397 Route 281
Tully, New York 13159
Phone: 315 696-6676
Fax: 315 696 9923
Email: sales@acipower.com
www.acipower.com

ACI-2532

PRODUCT DATA SHEET

08/06/14

I-DRIVE4, 2.5 WATT LED DRIVER
(Single Channel 50V, 0-50mA)

GENERAL DESCRIPTION

The ACI-2532 represents the 4th generation of I-Drive technology used for powering LED backlights.

Operating as a true constant current source and capable of driving a single channel of series connected LEDs with a forward voltage drop up to 50V. This driver provides a complete integrated solution that is regulated over an input voltage range from +6V to +15V.

This driver supports both voltage control and resistor control methods for controlling brightness and its brightness control is electrically equivalent to the NLT 65PW01F LED Driver.

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 = 21.6 grams

Altitude = 35,000 ft max.

Humidity < 95% non-condensing

Size (L x W x H) = 4.35 IN x 0.900 IN x 0.385 IN

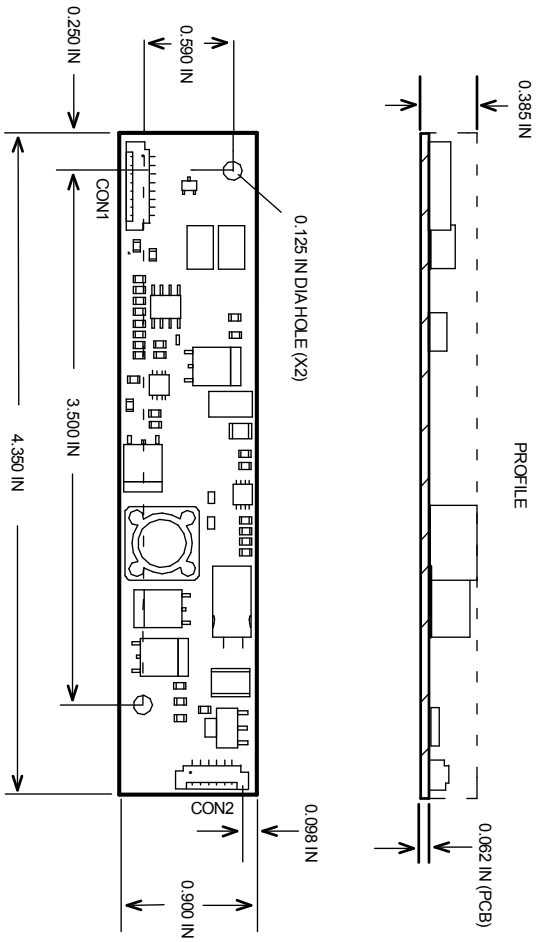
PCB thickness = 0.062 IN

Mounting Holes = 0.125 IN diameter (X2)

Input Power & Control Connector = CON1

LED Output Connector = CON2

RoHS Compliant



INPUT CONNECTOR
CON1
MOLEX 53261-0871

PIN #	FUNCTION
1	+6V to +15V (PWR)
2	+6V to +15V (PWR)
3	GND
4	GND
5	ENABLE
6	Icntl
7	GND (Signal)
8	NC

OUTPUT CONNECTOR
CON2
MOLEX 53261-0671

PIN #	FUNCTION
1	+LED (ANODE)
2	+LED (ANODE)
3	NC
4	NC
5	-LED (CATHODE)
6	-LED (CATHODE)

Applied Concepts
INNOVATION IN POWER CONVERSION TECHNOLOGY

397 Route 281
Tully, New York 13159
Phone: 315 696-6676
Fax: 315 696 9923
Email: sales@acipower.com
www.acipower.com

ACI-2532

PRODUCT DATA SHEET

08/06/14

MAXIMUM RATINGS*

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.7 to 18	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)	3.5	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)	6.0	15.0	Vdc
$Vin_{Shutdown}$	Supply Voltage Shutdown (Reference to Ground)	5.4	5.9	Vdc
Vf	Series Connected Cumulative LED Forward-Drop Voltage	**Vin + 1	50	Vdc
Icntl	LED Intensity Control (using **Voltage** Control Method)	0	2.5	Vdc
	LED Intensity Control (using **Resistor** Control Method)	0	10K	Ohm

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

ELECTRICAL CHARACTERISTICS

Vin = +6V, Vf = 50Vdc, Icntl = +2.5, Enable = +5V, unless otherwise specified.

Symbol	Parameter	Test Conditions	Min	Nom	Max	Unit
OCV	Open Circuit Voltage	No Load	55	60	65	Vdc
Iout	Output Current		45	50	55	mAdc
Iadj	Nominal Output Current Adjust Range	Icntl (Pin 6) = 0V or Icntl (Pin 6) = 0 Ohms	5			mAdc
		Icntl (Pin 6) >= +2.5V or Icntl (Pin 6) >= 7K Ohms			50	mAdc
ENoff	Enable Control, Unit Off				0.5	Vdc
ENon	Enable Control, Unit ON		2.0			Vdc
Iin	Input Current Draw			0.48		Adc
Iind	Input Current Draw (Disabled)	Enable (Pin 5) = 0V			0.03	Adc
Eff	Electrical Efficiency			87		%

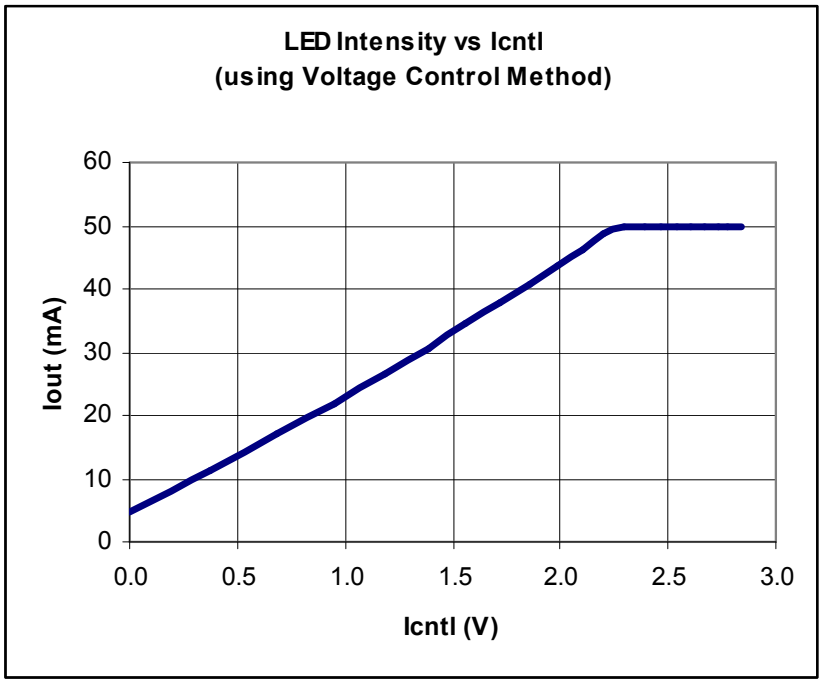
Applied Concepts
INNOVATION IN POWER CONVERSION TECHNOLOGY

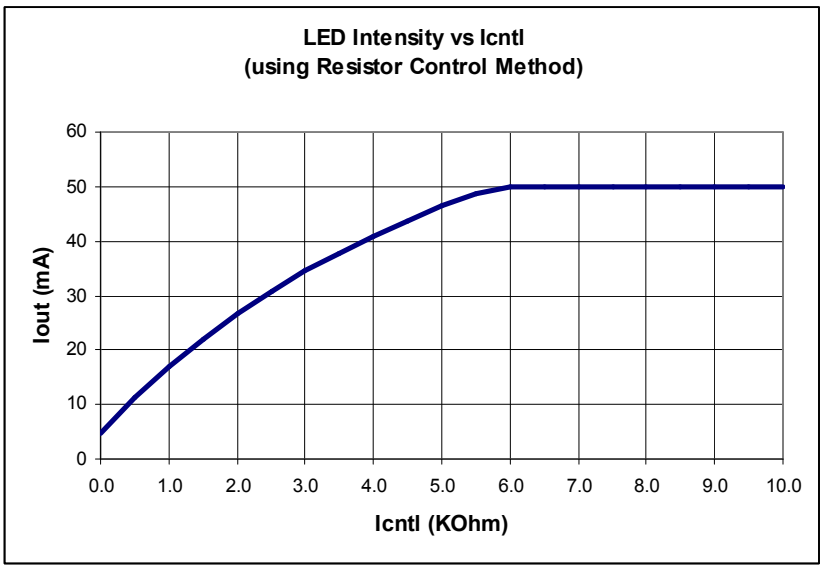
397 Route 281
Tully, New York 13159
Phone: 315 696-6676
Fax: 315 696 9923
Email: sales@acipower.com
www.acipower.com

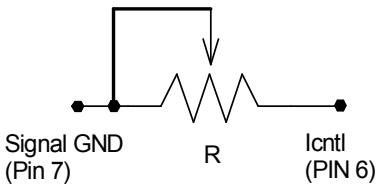
ACI-2532

PRODUCT DATA SHEET

08/06/14







Connecting 10K Ohm Potentiometer,
when using Resistor Control Method