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ACI-F0401260-2393

PRELIMINARY DATA SHEET

09/18/13

I-DRIVE 6, 50.4 WATT LED DRIVER (14 Channel 40V, 0-90mA per Channel)

GENERAL DESCRIPTION

The ACI-F0401260-2393 represents the 6th generation of I-Drive technology used for powering LED backlights.

Operating as a true constant current source and capable of driving up to 14 banks of series connected LEDs with a forward voltage drop up to 40V. This driver provides a complete integrated solution that is regulated over an input voltage range from +10V to +18V DC.

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

This unit features enable and intensity control inputs.

MECHANICAL/ENVIRONMENTAL

Weight = 50.7 grams

Altitude = 35,000 ft max.

Humidity < 95% non-condensing

Size (L x W x H) = 5.00 IN x 2.00 IN x 0.540 IN

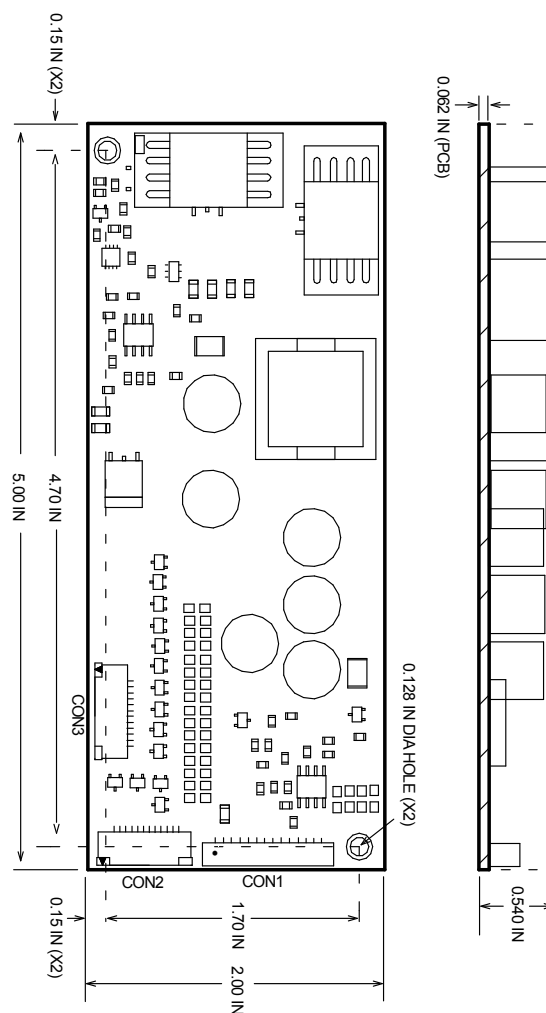
PCB thickness = 0.062 IN

Mounting Holes = 0.128 IN diameter (X2)

Input Power & Control Connector = CON1

LED Output Connectors = CON2 and CON3

RoHS Compliant



PLEASE REFER TO PAGE 3,
FOR INPUT AND OUTPUT CONNECTOR PIN ASSIGNMENTS

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MAXIMUM RATINGS*

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.7 to 20	Vdc
Vip	Voltage applied to any Input Pin (Referenced to Ground)	-0.7 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)	62	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 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	40	Vdc
Icctl	LED Intensity Control Voltage	0.25	4.75	Vdc

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

ELECTRICAL CHARACTERISTICS

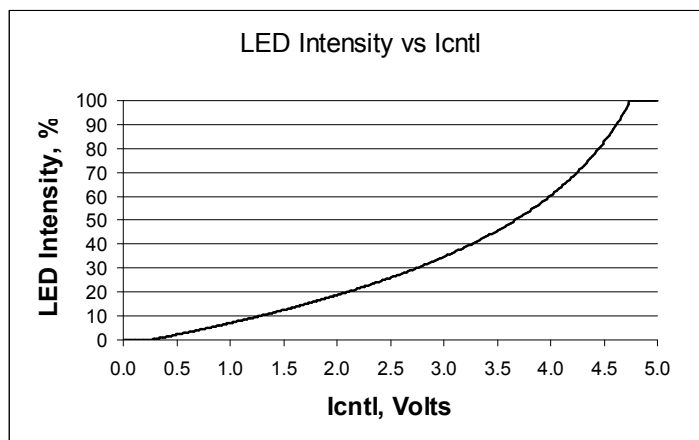
Vin = +12V, Vf = 40V per channel, # of channels = 14, Icctl = +4.75V, Enable = +5V unless otherwise specified.

Symbol	Parameter	Test Conditions	Min	Nom	Max	Unit
OCV	Open Circuit Voltage	No Load	40	45	50	Vdc
Iout	Output Current per Channel		85	90	95	mAdc
Iadj	Nominal Output Current Adjust Range Per Channel	Icctl(Pin 10)= +0.25V to +4.75V	0		90	mAdc
ENoff	Enable Control, Unit Off				0.5	Vdc
ENon	Enable Control, Unit ON		2.0			Vdc
+5Vref	+5V Output Reference Voltage	1K Ohm Load to Ground (Pin 13)	4.75	5.0	5.25	Vdc
Iin	Input Current Draw			4.7		Adc
Iind	Input Current Draw (Disabled)	Enable (Pin 9) = 0V			0.06	Adc
Eff	Electrical Efficiency			89		%

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BRIGHTNESS CURVE



INPUT AND OUTPUT CONNETOR PIN ASSIGNMENTS

INPUT CONNECTOR CON1 MOLEX 87438-1443	OUTPUT CONNECTOR CON2 MOLEX 52745-1097	OUTPUT CONNECTOR CON3 MOLEX 52745-1097
PIN# FUNCTION 1 +10 to +18V (PWR) 2 +10 to +18V (PWR) 3 +10 to +18V (PWR) 4 +10 to +18V (PWR) 5 GND (PWR) 6 GND (PWR) 7 GND (PWR) 8 GND (PWR) 9 ENABLE 10 ICNTL 11 TBD 12 TBD 13 +5VDC REF OUT 14 GND (SIGNAL OUT)	PIN# FUNCTION 1 -LED (CATHODE #1) (MASTER) 2 -LED (CATHODE #2) 3 -LED (CATHODE #3) 4 -LED (CATHODE #4) 5 -LED (CATHODE #5) 6 -LED (CATHODE #6) 7 -LED (CATHODE #7) 8 NC 9 +LED (ANODE) 10 +LED (ANODE)	PIN# FUNCTION 1 -LED (CATHODE #1) 2 -LED (CATHODE #2) 3 -LED (CATHODE #3) 4 -LED (CATHODE #4) 5 -LED (CATHODE #5) 6 -LED (CATHODE #6) 7 -LED (CATHODE #7) 8 NC 9 +LED (ANODE) 10 +LED (ANODE)