

## PRODUCT DATA SHEET

08/08/14

## I-LITE, 8.4 WATT LED DRIVER

(Common-Anode, Dual Channel, 30V)

### GENERAL DESCRIPTION

The ACI-A030047-2544 LED Driver is a true constant current source capable of driving 2 parallel channels of series connected LEDs with a forward voltage drop up to 30V.

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.

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

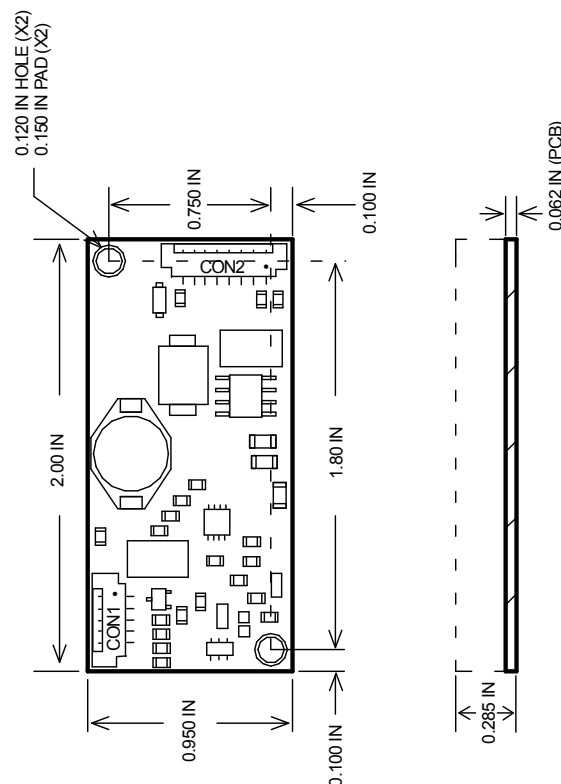
PCB thickness = 0.062 IN

Mounting Holes = 0.120 IN diameter (X2)

Input Power & Control Connector = CON1

LED Output Connector = CON2

RoHS Compliant



INPUT CONNECTOR  
CON1  
MOLEX 53261-0571

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

OUTPUT CONNECTOR  
CON2  
MOLEX 53261-0871

| PIN # | FUNCTION           |
|-------|--------------------|
| 1     | LED CATHODE #1     |
| 2     | LED CATHODE #2     |
| 3     | NC                 |
| 4     | NC                 |
| 5     | NC                 |
| 6     | NC                 |
| 7     | NC                 |
| 8     | LED ANODE (COMMON) |

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### 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)       | 11.1        | W    |
| Top    | Operating Temperature (Still air ambient around Driver) | -30 to +85  | °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

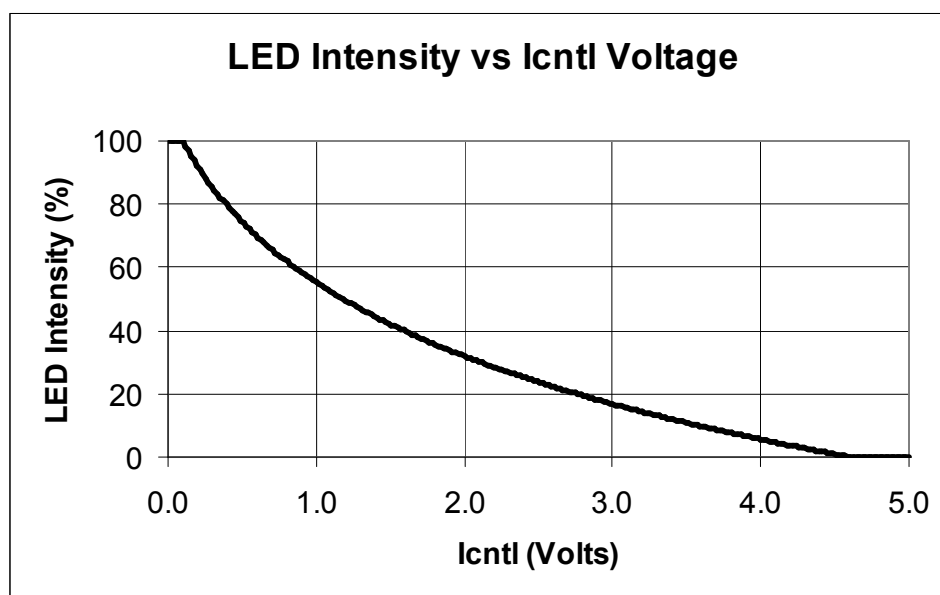
| Symbol | Parameter                                            | Min       | Max  | Unit |
|--------|------------------------------------------------------|-----------|------|------|
| Vin    | Supply Voltage (Referenced to Ground)                | 10.0      | 18.0 | Vdc  |
| Vf     | Series Connected Cumulative LED Forward-Drop Voltage | **Vin + 1 | 30   | 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, Vout = 30V, Number of Channels = 2, 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            |                               | 126  | 140   | 154  | mAdc |
| Iadj   | Brightness Intensity Adjustment Range | Icctl (Pin4) >= 4.6V          | 0    |       |      | mAdc |
|        |                                       | Icctl (Pin4) <= 0.1V          |      |       | 140  | 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                    |                               |      | 0.80  |      | Adc  |
| Iind   | Input Current Draw (Disabled)         | Enable (Pin 3) = 0V           |      | 0.001 | 0.06 | Adc  |
| Eff    | Electrical Efficiency                 |                               |      | 87    |      | %    |



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)             |