



LITEMAX LID10A03

LED Driving Board

(1st Edition 7/25/2008)

All information is subject to change without notice.

Approved by	Checked by	Prepared by
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General

The LID10A03 is designed to power High White LED Light Bar to a nominal power level of 8W (TYPICAL)

Intensity control (0-100%) is accomplished by the user providing a variable dc level of 0.5V (full-on) to 4.8V (off) at pin7 of J1.

Enable control is accomplished at pin8 of J1 (0V=on,5V=off)

Specifications:

- $V_{in}=+10V$ to $+14V \pm 10\%$
- Constant current and voltage function.
- No load voltage=30V
- LED Light Bar output Voltage=22V(TYPICAL)
- LED Light Bar output current=360mA @100%(TYPICAL)
- Nominal LED Light Bar working frequency=125KHz ± 5 KHz
- Nominal PWM frequency=200Hz $\pm 10\%$
- PWM duty cycle range=0 to 100%
- Average electrical efficiency > 90%

LED Application

This specification is applied to LED converter unit for SP1075 LED backlight

Operating Characteristics

Item	Symbol	Conditions	MIN.	TYP.	MAX.	Unit	Remark
Input Voltage	Vin		10.0	12.0	14.0	V	
Input Current (Low Brightness)	IinL	VIN=12V, Vadj=5V	0.0	-----	-----	mA	
Input Current (High Brightness)	IinH	VIN=12V, Vadj=0V	695	710	740	mA	
LED Current (Low Brightness)	IoutL	VIN=12V, Vadj=5V	0.0	-----	-----	Arms	
LED Current (High Brightness)	IoutH	VIN=12V, Vadj=0V	300	356	430	mA	
Working	Freq	VIN=12V, Vadj=0V	120	125	130	Hz	
PWM Frequency	Freq	VIN=12V	180	200	220	Hz	
Brightness Control	Vadj	Connection of Voltage	0.5	-----	4.8	V	
ON/OFF Control	Von/off	Normal Operation	2	-----	5	V	
Output Voltage	Vout	VIN=12V, Vadj=0V	20.97	21.31	21.8	V	
Efficiency	η	VIN=12V, Vadj=0V	90.52	89.1	90.5	%	

Environment

Operation Temperature	-20 ~ 70°C
Operation Humidity	% Max.RH
Storage Temperature	-40 ~ 85°C
Storage Humidity	% Max.RH

Connector Socket

Input Connector: LJ1 (JST B2B-PH-K-S or Compatible)

:

PIN No	Symbol	Description
1	Vin	DC+12V
2	Vin	DC+12V
3	Vin	DC+12V
4	GND	Ground
5	GND	Ground
6	GND	Ground
7	Brightness	Brightness Control 5V~0V
8	Control	ON/OFF Control 0.8V(OFF) 2~5V(ON)

Output Connector: LJ2, LJ3 (JST S2B-EH or Compatible)

PIN NO	Symbol	Description
1	Output	LED High Voltage(+)
2	Output	LED Low Voltage (-)

Mechanical Characteristics

Dimension: 124mm*50mm*15mm

INPUT CONNECTOR
 LJ1:
 PIN1:VIN
 PIN2:VIN
 PIN3:VIN
 PIN4:GND
 PIN5:GND
 PIN6:GND
 PIN7: BRIGHTNESS
 PIN8: ON/OFF

