

Intelligent Lighting Family Product Guide

Part Number	Description	Package(s) Available	Page No.
CCFL/EEFL Intelligent Inverter® Controller ICs			
LCD MONITOR (LCDM) APPLICATIONS			
OZ9919	Selectable LCDM Controller	16 SOP, Lead-free	7
OZ9933	LCDM Full-Bridge Controller	16 PDIP, SOP, Lead-free	8
OZ9937	Universal LCD Panel Controller	16 SOP, Lead-free	9
OZ9938	Multi-Lamp Controller	16 PDIP, SOIC, Lead-free	10
LCD TV APPLICATIONS			
OZ9928*	LCD TV Dual Controller	30 SSOP, Lead-free	11
OZ9966*	Large-Size LCD TV Controller	24 SOP, SSOP, Lead-free	12
OZ9972/ OZ9972A*	High Power LCD TV Controller	24 SOP, SSOP, Lead-free/ 28 SSOP, Lead-free	13
OZ9976*	Offline LCD TV Controller	16 SOP, Lead-free	14
LED Backlight Controller ICs			
NOTEBOOK / NETBOOK APPLICATIONS			
OZ9901	LCD Bias Supply Controller	24 QFN, Lead-free	15
OZ9955A	Eight String LED Controller	24 QFN, Lead-free	16
OZ9955B	Eight String SMBus™ LED Controller	24 QFN, Lead-free	17
OZ9956B	Six String LED Controller	20 QFN, Lead-free	18
OZ9956C	White LED Backlight Controller	20 QFN, Lead-free	19
OZ9960	High Power LED Controller	12 DFN, 16 SSOP, Lead-free	20
OZ9979	Six String w/Phase-Shift Dimming, Internal MOSFET	20 QFN, Lead-free	21
OZ9989	Three String LED Controller	12 DFN, Lead-free	22
OZ9993	Low Cost White LED Controller	SOT23-6L, Lead-free	23

* NOTE: The OZ9928, OZ9966, OZ9972/72A, OZ9976, and OZ9977/77A/77B are inverter controllers specially designated for use in televisions or applications with multiple lamps, are warranted and licensed for use in these or any other appropriate applications, and are sold with a license to all relevant O2Micro patents. Sale of all other O2Micro inverter controllers are subject to the following restrictions: (i) the product is not warranted, indemnified, or licensed for use in televisions or applications with multiple lamps; (ii) sale of the product and license to O2Micro inverter controller patents are expressly conditioned upon not using this product in a television or applications with multiple lamps; (iii) by using the product, you agree to notify customers of the limited scope of the license and sale; and (iv) use of the product in a television or applications with multiple lamps is expressly prohibited, is a material breach of such sale, and violates any express or implied license to any O2Micro patent. All sales are subject to O2Micro's conditions and terms of sale and use.

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LED Backlight Controller ICs (cont.)			
MONITOR APPLICATIONS			
OZ9902	Dual Channel High Power LED Driver	24 SOP, SSOP, Lead-free	24
OZ9906	Six String LED Controller	28 E-TSSOP, SOP, Lead-free	25
OZ9908	Eight String High Power LED Controller	48 LQFP, 40 QFN, Lead-free	26
OZ9961	Six String LED Controller	20 E-TSSOP, SSOP, Lead-free	27
OZ9967	Six String High Power LED Controller	28 SOP, SSOP, TSSOP, Lead-free	28
OZ9997	LED Backlight Controller	24 E-TSSOP, QFN, SOP, Lead-free	29
OZ9998/ OZ9998A	Eight String High Power LED Controller	24 E-TSSOP, QFN, SOP, Lead-free	30
OZ9998B	Four String High Power LED Controller	16 E-TSSOP, PDIP, QFN, SOP, Lead-free	31
TV APPLICATIONS			
OZ9902	Dual Channel High Power LED Driver	24 SOP, SSOP, Lead-free	24
OZ9902B	Single Channel High Power LED Driver	16 QFN, SOP, Lead-free	32
OZ9904	Four String LED Controller	28 SSOP, Lead-free	33
OZ9904A	Eight String LED Controller	40 QFN, Lead-free	34
OZ9906	Six String LED Controller	28 E-TSSOP, SOP, Lead-free	25
OZ9908	Eight String High Power LED Controller	48 LQFP, 40 QFN, Lead-free	26
OZ9908A	Six String High Power LED Controller	28 SOP, TSSOP, Lead-free	35
OZ9908B	Six String High Power LED Controller	32 LQFP, SOP, Lead-free	36
OZ9967	Six String High Power LED Controller	28 SOP, SSOP, TSSOP, Lead-free	28

OZ9976

FEATURES

- Offline Inverter Controller (IPB)
- Supports both fixed and variable frequency applications
- Half-bridge or push-pull topology
- Directly drives pulse transformers
- Dedicated pins for Analog and LPWM dimming
- User-defined minimum operating frequency
- User-defined striking frequency range
- Open-load, over-voltage, and under-voltage lockout protection
- User-defined striking and shutdown delay timers
- Soft start function

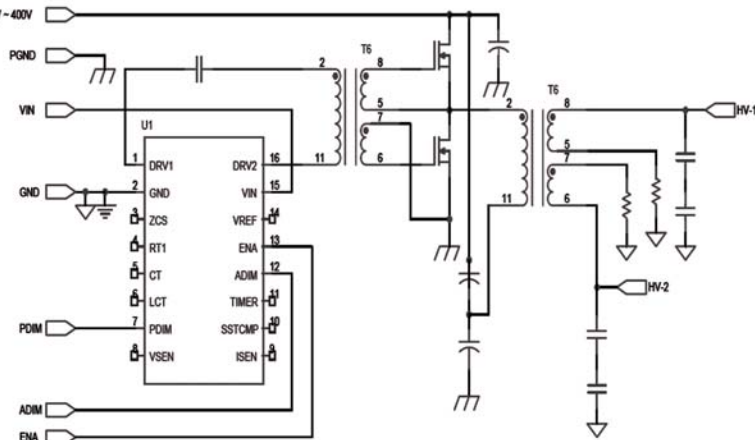
GENERAL DESCRIPTION

The OZ9976 is a high efficiency, Pulse Width Modulation (PWM) controller designed for off line LCD backlight application. It achieves high efficiency power conversion with minimal switching loss using Zero Current Switching (ZCS) technology. OZ9976 applications can operate under fixed or variable operating frequency with ZCS technology.

The minimum operating frequency can be set by either an external RC network or operate in self-oscillating mode. The intelligent operating frequency management circuitry extends Cold Cathode Fluorescent Lamp (CCFL) lifetime and offers design flexibility.

APPLICATIONS

- LCD TV



U.S. Patent #'s 6,259,615; 6,396,722; 6,570,344; 6,781,325; 6,804,129; 6,809,938; 6,856,519; 6,900,993; 6,936,975; 7,075,245; 7,120,035; 7,126,289; 7,190,123; 7,248,240; 7,345,431; 7,394,209; 7,417,382; 7,425,949; 7,515,445; 7,515,446; 7,550,928; 7,554,273; and more patents pending.

OZ9901

FEATURES

- Integrated 3A, 0.2Ω switching MOSFET
- Integrated VGH and VGL charge pump regulators
- Adjustable VGH Delay
- Operational amplifier for VCOM buffer
- Open-drain reset output for TCON
- 1.2MHz fixed switching frequency boost converter with soft start and adjustable output
- Thermal protection

GENERAL DESCRIPTION

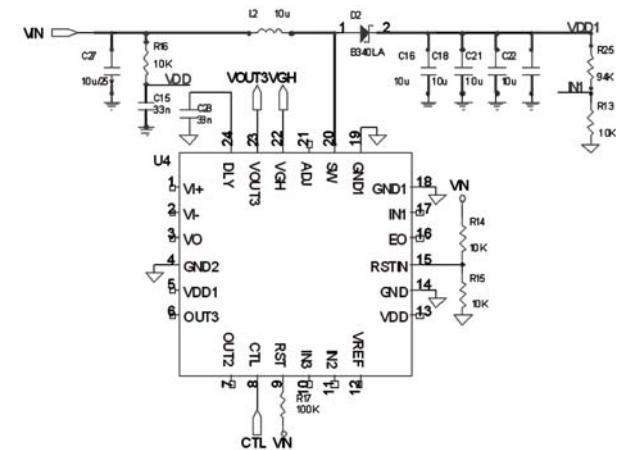
OZ9901 offers a complete power supply solution for TFT LCD panel applications. The LCD Bias Supply Controller consists of a high performance boost converter, open drain reset output, charge-pump regulators for VGH and VGL, operational amplifier, input voltage detector and a logic-controlled gate-on pulse modulator. The boost converter operates using current mode control, and offers fast line and load responses for LCD bias supplies.

The integrated charge pumps provide a regulated supply for the panel gate driver ICs. The charge-pump regulators provide a positive gate-on supply voltage (VGH) and negative gate-off supply voltage (VGL).

The operational amplifier works as a VCOM buffer and supplies a high output current, fast slew rate and wide bandwidth for driving capacitive loads.

APPLICATIONS

- Notebook/Netbook Computer



U.S. Patent #7,498,793; and more patents pending.