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ACI-A060023-2140

PRELIMINARY DATA SHEET

07/10/12

I-LITE, 10.8 WATT LED DRIVER

(Common Anode, Eight Channels)

GENERAL DESCRIPTION

The ACI-A060023-2140 is designed to drive up to 8 parallel channels of series connected LEDs with a maximum forward voltage of 60V.

The current per channel is determined by the number of channels used, as shown in Table 1 on Page 3.

Operating as a true constant current source, the driver provides a complete integrated solution that operates over an input voltage range from 10.8 to +15VDC.

Simple to connect and operate, the driver solution is capable of providing precise control to support dimming applications of over 5,000 to 1.

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 = 8.4 grams

Altitude = 35,000 ft max.

Humidity < 95% non-condensing

Size (L x W x H) = 2.0 IN x 0.95 IN x 0.530 IN

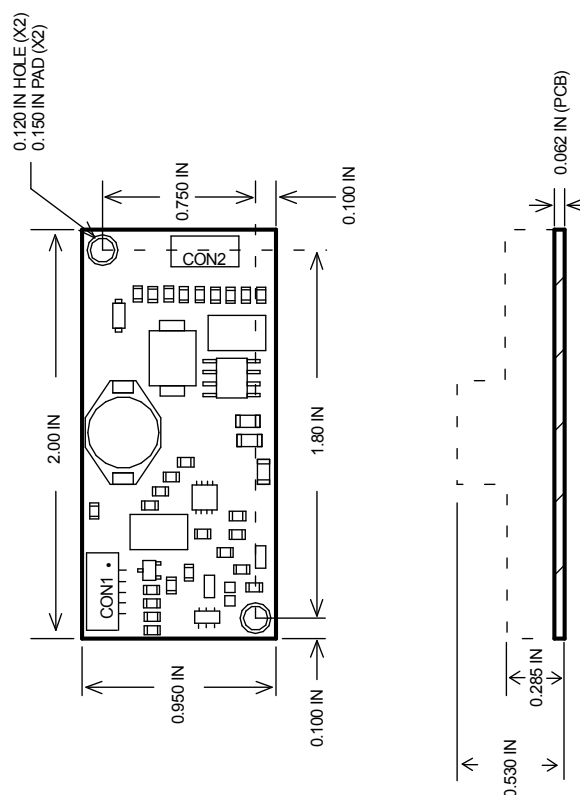
PCB thickness = 0.062 IN

Mounting Holes = 0.120 IN diameter (X2)

Input Power & Control Connector = CON1

LED Output Connector = CON2

RoHS Compliant



INPUT CONNECTOR
CON1
MOLEX 87438-0543

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

OUTPUT CONNECTOR
CON2
JST 10FH-SM1-TB (Flexfoil)

PIN #	FUNCTION
1	LED CATHODE #1
2	LED CATHODE #2
3	LED CATHODE #3
4	LED CATHODE #4
5	LED ANODE (COMMON)
6	LED ANODE (COMMON)
7	LED CATHODE #5
8	LED CATHODE #6
9	LED CATHODE #7
10	LED CATHODE #8

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MAXIMUM RATINGS*

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.3 to 18	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)	13.7	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)	10.8	15	Vdc
Vf	Series Connected Cumulative LED Forward-Drop Voltage	18	60	Vdc
Icntl	LED Intensity Control Voltage	0.5	4.5	Vdc

ELECTRICAL CHARACTERISTICS

Vin = +12V, Vf = 60V per channel, # of channels = 8, Icntl = +0.5V, Enable = +5V, unless otherwise specified.

Symbol	Parameter	Test Conditions	Min	Nom	Max	Unit
OCV	Open Circuit Voltage	No Load	68	75	82	Vdc
Iout	Output Current per Channel		20	22.5	25	mADC
ICNTL	Nominal Output Current per Channel Adjustable Range	ICNTL (Pin 4) = +4.5V to +0.5V	0		22.5	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		
Iind	Input Current Draw (Disabled)	Enable (Pin 3) = 0V		0.001	0.06	Adc
Eff	Electrical Efficiency			90		%

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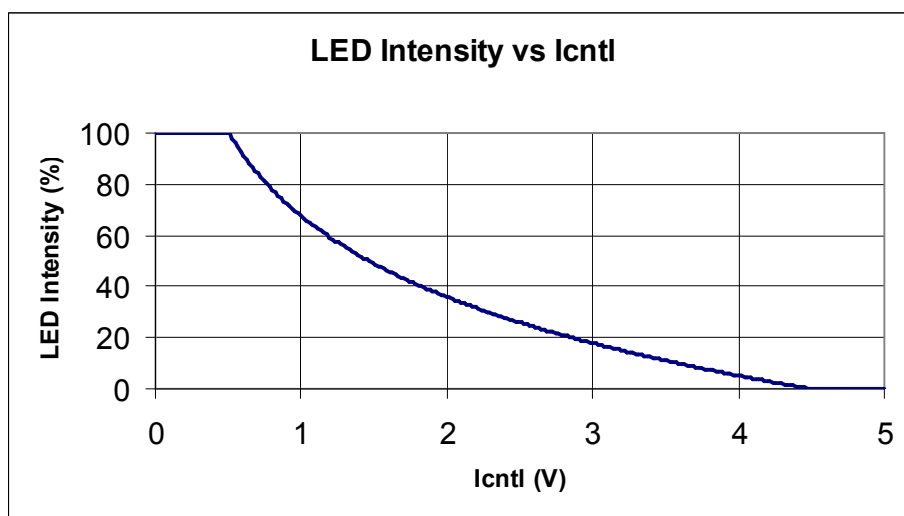
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Number of Channels Connected	1	2	3	4	5	6	7	8
Current per Channel (mA)	180	90	60	45	36	30	25.7	23.5

TABLE1. – Current per Channel, based on the number of channels connected.

BRIGHTNESS CURVE



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	(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)