

8 Channel High Power Constant Current LED Driver

Features

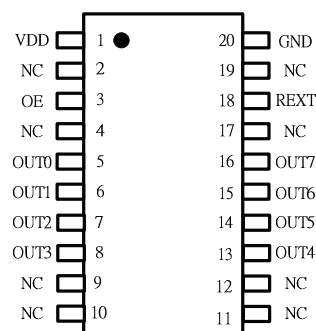
- 20mA~150mA, 8 channels constant current regulator
- Output current adjustable by external resistor
- 3V ~ 12V wide range supply voltage
- 1MHz OE PWM dimming support
- 0V ~ 17V output sustain voltage
- low output voltage dropout
0.25V @ 40mA/ch (total 320mA output)
0.6V @ 150mA/ch (total 1.2A output)
- Minimized I_{DD} consumption
- Low speed V_{DD} dimming support
- 160°C half power thermal protect
- Less than $\pm 4\%$ chip current skew
- Less than $\pm 9\%$ channel to channel current skew
- Less than 0.5%/V line regulation
- Less than 1%/V load regulation
- 25nS channel stagger output
- Green package

Applications

- General LED Lighting
- Decoration lighting for architecture
- LCD back lighting
- Street lamp

Package Type

- TSSOP 173 mil 20 pin



Product Description

The NU508 is a dedicated designed constant current LED driver for general lighting. It can drive 8 channel LEDs simultaneously and provide each channel sink current up to 150mA.

The wide range of power supply capability makes the NU508 be driven easily by a simple circuit. For example, using a zener diode lowers down the V_{LED} voltage for V_{DD} or just routing V_{DD} pin into the LED loading loop gets popper voltage for NU508.

In the application of dimming function, the OE pin can switch all output channels on or off simultaneously with 25nS time stagger between odd and even channels. The fast transient speed of OE function in NU508 is best for most of dimming requirements and the stagger function will lower the EMI generation in fast dimming situation.

While in full current output, the NU508 only need about 0.6V drop on each output channel. This makes NU508 to be the lowest power lost LED driver that compared with the other types of LED drivers. The minimized voltage drop in NU508 will increase the efficiency of entire lighting system and lower the heat generation from LED driver.

Terminal Description

Pin #	Pin name	Function
1	VDD	Power supply
2	NC	
3	OE	Output enable
4	NC	
5	OUT0	Output channel 1
6	OUT1	Output channel 2
7	OUT2	Output channel 3
8	OUT3	Output channel 4
9	NC	
10	NC	
11	NC	
12	NC	
13	OUT4	Output channel 5
14	OUT5	Output channel 6
15	OUT6	Output channel 7
16	OUT7	Output channel 8
17	NC	
18	REXT	R external
19	NC	
20	GND	Ground