100VAC-265VAC 100W High Bay LED Lighting (100V @ 1.2A)

(ACTIVE) PMP4862.1

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Description

The PMP4862 reference design drives three separate LED strings (up to 77V) at 350mA from a universal AC input. The UCC28810 is used in a PFC-Flyback configuration to provide power factor correction and isolation at the same time. Each LED driver uses one TPS40210 to control the individual LED current. PWM dimming, ON/OFF control, current monitoring, and a trim function are all provided for each individual LED string. The PFC-flyback is over 87% efficient, while the buck LED drivers are over 92% efficient. The overall efficiency is over 80%.

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LED Lighting Reference Design | PFC-Flyback Configuration

Fully assembled board (shown above) developed for testing and performance validation only, not available for sale.

Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

Parametrics

	PMP4862.1
Vin (Min) (V)	85
Vin (Max) (V)	265
Vout (Nom) (V)	100
Iout (Max) (A)	1.2
Output Power	120
Isolated/Non-Isolated	Isolated
Input Type	AC
Topology	Flyback- PFC

TI Devices (2)

Order samples, get tools and find more information on the TI products in this reference design.

Part Number	Name	Product Family	Sample & Buy	Design Kits & Evaluation Modules
TPS40210	Wide Input Range Current Mode Boost Controller	Controller (External Switch)	Sample & Buy	View Design Kits & Evaluation Modules
UCC28810	LED Lighting Power Controller	LED Driver	Sample & Buy	View Design Kits & Evaluation Modules

CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
TPS40210	HVSSOP (DGQ) | 10	Download	Download
	VSON (DRC) | 10	Download	-
UCC28810	SOIC (D) | 8	Download	Download

Texas Instruments and Accelerated Designs Inc. have collaborated together to provide TI customers with schematic symbols and PCB layout footprints for TI products.

Step 1: Download and install the Ultra Librarian software ZIP: 62MB

Step 2: Download the Symbol and Footprint .bxl file.

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Technical Documents

User Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
PMP4862 Test Results		PDF	2389	18 Aug 2011	85

Design Files (4)

Title	Abstract	Type	Size (KB)	Date	Views
PMP4862 Schematic		PDF	167	24 Aug 2011	157
PMP4862 BOM		PDF	20	24 Aug 2011	78
PMP4862 Gerber		ZIP	252	24 Aug 2011	40
PMP4862 PCB		PDF	284	18 Aug 2011	72

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