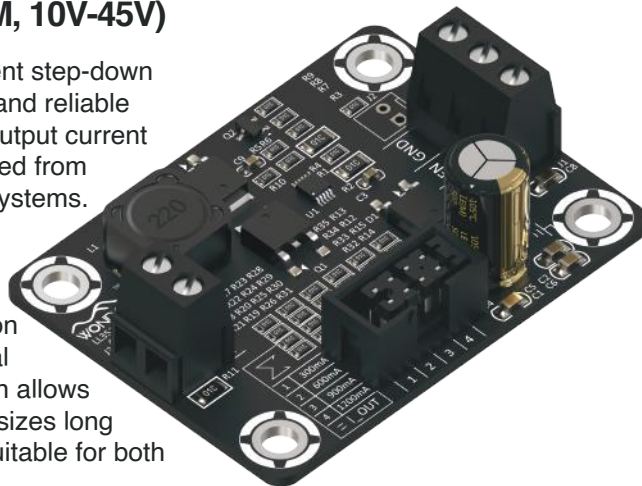


WONDOM™ LED Driver

0.3A-3A 1-100W High-Power Buck LED Driver (PWM, 10V-45V)

The WONDOM™ LED Driver is a high-performance constant-current step-down DC/DC converter specifically designed to provide stable, efficient, and reliable power for high-power LED applications. It supports an adjustable output current range of 0.3A to 3A, which makes it suitable for powering LEDs rated from 1W up to 100W, offering flexibility across a wide range of lighting systems. With an input voltage range of 10V to 45V, it can be adapted to different power sources, ensuring broad compatibility and ease of integration in various projects. The driver adopts PWM dimming control, enabling smooth, precise, and efficient brightness regulation without compromising LED performance or stability, which is crucial for applications requiring consistent illumination. Its compact design allows for easy installation in limited spaces, while its construction emphasizes long service life, high efficiency, and dependable operation, making it suitable for both consumer and industrial environments.



Certificates:



RoHS
compliant

Features:

- Minimum size, high efficiency
- Excellent workmanship, cost-effective
- Constant current output, stable LED lighting
- Input voltage: 10V~45V, Output voltage: 7V-42V
- Full protection:
 - i. Overtemperature Protection
 - ii. UVLO (Under-Voltage Lockout), Under-Voltage Protection Voltage: 10V
 - iii. Start-Up / LED Open-/Short-Circuit Protection Circuit
- Easy to install and long service life
- 10000:1 PWM dimming range
- Built-in soft-start function
- Imported high-quality chips make the overall output very stable

Product Compatibility:

LED Light	Range Vf Range (350mA)	Power
1W White LED Light	3.0V ~ 3.6V	0.35A x 3.2V=1.12W
1W Red LED Light	1.8V ~ 2.4V	0.35A x 2.4V=0.84W
1W Blue LED Light	3.0V ~ 3.6V	0.35A x 3.2V=1.12W
1W Green LED Light	2.8V ~ 3.4V	0.35A x 3.0V=1.05W
1W Yellow LED Light	2.0V ~ 2.6V	0.35A x 2.6V=0.91W
1W Purple LED Light	3.2V ~ 3.8V	0.35A x 3.2V=1.12W

Applications:

- Factory lighting
- Street and landscape lighting
- Commercial advertising lights
- Decoration LED lighting
- Solar street lights
- DIY lamps
- High-power LED lighting
- Constant current power supply

Safety Notes:

- Keep input voltage within 10–45V and avoid operating below the rated minimum.
- Provide proper cooling to prevent overheating.
- Prevent open/short circuits; repeated faults may shorten lifespan.
- Check polarity carefully on all terminals before powering.
- Use compatible PWM signals for dimming.
- Do not exceed 3A output or LED ratings.
- Install in a dry, ventilated, dust-free environment.
- Ensure good insulation and secure wiring for safe use.



■ SPECIFICATION

Product Model		LE-LL51113
Product Overview		0.3-3A 1W-100W High Power Buck LED Driver
Inputs/Outputs	Input Voltage	10V-45V
	Output Voltage	7V-42V
	Current Range	300mA-3000mA
	Current accuracy	±5%
	Ripple and Noise	300mVp-p
	Switching Frequency	500kHz
	No-load Output Voltage	Vin
	Efficiency	96%
PWM Dimming & Switch Control	EN On/Off	Keep an open circuit if not in use
		Power off (with dimming function): Voltage between EN and GND > 2-10VDC
		Power On: Voltage between EN and GND < 0.5VDC or short circuit or open circuit
	PWM Frequency	1kHz-10kHz
	PWM Signal Current	0.25mA/5V
Protection	Short Circuit	Adjustable within the set output current range
		Protection mode: Can continue, automatically recovers after removing abnormal conditions
	Undervoltage	The under-voltage is equipped with a lock-out (UVLO), and the under-voltage protection voltage is 10V
	Over-temperature	IC internal junction temperature exceeds 145°C, triggers over-temperature protection
		Protection mode: Output is cut off, automatically recovers after temperature drops
Environment	Operating Temperature	-40~+60°C
	Operating Humidity	20%-90%RH, No condensation
Other	MTBF	100000hrs
	Dimensions	60.96mm x 45.72mm x 20.32mm or 2.40 inch x 1.80 inch x 0.80 inch
	Weight	31g

Friendly Reminder:

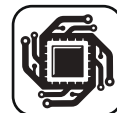
User Knowledge Required: This module is designed for users with basic electronic knowledge and safe handling experience. Incorrect use during DIY processes may lead to burning, injury, electric shock, explosion, or product damage. We cannot take responsibility for consequences caused by improper operation, so please handle with care and attention.

Correct Wiring is Essential: The terminals are clearly marked as IN- (negative input), IN+ (positive input), OUT- (negative output), and OUT+ (positive output). Always connect them correctly, as reverse wiring or wrong polarity may cause permanent damage to the module and connected LEDs. Double-check wiring with a multimeter before powering on.

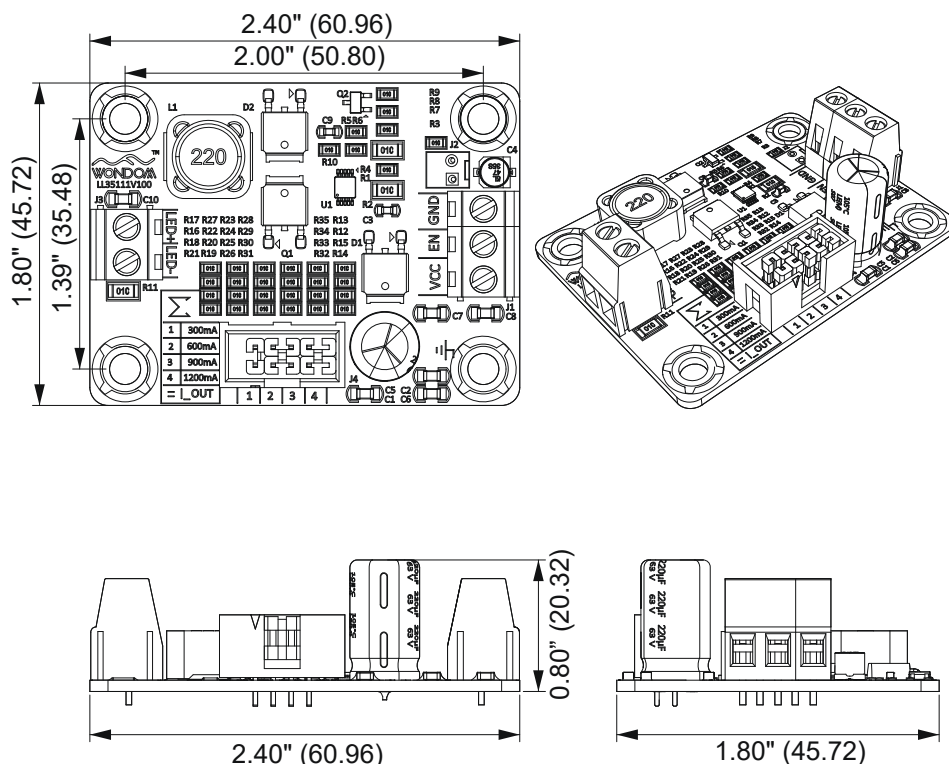
Safe Operation: Operate strictly within the rated 10V–45V input voltage and 0.3A–3A output current range. Ensure proper ventilation, avoid short circuits, and do not expose the module to moisture or flammable materials.



All parameters and specifications listed herein are subject to change without prior notice. These values represent typical performance characteristics under specified test conditions. Actual performance may vary depending on application-specific environmental factors, power supply stability, and measurement techniques. It is recommended to verify critical parameters for your specific design.



MECHANICAL DIMENSION



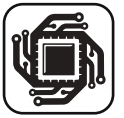
Dimensioning Positive Tolerance: +0.05 inch
 Dimensioning Negative Tolerance: -0.00 inch

PIN DEFINITION

Pin	Description
VCC	Positive terminal for 10V -45V DC Power supply
GND	Power Ground
LED+	Positive of LED terminal
LED-	Negative of LED terminal
EN	PWM terminal. When applied with ground or suspended, full amount of current will be output and when connected with +5V or VCC, output current will be 0.



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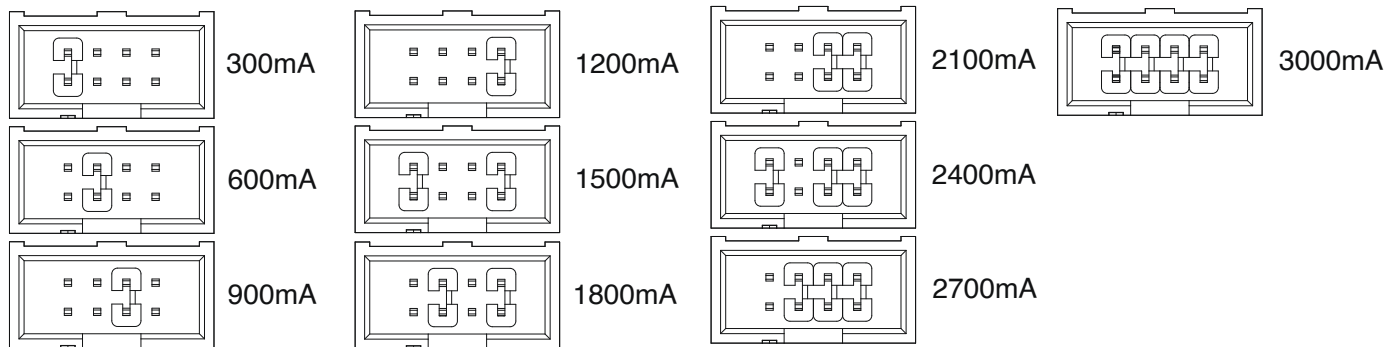


■ CURRENT ADJUSTMENT

Current Adjustment and Jumper Setting

This module allows you to select the LED driving current by setting a jumper cap on the current selection header (J4). Each position corresponds to a specific output current, as indicated on the PCB silkscreen.

Available Current Settings



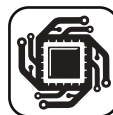
How to Set and Connect the Jumper Cap

1. Turn off the power supply before adjusting the jumper.
2. Locate the J4 header labeled 1–4 on the module.
3. Identify the desired current setting based on the table above.
4. Use the provided jumper cap (small black connector) to short the two pins of the selected position.
5. Align the jumper cap vertically over the pin pair.
6. Press it down gently until it is fully seated and snug.
7. Double-check that the jumper is not loose or bridging two settings at once.
8. Power on the module. The LED driver will now limit current according to the selected jumper setting.

Tips and Notes

1. Always handle the jumper gently using tweezers or your fingers—avoid bending the pins.
2. If uncertain about the setting, remove the jumper and refer to the silkscreen marking beside J4.
3. For testing or calibration, measure the LED current in series with the LED+ terminal.
4. Never move the jumper while the board is powered, as this may damage the driver or LED load.

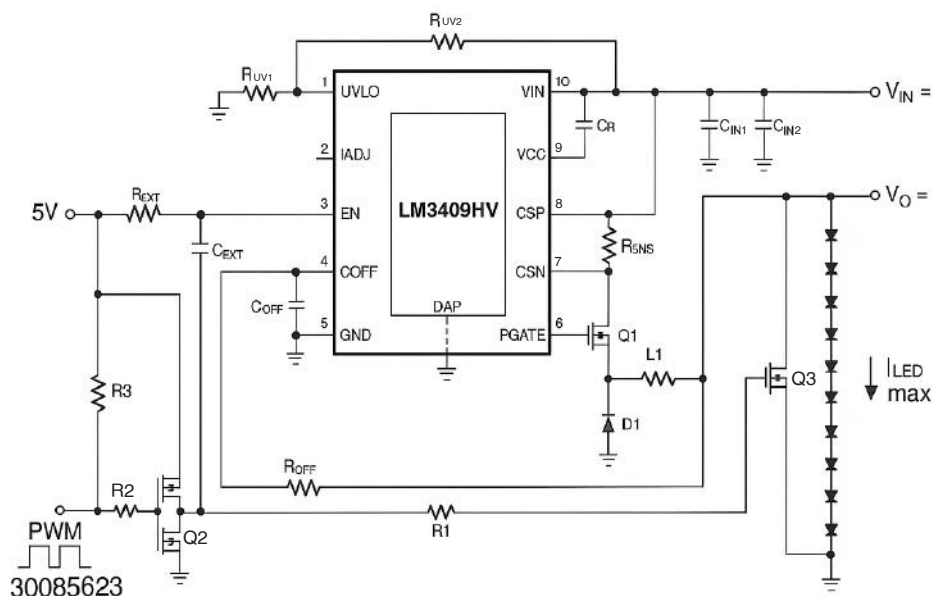
 *Incorrect or loose jumper placement may cause unstable current output or prevent the LED from lighting properly.*



■ SCHEMATIC DIAGRAM

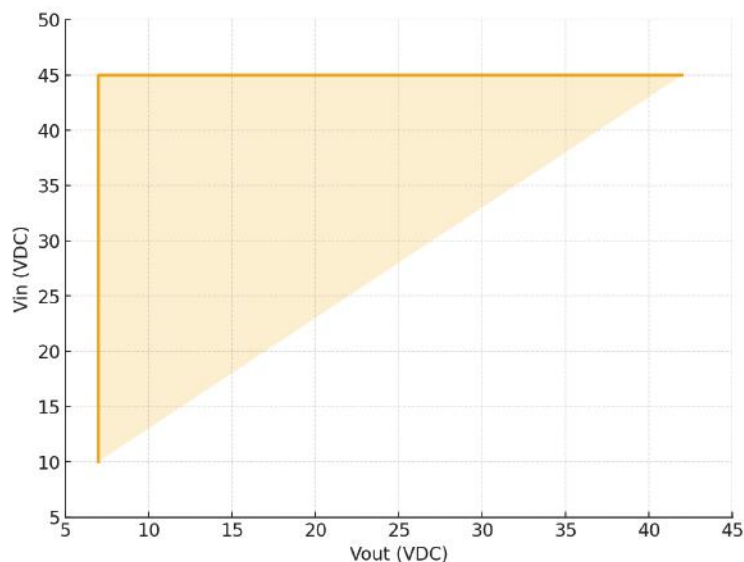
APPLICATIONS INFORMATION

DESIGN #3: EXTERNAL PARALLEL FET PWM DIMMING APPLICATION FOR 10 LEDs



■ SAFE OPERATING AREA

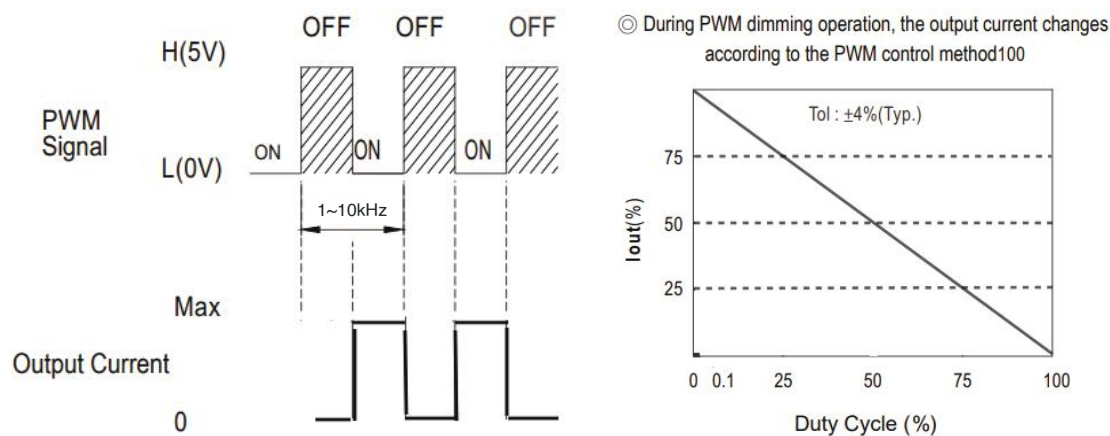
Output Current 300mA-3000mA



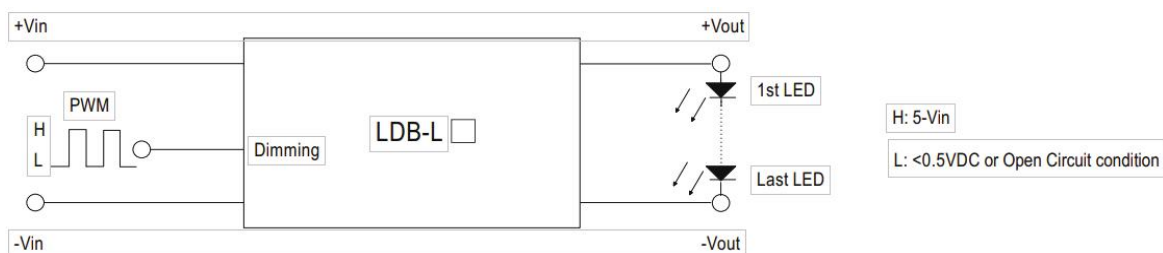
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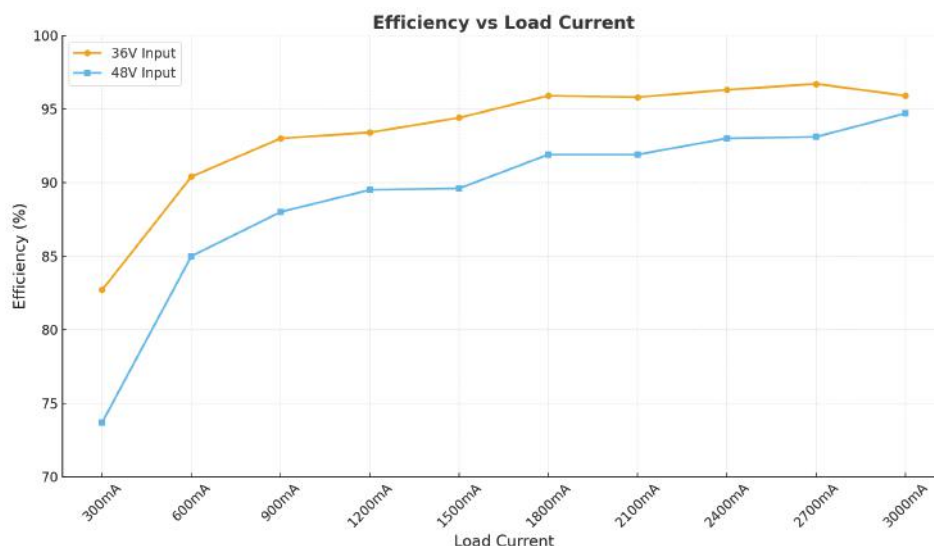
■ PWM DIMMING CONTROL



■ STANDARD APPLICATION



■ EFFICIENCY VS OUTPUT VOLTAGE



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