

Subject
OB3375Y Demo Board Manual

Board Model: LD60V0.75A3375Y.00
Doc. No.: OB_DOC_DBM_3375Y00

Description:

The performance of LED backlight power supply for LCD backlight application is presented. It is designed with OB3375Y which integrates a buck converter. The detailed, schematic, BOM, PCB layout and test data are also described.

The test data in this report is by White LED array.

Revision History

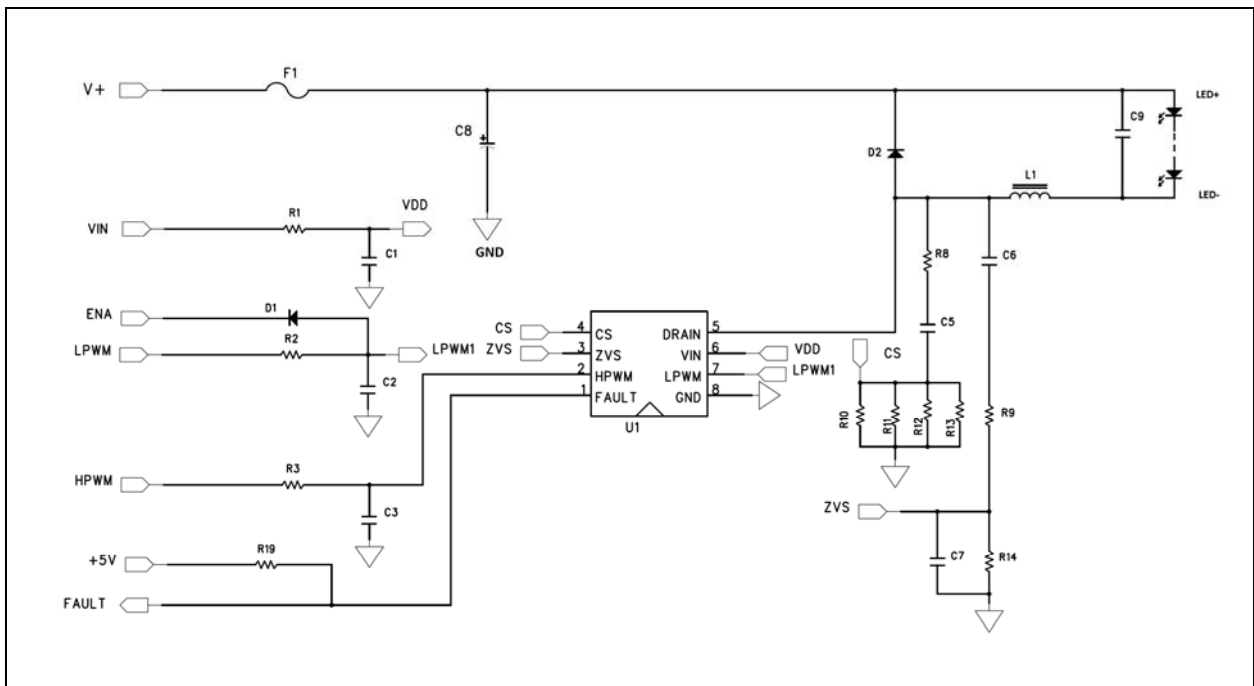
Revise Date	Version	Reason/Issue
2020-09-11	00	First Issue

1. Board Information

1.1. Features

- Low system cost and high efficiency
- PWM and PWM to Analog combination dimming
- Comprehensive protections coverage covers LED open, LED+ to LED- short, LED- to GND short, Diode/Inductor short, Drain/CS short, OTP etc.
- No visible flicker and audio noise free

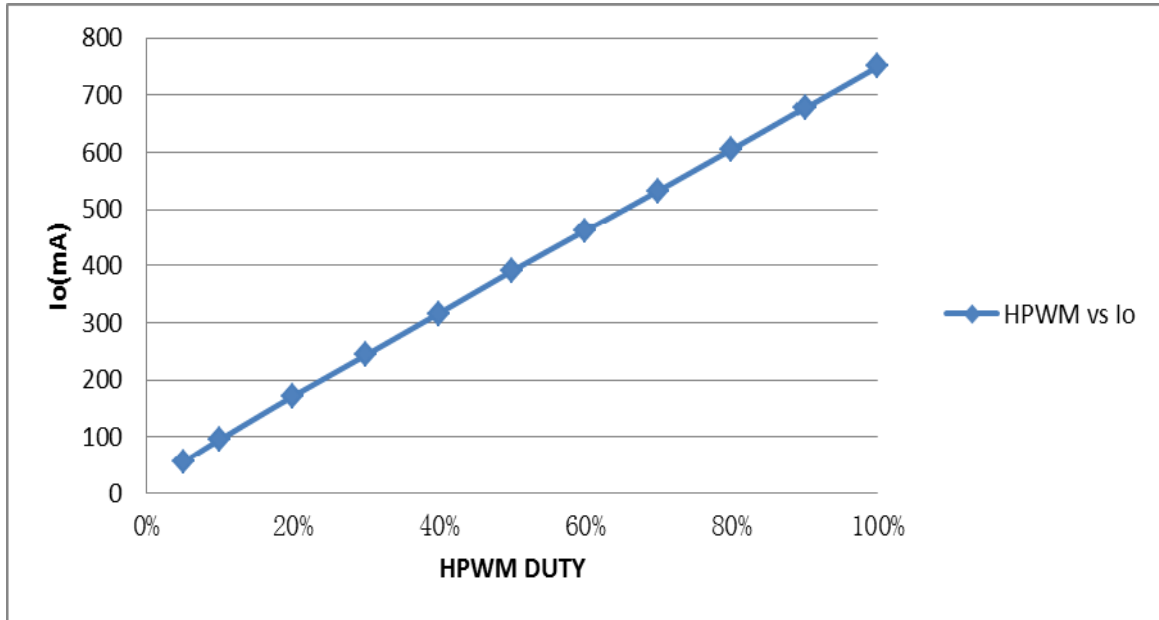
1.2. Electrical Schematic



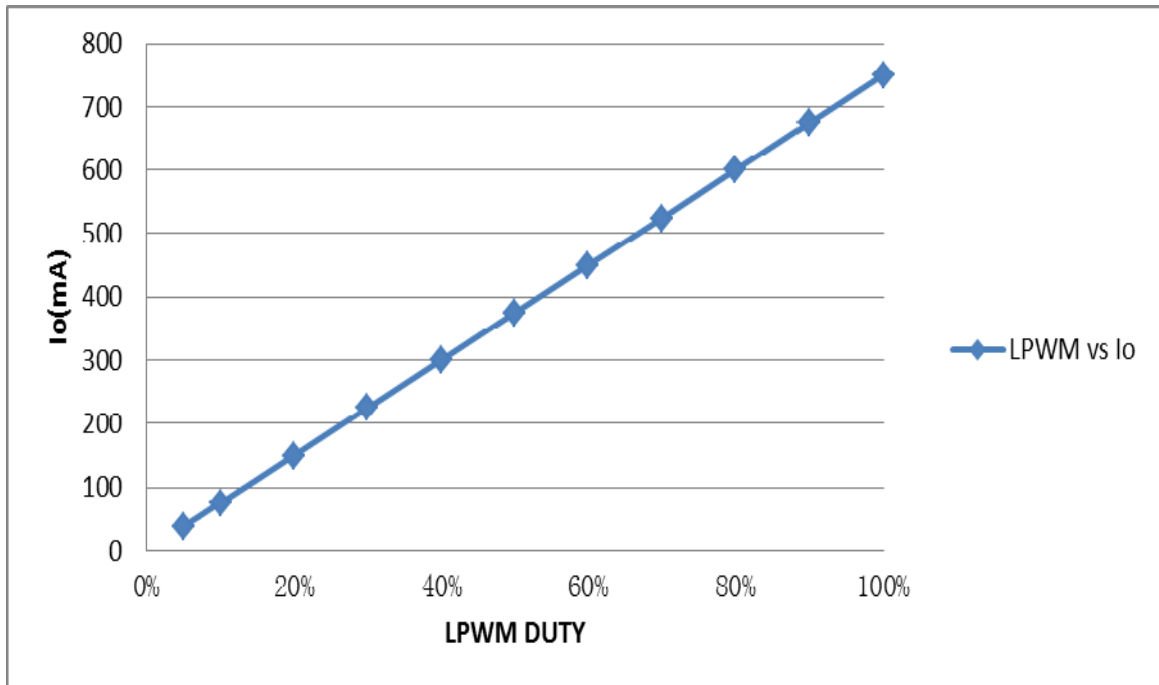
2. Test Data & Waveform

3.1 LED Current regulation

3.1.1 HPWM 15khz dimming @ LPWM 100%



3.1.2 LPWM 200Hz dimming @ HPWM 100%



3.1.3 Steady state

Io(A)	VIN=75V	VIN=80V	VIN=85V	Precision VS VIN
Vout=30V	0.756	0.756	0.757	0.13%
Vout=60V	0.752	0.753	0.754	0.27%
Precision VS Vo	0.53%	0.40%	0.40%	

3.1.4 Efficiency Test

	VIN=75V	VIN=80V	VIN=85V
Vout=30V	90.26%	90.27%	90.5%
Vout=60V	91.8%	92.6%	92.6%

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