



Optillis

LPS100A-5

LED Backlight Power Control

Product Description

The Optillis LPS100A series is a fixed frequency step-up DC/DC converter designed to drive up to 3 strings of LEDs from a 12V supply. This board was designed to work with the Optrex and Mitsubishi TFT-LCD display product line.

Features

- Low Cost – Constant Current Led Backlight Driver Board
- Form Factor and Control Interface compatible to existing CCFL Driver Boards
- 3 / 4 wire operation
- 97% efficiency
- RoHs
- Extended Temperature Range
- Power on soft start

LCD Support

- 12.1" Optrex T-55373D121J-LW-A-AAN
- 12.1" Optrex T-55374D121J-LW-A-AAN
- 12.1" Optrex T-55513D121J-LW-A-AAN

Specifications

- 6 – 18 VDC input voltage
- -30 to 85 C operating temperature
- Weight 0.4 oz (10g)
- 0.800"W x 4.35"L x 0.4" H
- (1) SM06B-SHLS-TF LED connectors
- (1) 640457-4 Tyco power / control connector

Options

- 5V input voltage
- Custom form factor, connectors

Optillis 2011 Rev A

Electrical Characteristics (per string)

Input

PIN.	ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT	Remarks
1	LED Input Voltage	VCC	6	12	18	Vdc	
2	Ground	VEE	0	--	--	V	
3	Vcontrol	VCTL	0	--	18	V	*note 1
4	Enable (on/off)	Enb	0	--	18	V	**note 2

* note 1 • Brightness Control Input : 0 – 5.0 VDC (0 – 100%)

** note 2 • Enable Input: 0.3V or less=OFF, 2V or greater=ON. Not Connected defaults ON.

Output

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT	Remarks
LED Voltage	VF	--	(24)	36.6	V	25C
		--		37.9	V	0C
		--		39.6	V	-30C
LED Current	IF	--	--	120	mA	25C

Mechanical Characteristics

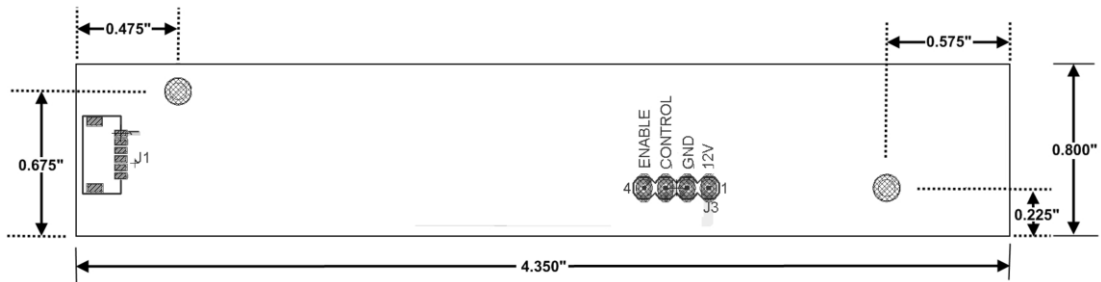
- **J3 (Input)** - Power / Control connector
 - Tyco - 640457-4. (Mating connector Tyco 3-644512-4)

PIN	INPUT
1	Vin
2	GND
3	Vcontrol
4	Enable

- **J1(Output)** - LED connectors
 - JST - SM06B-SHLS-TF. (Mating connector JST SHLP-06V-S-B)

PIN	OUTPUT	PIN	OUTPUT
1	NC	4	Anode 1
2	NC	5	Anode 2
3	Cathode 1	6	Cathode 2

- Dimensions / Connector location for P/N LPS100A-xy (note only 1 connector – J1)



Part Numbering / Ordering

LPS100A-xy

x – LCD type

- 3

y – Enable Control Voltage

- Blank Connection not required. Default ON with internal pull up to Vin.
Can be disabled with GND connection.

- 1 2 VDC or greater = Enabled. 1VDC or less = Disabled.