

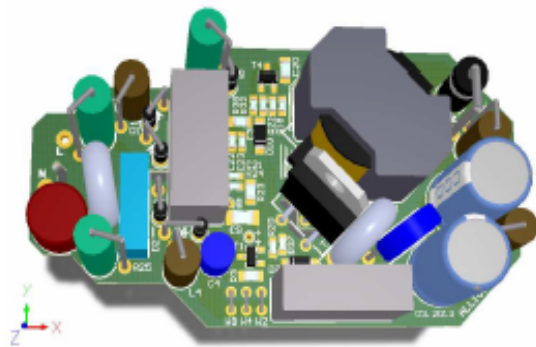
Beschreibung und Auf-/Einbauanleitung ALL1081

ALL1081 - Primary dimmable high efficiency LED constant current power supply

General information

The ALL1081 power supply represents an isolated primary dimmable high efficiency LED driver for use in medium power LED lighting products like PAR38-lamps from 9W to 18W.

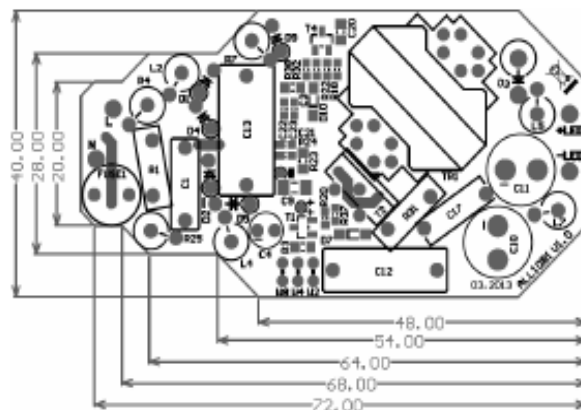
Operating from AC supplies of 207V to 253V (e.g. European line voltage), the ALL1081 is capable of driving from 9 up to 18 LEDs in series in one string with 275mA ($\pm 10\%$). The typical efficiency is between 84.5% to 88%. With respect of the power supply efficiency, the primary power consumption is about 1W per (white) LED.



Primary dimming is performed by applying a phase-cut line voltage to the power supply input. The power supply is able to modulate the LED power directly. For this reason, the inrush-current has been minimized to $< 300\text{mA}$, enabling to switch on many lamps with this power supply together at the same time. To achieve smooth phase-cut dimming with the most dimmers, the powerfactor reaches up to 98%.

The ALL1081 includes fault protection modes for LED short and open, over temperature (with active power derating), overcurrent and overvoltage errors. It features an internally fixed OVP value of 60V (typical) which protects the device in the event of a failure in the LED string.

With extremely low EMI interferences (refer to EMI section) meets the ALL1081 the EMC regulatories EN55015/55022 Class B and withstand surge levels up to xxxkV, burst levels up to xxxkV and direct ESD discharge against power supply output up to 8kV (MachineModel). The primary to secondary insulation test voltage is 2500Vac/10sec.

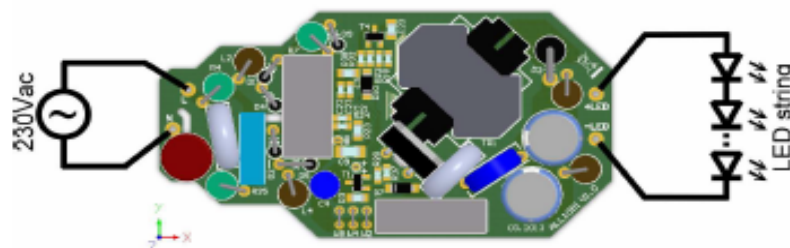


For using this power supply the mounting in a isolated case is necessary.



Beschreibung und Auf-/Einbauanleitung ALL1081

Connecting diagram:



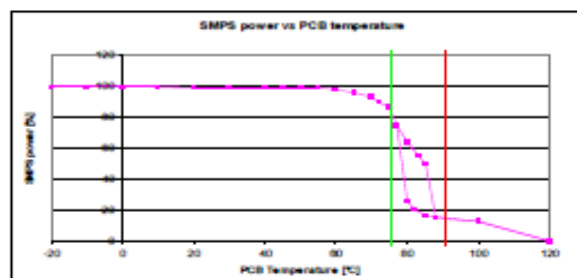
Configuration:

No configuration necessary.

Technical Data:

- Input voltage (normal mode): 207 to 253Vac (47 to 63Hz)
- Accepted input voltage: 180...270Vac (current maybe vary, refer to diagrams)
- Primary dimmable via phase-cut dimmers (leading/trailing edge dimmers)
- Inrush current: <300mA
- Output current: typical 275mA ($\pm 10\%$)
- Constant power behaviour (CC)
- Output voltage range: 28 to 58V
- Output OVP shutdown: at typical 60V
- Startup time: typical 200ms
- Ramp-up time to full light: typical 500ms
- Emergency light function: Input >30Vdc, >24Vac (at 10% nominal power)
- Temperature range: -25 to 65°C
- Overall efficiency: 84.5 to 88%
- High power factor: 80 to 98% (refer to diagrams)
- Temperature derating: Power reducing at 60°C PCB temperature
- Thermal shutdown: at 80°C PCB temperature to 20% of nominal power

Temperature behaviour (typical):

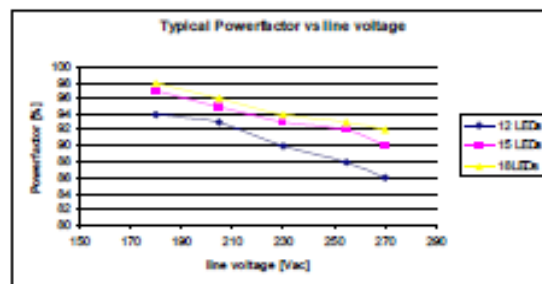
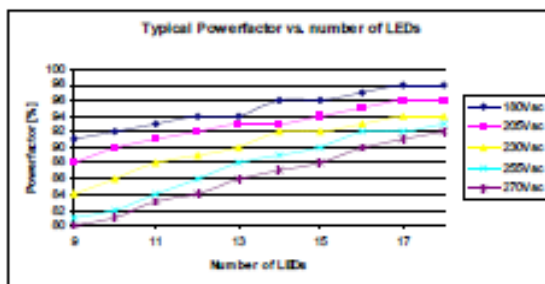
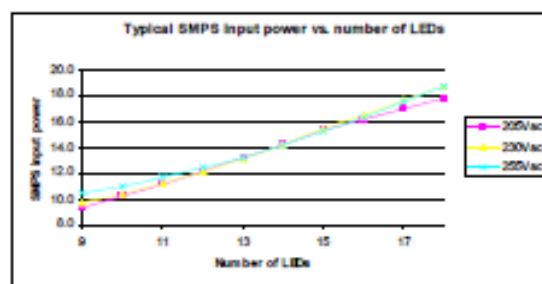
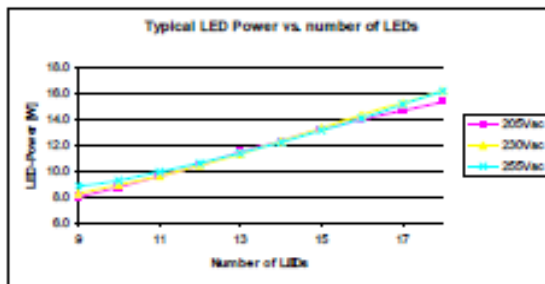
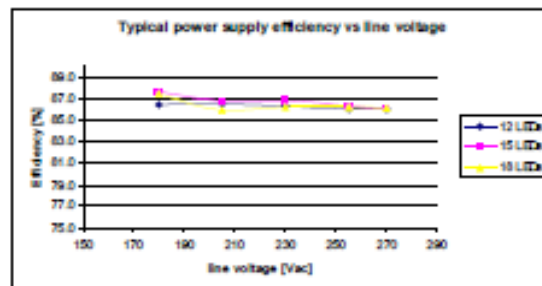
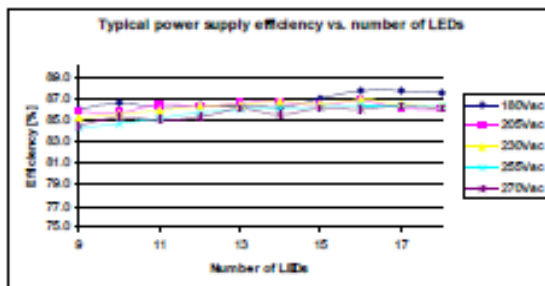
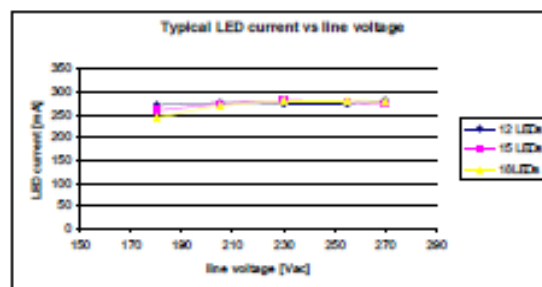
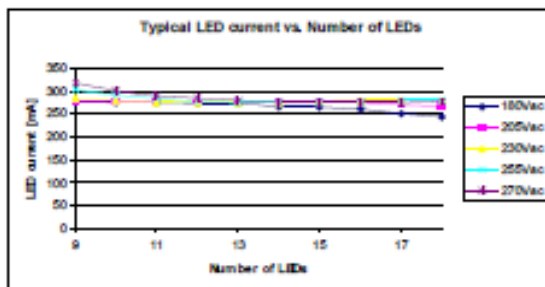


Thermal shutdown at 85°C, auto recover at typical 75°C.



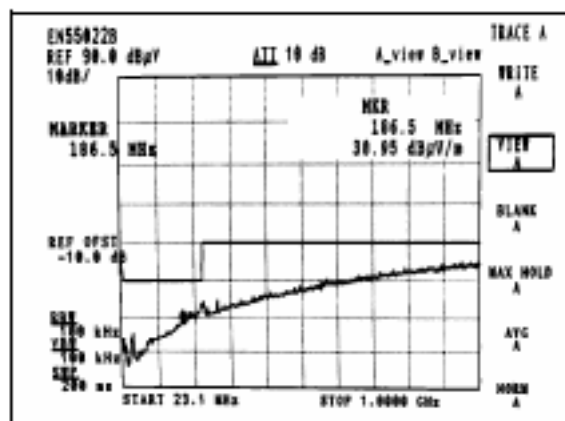
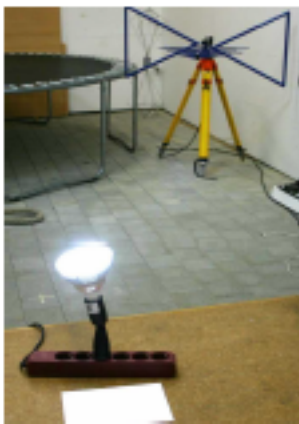
Beschreibung und Auf-/Einbauanleitung ALL1081

Technical diagrams:

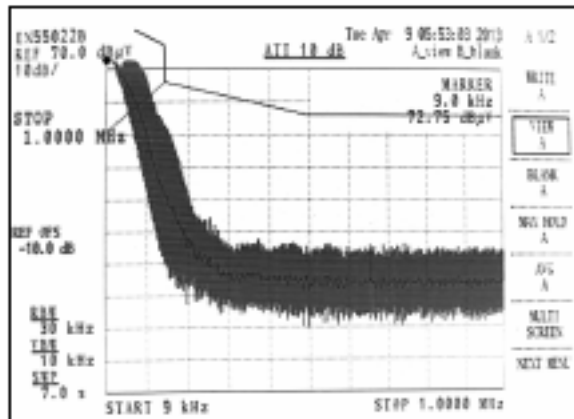
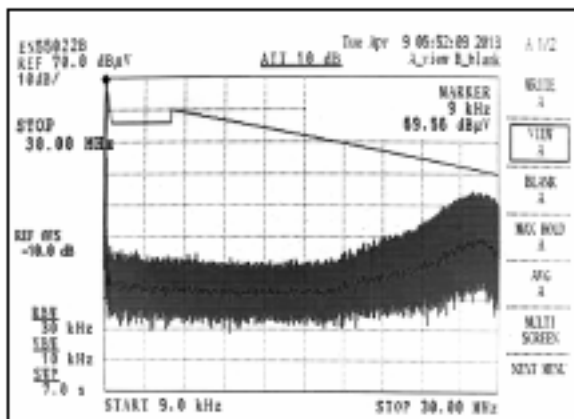


Beschreibung und Auf-/Einbauanleitung ALL1081

EMI pre-compliance measurements:



Radiated emissions measurement at 16W (max hold)



Conducted emissions measurement at 16W