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# ACI-A036032-1788

## PRODUCT DATA SHEET

### I-LITE, 6.9 WATT LED DRIVER

(Common-anode, six channel 15-36V, 0-32mA)

5/19/09

#### GENERAL DESCRIPTION

The ACI-A036032-1788 is designed to drive up to 6 parallel channels of series connected LED's. Each series channel can provide an adjustable 0 to 32mA of output current into a maximum forward voltage of 36V.

Operating as a true constant current source the driver provides a complete integrated solution that operates from a nominal +12V source.

Simple to connect and operate, the driver solution is capable of providing precise control to support dimming applications of over 5000:1.

This unit feature's enable and intensity control inputs. Additionally, an on-board rotary switch allows the user to select any of 4 specific maximum output current levels.

#### MECHANICAL / ENVIRONMENTAL

Weight = 7.2 grams

Altitude = 35,000 Ft maximum

Humidity < 95% non-condensing

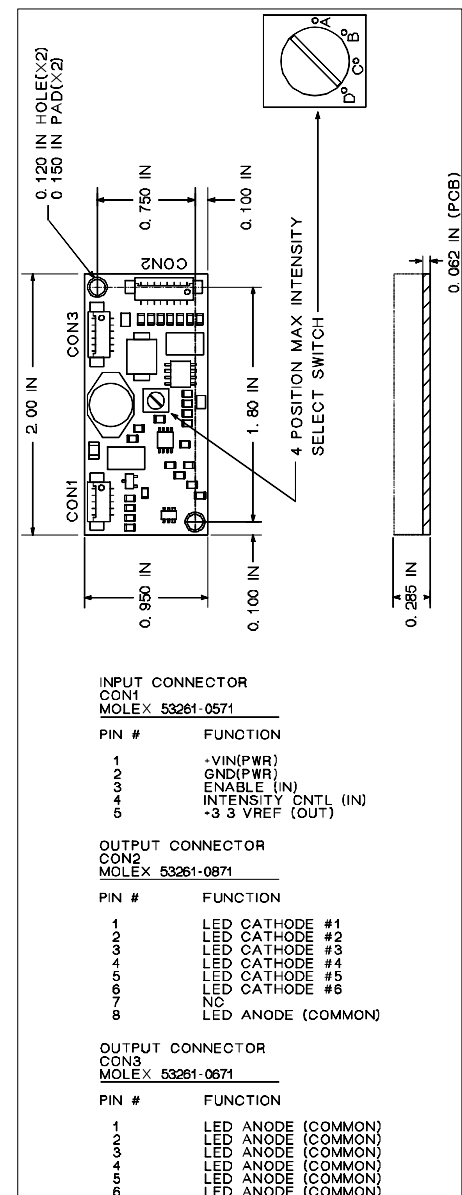
Size (L x W x H) = 2.0 IN x 0.95 IN x 0.285 IN

PCB thickness = 0.062 IN

Input power & control connector = CON1

LED output connector(s) = CON2, CON3

RoHS compliant



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### MAXIMUM RATINGS\*

| Symbol | Parameter                                                 | Value       | Unit  |
|--------|-----------------------------------------------------------|-------------|-------|
| Vin    | Supply Voltage (Referenced to Ground)                     | -0.3 to 15  | 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)         | 9.0         | Watts |
| Top    | Operating temperature (Still air ambient around inverter) | -30 to +85  | Deg-C |
| Tstg   | Storage Temperature                                       | -40 to +105 | Deg-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 | 13.2 | Vdc  |
| Vf     | Series connected cumulative LED forward-drop voltage | 18   | 32   | Vdc  |
| Icntl  | LED intensity control voltage                        | 0.25 | 3.0  | Vdc  |

### ELECTRICAL CHARACTERISTICS

Vin = +12V, Vf = 29Vdc, Icntl = +3.0V, Enable = +3.0V, S1 = A unless otherwise specified

| Symbol   | Parameter                             | Test Conditions                 | Min  | Typ  | Max  | Unit |
|----------|---------------------------------------|---------------------------------|------|------|------|------|
| OCV      | Open circuit voltage                  | No load                         | 45   | 50   | 55   | Vdc  |
| Iout-a   | Output current per channel, setting A | S1 = A                          | 30.4 | 32   | 33.6 | madc |
| Iout-b   | Output current per channel, setting B | S1 = B                          | 22.8 | 24   | 25.2 | madc |
| Iout-c   | Output current per channel, setting C | S1 = C                          | 15.2 | 16   | 16.8 | madc |
| Iout-d   | Output current per channel, setting D | S1 = D                          | 7.6  | 8    | 8.4  | madc |
| Iadj     | Nominal output current adjust range   | Icntl (Pin 4) = +0.25V to +3.0V | 0    |      | 32   | 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 | +3.3 volt output reference voltage    | 1k load to ground (Pin 5)       | 3.13 | 3.3  | 3.47 | Vdc  |
| Iin      | Input current draw                    |                                 |      | 0.52 |      | Adc  |
| Iind     | Input current draw (Disabled)         | Enable (Pin 3) = 0V             |      | 1.0  |      | madc |
| Eff      | Electrical Efficiency                 |                                 |      | 90   |      | %    |



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GRAPHS

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