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ACI-A040025-2165

PRODUCT DATA SHEET

03/14/13

I-LITE, 3.0 WATT LED DRIVER

(Common-Cathode, Three Channel, 40V, 0-25mA per Channel)

GENERAL DESCRIPTION

The ACI-A040025-2165 is designed to drive three parallel channels of series connected LEDs with a forward voltage drop up to 40V.

Operating as a true constant current source, the driver provides a complete integrated solution that operates over an input voltage range from +8V to +18V.

This unit features enable and intensity control inputs.

Additional Support Documentation:

1. Application Note AN-OP1
2. I-LITE LED DRIVER APPLICATION NOTE

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

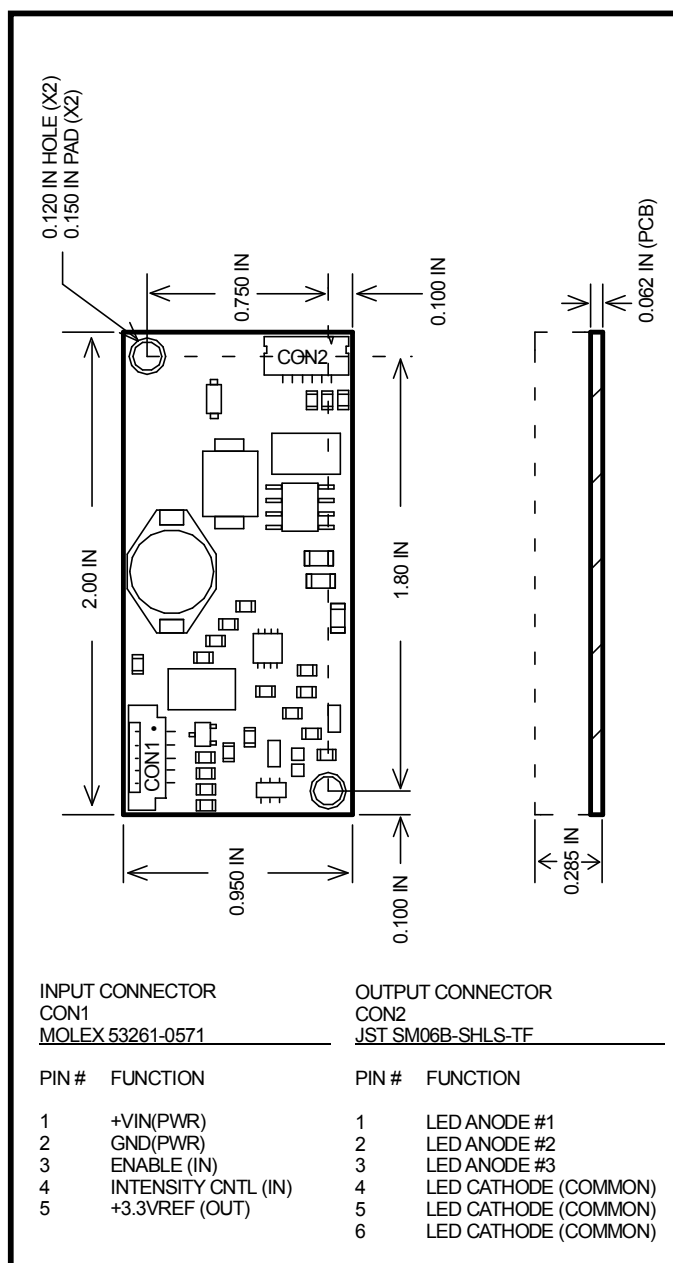
PCB thickness = 0.062 IN

Mounting Holes = 0.120 IN diameter (X2)

Input Power & Control Connector = CON1

LED Output Connector = CON2

RoHS Compliant



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 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)	3.8	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)	8.0	18.0	Vdc
Vf	Series Connected Cumulative LED Forward-Drop Voltage	**Vin + 1	40	Vdc
Icctl	LED Intensity Control Voltage	0.25	3.0	Vdc

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

ELECTRICAL CHARACTERISTICS

Vin = +12V, Vout = 40V, Number of Channels = 3, Icctl = +3.0V, Enable = +3.0V, unless otherwise specified.

Symbol	Parameter	Test Conditions	Min	Nom	Max	Unit
OCV	Open Circuit Voltage	No Load	41	45	49	Vdc
Iout	Output Current per Channel		23	25	27	mAdc
Iadj	Nominal output current adjust range	Icctl (Pin4) <= +0.25V			0	mAdc
		Icctl (Pin4) >= +3.0V		25		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	+3.3V Output Reference Voltage	1K Ohm Load to Ground (Pin 5)	3.13	3.3	3.47	Vdc
Iin	Input Current Draw			0.28	0.29	Adc
Iind	Input Current Draw (Disabled)	Enable (Pin 3) = 0V		0.001	0.06	Adc
Eff	Electrical Efficiency			90		%

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BRIGHTNESS CURVE

