

ACI-2955

PRODUCT DATA SHEET

02/15/19

I-DRIVE 5, 21 WATT BLUE LED DRIVER

(70V, 4 Channels, 0 to 75mA per Channel)

GENERAL DESCRIPTION

The ACI-2955 represents the 5th generation of I-Drive technology used for powering LED backlights.

This driver is used as part of a dual driver solution to power the **Blue LED's** in the backlight of the LG LM300WQ6 30" GB-LED display. ACI-2973 is the Green driver that is also required for powering the Green LED's. Please refer to the connection diagram on page 4.

Operating as a true constant current source and capable of driving up to 4 parallel banks of series connected LEDs with a forward voltage drop up to 70V. This driver provides a complete integrated solution that is regulated over an input range of +20V to +28V.

Simple to connect and operate, this driver solution is capable of providing precise control to support wide dimming applications.

This unit features enable and intensity control inputs, and features 'ChromaTrak' which reduces chromaticity shift across the dimming range.

Use of input power and control cable **27-R0255** will greatly simplify the interconnection of the two drivers.

MECHANICAL/ENVIRONMENTAL

Weight = 35.7 grams

Altitude = 35,000 ft max.

Humidity < 95% non-condensing

Size (L x W x H) = 3.25 IN x 2.00 IN x 0.47 IN

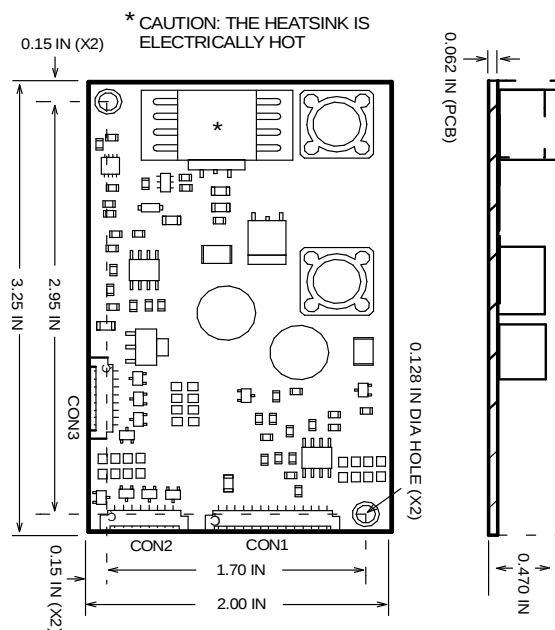
PCB thickness = 0.062 IN

Mounting Holes = 0.128 IN diameter (X2)

Input Power & Control Connector = CON1

LED Output Connector = CON2

RoHS Compliant



INPUT CONNECTOR

CON1

MOLEX 53261-1471

PIN# FUNCTION

1	+20 to +28V (PWR)
2	+20 to +28V (PWR)
3	+20 to +28V (PWR)
4	+20 to +28V (PWR)
5	GND (PWR)
6	GND (PWR)
7	GND (PWR)
8	GND (PWR)
9	ENABLE
10	ICNTL
11	TBD
12	TBD
13	+5VDC REF OUT
14	GND (SIGNAL)

OUTPUT CONNECTOR

CON2

MOLEX 53261-0871

PIN# FUNCTION

1	+ LED (ANODE)
2	+ LED (ANODE)
3	+ LED (ANODE)
4	+ LED (ANODE)
5	- LED (CATHODE 1) Master*
6	- LED (CATHODE 2)
7	- LED (CATHODE 3)
8	- LED (CATHODE 4)

*The Master Channel must always be used.

OUTPUT CONNECTOR
CON3 (NOT USED)

MAXIMUM RATINGS*

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.7 to 30	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)	27	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)	20.0	28.0	Vdc
Vf	Series Connected Cumulative LED Forward-Drop Voltage	**Vin + 1	70	Vdc
Icctl	LED Intensity Control Voltage	0.25	4.75	Vdc

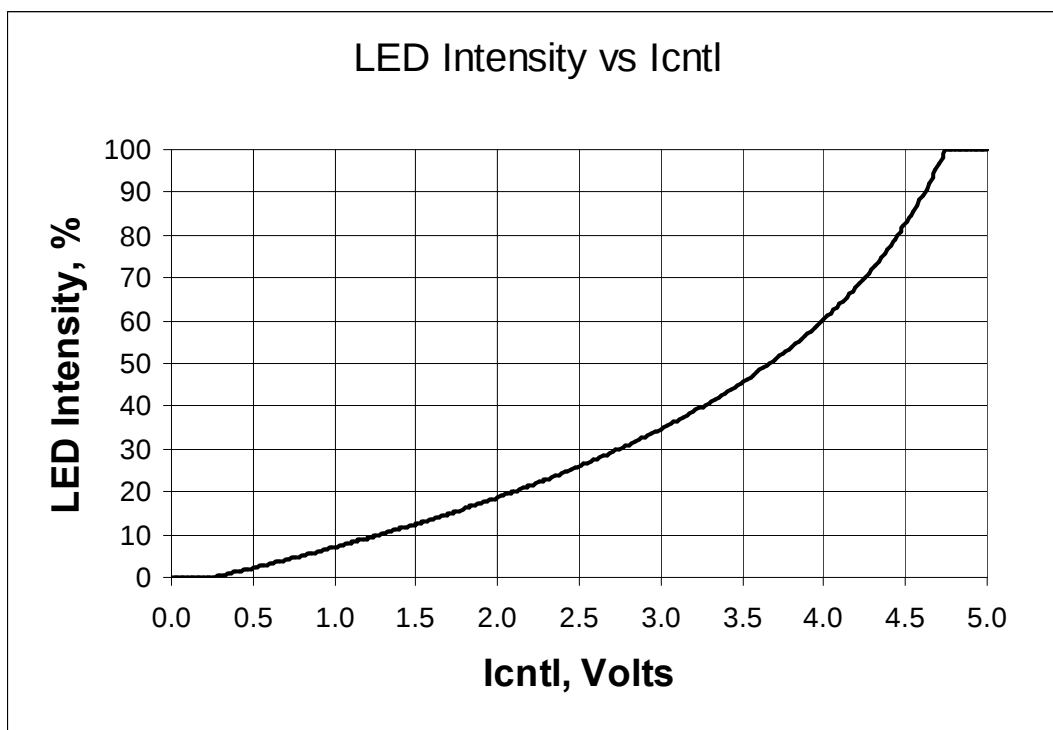
**Vin must be less than the minimum Forward-Drop Voltage (Vf).

ELECTRICAL CHARACTERISTICS

Vin = +24V, Vf = 70V, # of Channels = 4, Icctl = +4.75V, Enable = +5V unless otherwise specified.

Symbol	Parameter	Test Conditions	Min	Nom	Max	Unit
OCV	Open Circuit Voltage	No Load	65	72	79	Vdc
Iout	Output Current per Channel		71	75	79	mAdc
Iadj	Nominal Output Current Adjust Range	Icctl(Pin 10)= +0.25V to +4.75V	0		75	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 13)	4.75	5.0	5.25	Vdc
Iin	Input Current Draw			0.975		Adc
Iind	Input Current Draw (Disabled)	Enable (Pin 9) = 0V			0.06	Adc
Eff	Electrical Efficiency			90		%

BRIGHTNESS CURVE



CONNECTION DIAGRAM

