

Middle Voltage (12V or above) LED Driver

Middle voltage LED drivers accept a wider input voltage (12V to 36V) and with high current output. These drivers can drive high power/ high brightness LED by serial or matrix. Meanwhile, those controller are also fit for application for secondary constant current control. Some of the listed drivers have dimming control, high efficiency and up to 75V DC input. Therefore, they can provide very flexible design features for the designer in various application.



► FEATURES

- High output voltage/ current
- High input voltage
- Some parts with very low feedback voltage
- Dimming control input

► BENEFITS

- Able to drive large amount for the LED
- Compact design
- Simple
- High efficiency
- PWM dimming available

► APPLICATIONS

- MR16
- Automotive
- Outdoor architectural lighting
- Secondary constant current control
- Light bar

► SUPPLIERS



Supplier	TI	TI	NS	NXP	NS	ON Semi	ON Semi	ON Semi	Diodes	LTC	LTC	LTC
Part No.	TPS40200	TPS40211	LM3404HV	UBA3070	LM3485	NCP1215A	CS51411	NCP3065	ZXLD1350	LT3474	LT3475	LT3466
Min. Input Voltage	4.5V	4.5V	6V	12V	4.5V	8V	4.5V	3V	7V	4V	4V	2.7V
Max. Input Voltage	52V	52V	75V	190V	35V	16V	40V	40V	30V	36V	36V	24V
Output Voltage	Adjustable	Adjustable	Adjustable	Adjustable	1.242V to Vin	14V	Adjustable	Adjustable	Adjustable	26V	25V	39V
Max. Output Current	1A	1A	1A	350mA or above	Over 1A	0.35 - 1A	1.5A	1.5A	350mA	1A	2*1.5A	2* 0.32A
Est Efficiency	up to 94%	up to 94%	up to 96%	90%	up to 93%	up to 90%	up to 85%	up to 85%	95%	up to 88%	up to 88%	up to 81%
Switching Frequency	35KHz - 500KHz	Set by ext resistor	Base on selected o/p voltage	30KHz - 125KHz	1.4MHz	Set by ext resistor	260KHz/ 520KHz	150KHz	250KHz - 1MHz	200KHz - 2MHz	200KHz - 2MHz	Fixed freq up to 2MHz
Feedback	700mV	270mV	200mV	0.52V	1.27V	1.2V	0.32V	235mV	0.1V	1.25V	1.25V	200mV
Built-in MOSFET	No	No	Yes (0.75 Ohm)	No	No	No	Yes BJT	Yes BJT	Yes (1.5 Ohm)	Yes BJT	Yes BJT	Yes BJT
Component Count	15	16	7	26	16	11	8	8	5	8	12	8
Package	SOIC8	10 pin SON	MSOP8	SO8	MSOP8	DIP 8 and TSOP6	SOIC8/ DFN-18	SOIC8/ DFN-8 or PDIP8	TSOT23-5	TSSOP-16	TSSOP-20	DFN-10 and TSSOP-16
Max. No. of LED	12 - 15	10	9	up to 20	10	3	10	8 - 10	1 - 5	6 - 8	6 - 8	12 - 15
Topology	Buck	Boost, flyback, SEPIC	Buck	Buck/ boost	Buck	Buck/ boost	Buck	Buck/ boost	Buck	Buck	Buck	Boost
Dimming Control	No, require external circuit	No, require external circuit	Yes	Yes	No, require external circuit	No, require external circuit	No, require external circuit	No, require external circuit	No	Yes	Yes	Yes
1K Pcs. Ref. Price (USD) **	0.95	1.10	1.76	0.45	0.50	0.20	0.60	0.25	0.80	2.50	3.00	1.90
Remark	Wide input range, ext MOSFET allow high current	Wide input range, ext MOSFET allow high current	Very wide input range	2nd current control	Hysteretic control	NCP1215 can be used in AC flyback	1.5A switch pin-pin compatible LT1375	High switching current up to 1.5A	Low part count, high efficiency	Integrated diode and 1A driving current	Dual step down driver	Dual step up converter

* Green highlight means best in class

** 1K pcs order price is for reference only. Please consult Arrow sales representative for quotation.