



NCL30100ADLMGEVB: Compact Switching Buck LED Driver Evaluation Board

Evaluation Board Description

The NCL30100 is a compact switching buck LED driver controller intended for space constrained constant current high brightness LED driver applications where high efficiency and small size are important. This demo board illustrates the NCL30100 in a form factor suitable to be embedded in the base of an MR16 LED light bulb. In this case the dual sided PCB incorporates a low voltage AC rectifier bridge so that it can accept the 12 Vac input commonly used in MR16 applications.

The controller is based on a peak current, quasi fixed off-time control architecture optimized for continuous conduction mode stepdown (buck) operation. This allows the output filter capacitor to be eliminated. In this configuration, a reverse buck topology is used to control a cost effective N-channel MOSFET. The Demo board has multiple FET footprints to allow for optimal FET selection. The footprints include SOT23, SOT363, SOT223 and as built, a TSOP6.



Evaluation Board Information

| Evaluation Board | Status | Compliance | Short Description | Parts Used | Action |
|----------------------------------|--------|------------|--|-------------------------------|--------|
| NCL30100ADLMGEVB | Active | Pb-free | Compact Switching Buck LED Driver Evaluation Board | NCL30100SNT1G | |

Technical Documents

| Type | Document Title | Document ID/Size | Rev |
|----------------------------|---|---|-----|
| Eval Board: BOM | NCL30100ADLMGEVB Bill of Materials ROHS Compliant | NCL30100ADLMGEVB_BOM_ROHS.PDF - 77.0 KB | 0 |
| Eval Board: Gerber | NCL30100ADLMGEVB Gerber Layout Files (Zip Format) | NCL30100ADLMGEVB_GERBER.ZIP - 11.0 KB | 0 |
| Eval Board: Schematic | NCL30100ADLMGEVB Schematic | NCL30100ADLMGEVB_SCHEMATIC.PDF - 358.0 KB | 0 |
| Eval Board: Test Procedure | NCL30100ADLMGEVB Test Procedure | NCL30100ADLMGEVB_TEST_PROCEDURE.PDF - 41.0 KB | 0 |

