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ACI-C068220-1956

PRODUCT DATA SHEET

11/23/10

I-DRIVE, 15 WATT LED DRIVER (Single Channel 68V, 0-220mA)

GENERAL DESCRIPTION

The ACI-C068220-1956 represents the 3rd generation of I-Drive technology used for powering LED backlights.

Operating as a true constant current source and capable of driving up to 20 LEDs in series. This driver provides a complete integrated solution that is regulated over an input range of +8V to +18V.

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 = 20.5 grams

Altitude = 35,000 ft max.

Humidity < 95% non-condensing

Size (L x W x H) = 2.35 IN x 1.43 IN x 0.385 IN

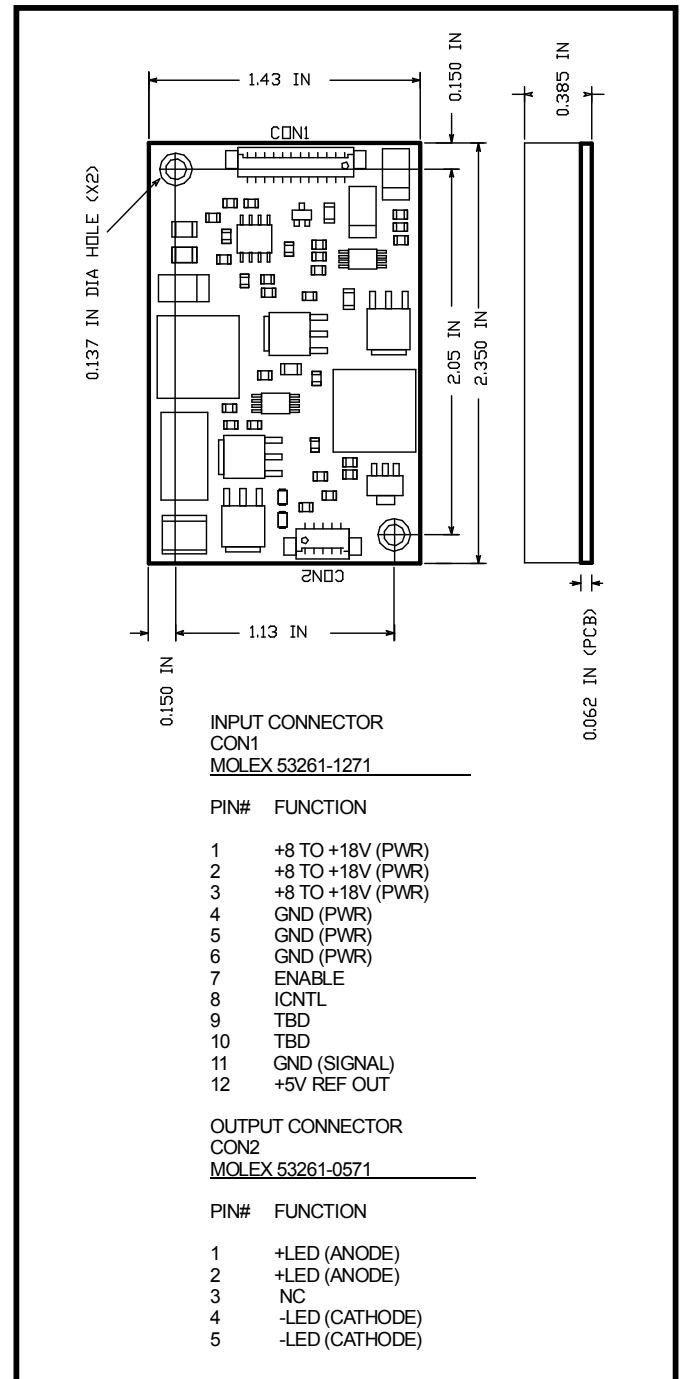
PCB thickness = 0.062 IN

Mounting Holes = 0.137 IN diameter (X2)

Input Power & Control Connector = CON1

LED Output Connector = CON2

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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) | 20 | 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 driver may occur.

RECOMMENDED OPERATING CONDITIONS

| Symbol | Parameter | Min | Max | Unit |
|--------|--|-----|------|------|
| Vin | Supply Voltage (Referenced to Ground) | 8.0 | 18.0 | Vdc |
| Vf | Series Connected Cumulative LED Forward-Drop Voltage | 20 | 62 | Vdc |
| Icntl | LED Intensity Control Voltage | 0.5 | 4.5 | Vdc |

ELECTRICAL CHARACTERISTICS

Vin = +12V, Vf = 62Vdc, Icntl = +4.5V, Enable = +5V unless otherwise specified

| Symbol | Parameter | Test Conditions | Min | Nom | Max | Unit |
|--------|-------------------------------------|--------------------------------|------|-----|------|------|
| OCV | Open Circuit Voltage | No Load | 78 | 82 | 86 | Vdc |
| Iout | Output Current | | 209 | 220 | 231 | mAdc |
| Icntl | Nominal Output Current Adjust Range | Icntl(Pin 8)= +0.5V to +4.5V | 0 | | 220 | 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 12) | 4.75 | 5.0 | 5.25 | Vdc |
| Iin | Input Current Draw | | | 1.3 | | Adc |
| Iind | Input Current Draw (Disabled) | Enable (Pin 7) = 0V | | | 0.06 | Adc |
| Eff | Electrical Efficiency | | 86 | | | % |

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