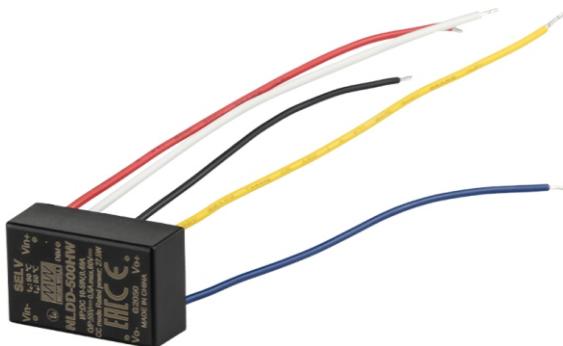




DC-DC Constant Current Step-Down LED driver

NLDD-H series



■ Features

- DC/DC step-down converter
- Constant current output: 350mA to 1400mA
- Wide input voltage: 10 ~ 56VDC(59VDC Max.)
- Wide output LED forward voltage: 6 ~ 52VDC
- High efficiency up to 96%
- Comply with BS EN/EN61347 and BS EN/EN55015 regulation
- Built-in PWM and remote ON/OFF control
- Protections: Short circuit / Over temperature
- Cooling by free air convection
- Fully encapsulated and compact size
- Suitable for driving illumination LED
- 3 years warranty

■ Applications

- DC battery source lighting
- Portable lighting
- Commercial lighting
- DC 48V Track lighting
- DC 24V landscape lighting
- For class III application(SELV)

■ Description

NLDD-H series is a 60W DC/DC LED drive featuring constant current output. NLDD-H operates from 10~56VDC and offers models with different rated current ranging between 350mA and 1400mA. With the high efficiency up to 96%, The 94V-0 flame retardant plastic case the fully-potted silicone to enhance the heat dissipation allows this series to fit for class III or DC bus lighting application.

■ Model Encoding

NLDD - **350** H **W**

Blank: Pin style for PCB mounting
W: Wire style

Output current (350/500/700/1050/1200/1400mA)

Series name



SPECIFICATION

ORDER NO.		NLDD-350H <input type="checkbox"/>	NLDD-500H <input type="checkbox"/>	NLDD-700H <input type="checkbox"/>	NLDD-1050H <input type="checkbox"/>	NLDD-1200H <input type="checkbox"/>	NLDD-1400H <input type="checkbox"/>						
OUTPUT	CURRENT RANGE	350mA	500mA	700mA	1050mA	1200mA	1400mA						
	VOLTAGE RANGE Note.4	6 ~ 52VDC			6 ~ 46VDC								
	CURRENT ACCURACY (Typ.)	±5% at 48VDC input											
	RIPPLE & NOISE(max.) Note.2	150mVp-p	150mVp-p	200mVp-p	350mVp-p	350mVp-p	350mVp-p						
SWITCHING FREQENCY		200KHz											
INPUT	VOLTAGE RANGE	10 ~ 56VDC (59VDC Max.)											
	EFFICIENCY (max.)	96% at full load and 36VDC/48VDC input				95% at full load and 36VDC/48VDC input							
	DC CURRENT	Full load Note.3	350mA	490mA	700mA	1100mA	1200mA						
		No load	5mA										
PWM DIMMING & ON/OFF CONTROL	REMOTE ON/OFF		Leave open if not use										
			Power ON with dimming: DIM ~ -Vin > 2.5 ~ 5VDC or open circuit										
			Power OFF : DIM ~ -Vin < 0.8VDC or short										
	PWM FREQUENCY	100 ~ 1KHz											
QUIESCENT INPUT CURRENT IN SHUTDOWN MODE(max.)		2mA at PWM dimming OFF at 48VDC input											
PROTECTION	SHORT CIRCUIT		Regulated at rated current										
			Protection type: Can be continued, recovers automatically after fault condition is removed										
	OVER TEMPERATURE		T _j 165°C typically(IC1) detect on main control IC										
			Protection type : Shut down, recovers automatically after temperature goes down										
ENVIRONMENT	WORKING TEMP.	-40 ~ + 50°C (Refer to derating curve)											
	WORKING HUMIDITY	20% ~ 90% RH non-condensing											
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C , 10 ~ 95% RH											
	TEMP. COEFFICIENT	±0.03% / °C											
	VIBRATION	10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes											
	OPERATING CASE TEMP. (max.)	90°C											
EMC	SAFETY STANDARDS	LVD BS EN/EN61347-1, BS EN/EN61347-2-13;IEC61347 and EAC TP TC 004 approved											
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN61547											
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,6,8, light industry level, criteria A, EAC TP TC 020											
OTHERS	MTBF	1000Khrs min. MIL-HDBK-217F (25°C)											
	DIMENSION	32.1*20.5*12.5mm or 1.26" *0.8" *0.49" inch (L*W*H)											
	WEIGHT	NLDD-H:15.6g ; NLDD-HW:18g											
	POTTING MATERIAL	Epoxy(UL94-V0)											
NOTE	1. All parameters are specified at normal input(48VDC), rated load, 25°C 70% RH ambient. 2. Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1μF capacitor. 3. Test condition: 48VDC input. 4. Output voltage will always step down by 4 volts from input DC voltage. 5. The output of NLDD-H should not be connected to the input of the same unit or output from other sources. 6. Need additional EMI filter to meet regulations of EMC conducted. Characteristics of EMI filter please refer to the table, Guidance of additional filter. 7. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx												



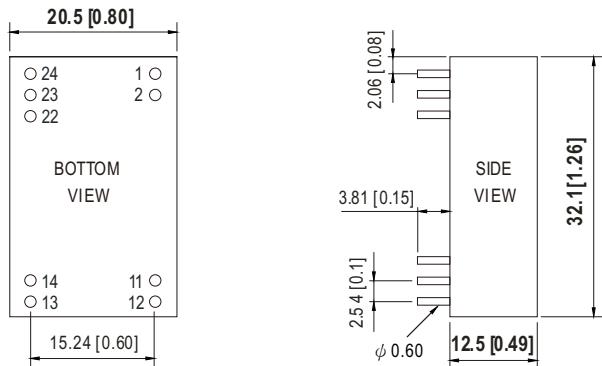
DC-DC Constant Current Step-Down LED driver

NLDD-H series

■ Mechanical Specification

◎ Blank type(NLDD-350~1050H):

Unit: mm (inch)

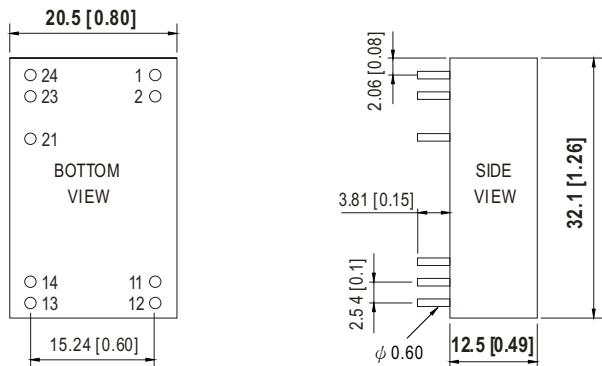


■ Pin Configuration

Pin No.	Comment
1,2	-Vin
11,12	-Vout
13,14	+Vout
22	PWM DIM
23,24	+Vin
others	N.C

NOTE: Pin tolerance ±0.05mm

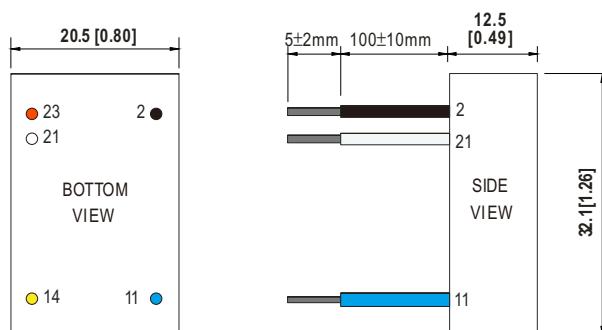
◎ Blank type(NLDD-1200~1400H):



Pin No.	Comment
1,2	-Vin
11,12	-Vout
13,14	+Vout
21	PWM DIM
23,24	+Vin
others	N.C

NOTE: Pin tolerance ±0.05mm

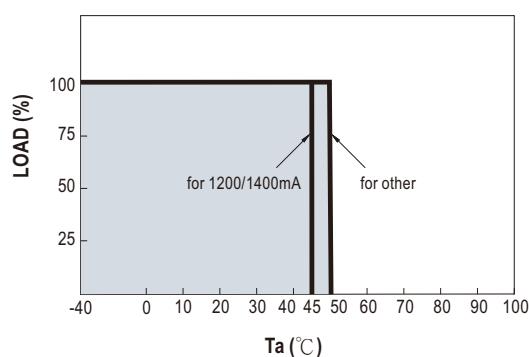
◎ W type(NLDD-350~1400HW):



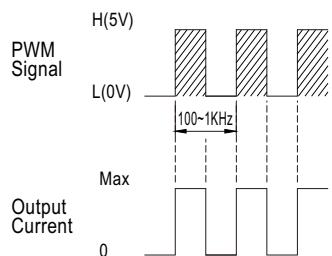
Pin No.	Comment
2	-Vin (Black)
11	-Vout (Blue)
14	+Vout (Yellow)
21	PWM DIM (White)
23	+Vin (Red)
others	N.C

NOTE: All wires UL1569 22AWG

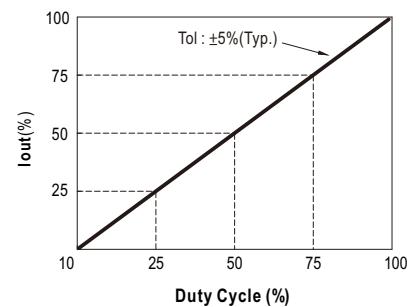
■ Derating Curve



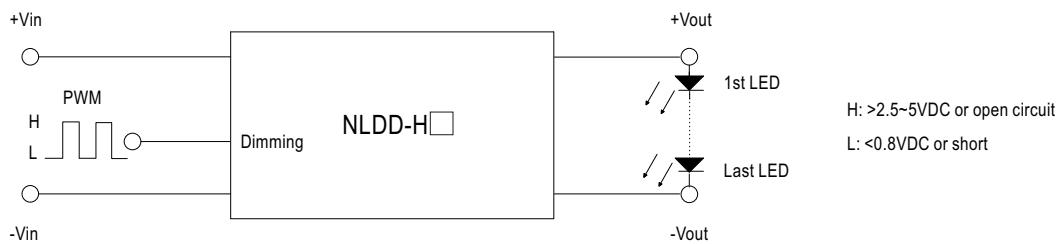
■ PWM Dimming Control



- ◎ Short circuit PWM PIN can realize dimming turn off.
- ◎ During PWM dimming operation, the output current will change to PWM style.



■ Standard Application



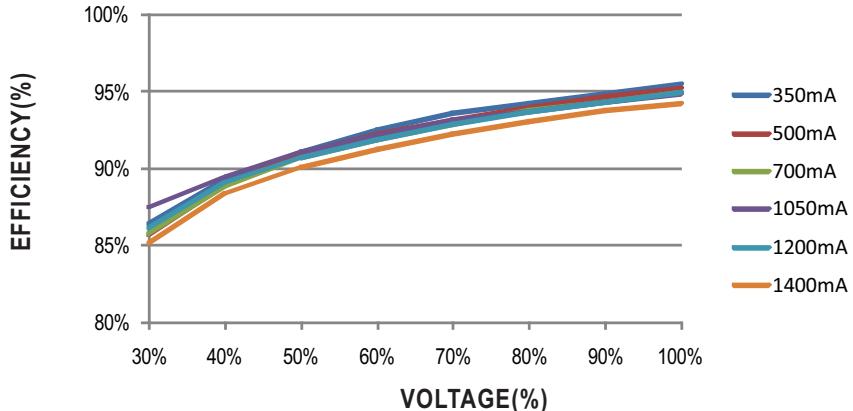


DC-DC Constant Current Step-Down LED driver

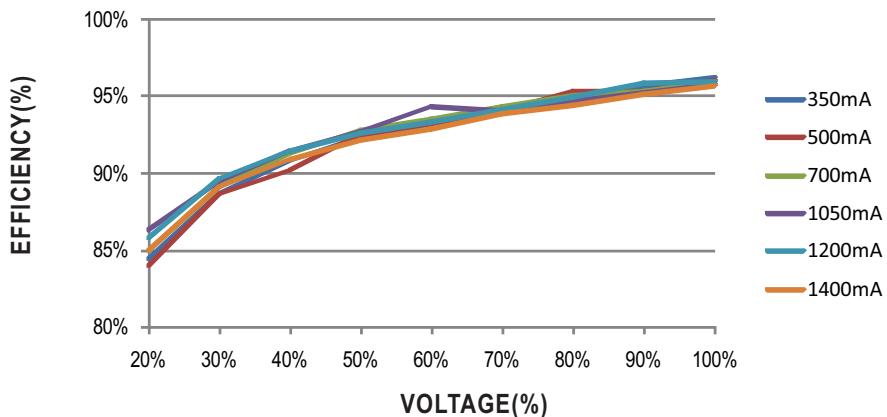
NLDD-H series

■ Efficiency VS Output Voltage

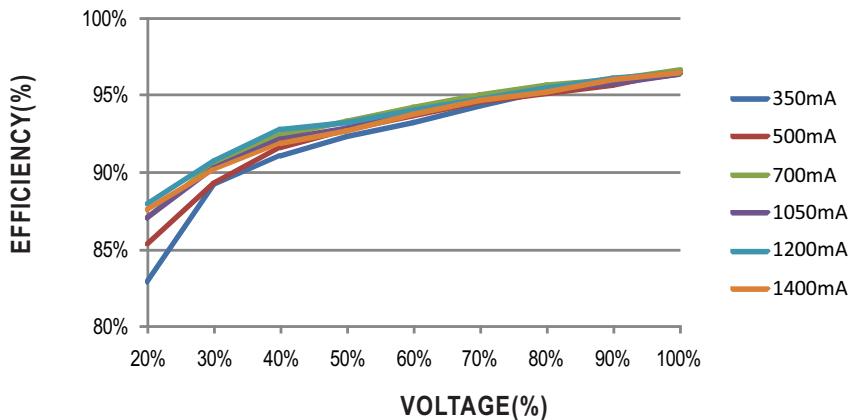
24VDC input



36VDC input



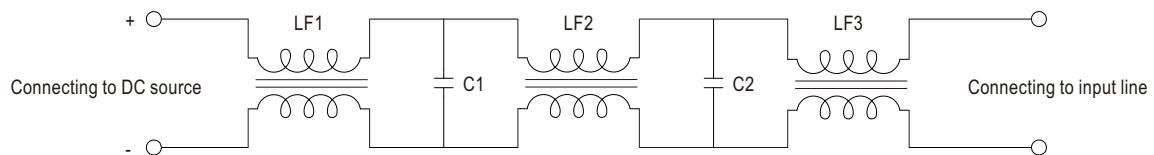
48VDC input



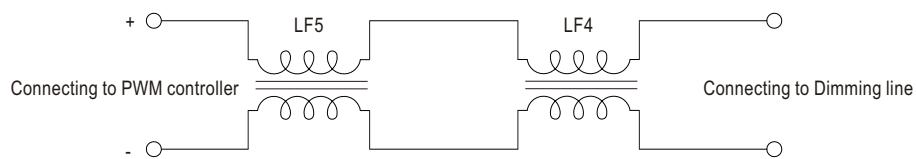
■ GUIDANCE OF ADDITIONAL FILTER

1. Schematic

EMI filter 1:



EMI filter 2:



2. Parameter description

Parameter description						
LF1	LF2	LF3	LF4	LF5	C1	C2
1.5mH	12mH	12mH	10mH	19mH	2.2uF	2.2uF

3. Configuration

