONNECTOR
CON1
MOLEX 87438-0543

OUTPUT CONNECTORS
CON2 AND CON3
JST SM06B-SHLS-TF

PIN #	FUNCTION
1	+VIN(PWR)
2	GND(PWR)
3	ENABLE (IN)
4	INTENSITY CNTL (IN)
5	+5VREF (OUT)

PIN #	FUNCTION
1	LED ANODE #1
2	LED ANODE #2
3	LED ANODE #3
4	LED CATHODE (COMMON)
5	LED CATHODE (COMMON)
6	LED CATHODE (COMMON)

PRODUCT DATA SHEET

11/22/13

MAXIMUM RATINGS*

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.3 to 19	Vdc
Vip	Voltage applied to any Input Pin (Referenced to Ground)	-0.3 to 5.7	Vdc
Iop	Current sourced or sinked from any Output Control Pin	+/- 10	mAdc
Pin	Input Power (DC Input Voltage x DC Input Current)	14.0	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)	10.0	18.0	Vdc
Vf	Series Connected Cumulative LED Forward-Drop Voltage	**Vin + 1	38	Vdc
Icctl	LED Intensity Control Voltage	0.1	4.6	Vdc

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

ELECTRICAL CHARACTERISTICS

Vin = +12V, Vf = 38V, Number of Channels = 6, Icctl = +0.1V, Enable = +5V, unless otherwise specified.

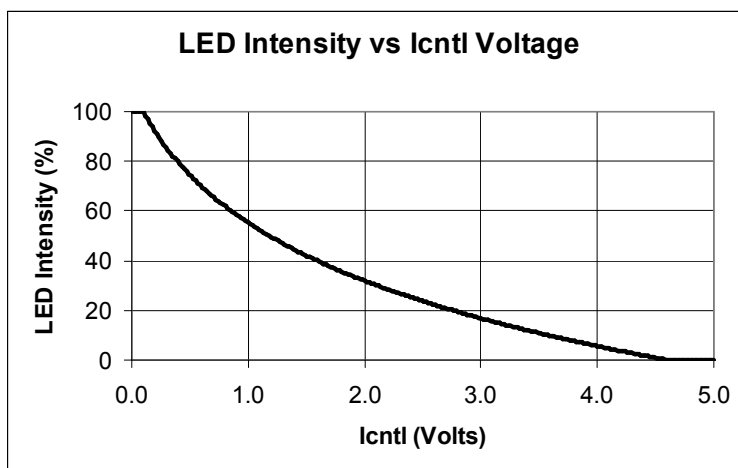
Symbol	Parameter	Test Conditions	Min	Nom	Max	Unit
OCV	Open Circuit Voltage	No Load	40	45	50	Vdc
Iout	Output Current per Channel		42	46.7	51	mAdc
Iadj	Brightness Intensity Adjustment Range	Icctl (Pin4) <= 0.1V			46.7	mAdc
		Icctl (Pin4) >= 4.6V	0			mAdc
ENoff	Enable Control, Unit Off	Enable (Pin 3)			0.5	Vdc
ENon	Enable Control, Unit ON	Enable (Pin 3)	2.0			Vdc
+5Vref	+5V Output Reference Voltage	1K Ohm Load to Ground (Pin 5)	4.75	5.0	5.25	Vdc
Iin	Input Current Draw			1.0		Adc
Iind	Input Current Draw (Disabled)	Enable (Pin 3) = 0V		0.001	0.06	Adc
Eff	Electrical Efficiency			87		%

PRODUCT DATA SHEET

11/22/13

Number of Channels Connected	1	2	3	4	5	6
Maximum Output Current per Channel (mA)	280	140	93.3	70	56	46.7

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



NOTE: The intensity response curve is designed to be compatible with the Digital View LCD Controller and Button Board.

Digital View LCD Controllers and Jumper Settings

LCD Controller	Jumper Settings
ALR-1400	(JB2 = 2-3) (JB3 = 1-2) (JP2 = 1-2)
ALR-1920	(JB1 = 2-3) (JB2 = 2-3) (JB3 = 1-2) (JB5 = 1-2)
DVS-1600	(JB1 = 2-3) (JB2 = 2-3) (JB3 = 1-2) (JB5 = 1-2)
SP-1600	(JB2 = 2-3) (JB3 = 1-2) (JP3 = 1-2)
SVH-1920	(JB2 = 2-3) (JB3 = 1-2) (JP3 = 1-2)