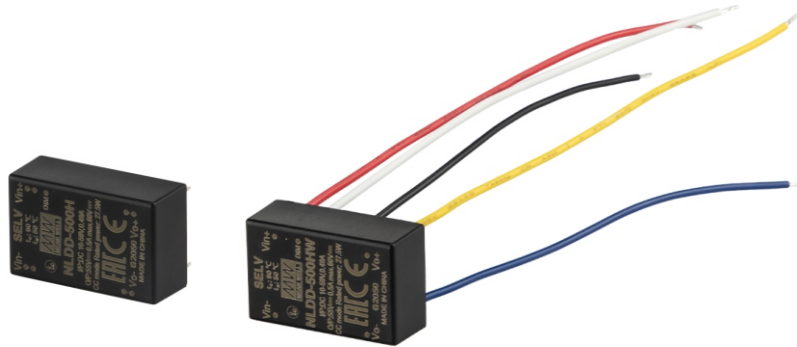




DC-DC Constant Current Step-Down LED driver

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 site
- 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  $\text{III}$  class III application(SELV)

## ■ GTIN CODE

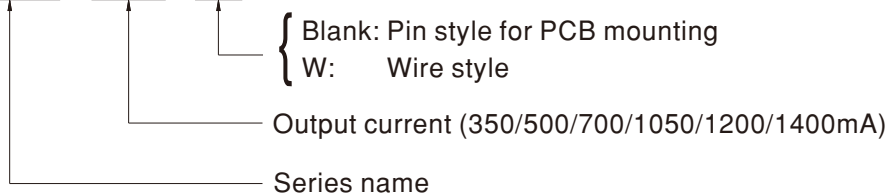
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

## ■ 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





## DC-DC Constant Current Step-Down LED driver

## NLDD-H series

## SPECIFICATION

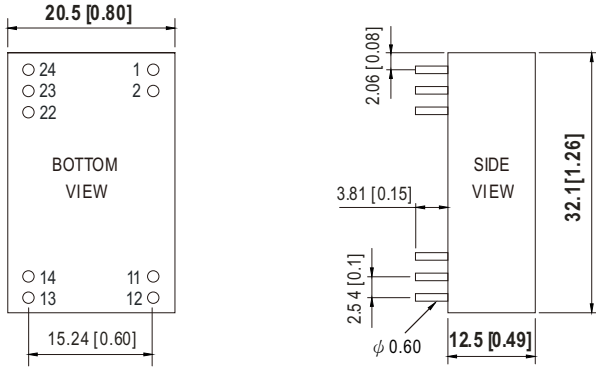
ORDER NO.		NLDD-350H <input type="checkbox"/>	NLDD-500H <input type="checkbox"/>	NLDD-700H <input type="checkbox"/>	NLDD-1050H <input type="checkbox"/>	NLDD-1200H <input type="checkbox"/>	NLDD-1400H <input type="checkbox"/>	
OUTPUT	CURRENT RANGE	350mA	500mA	700mA	1050mA	1200mA	1400mA	
	VOLTAGE RANGE <small>Note.4</small>	6 ~ 52VDC					6 ~ 46VDC	
	CURRENT ACCURACY (Typ.)	±5% at 48VDC input						
	RIPPLE & NOISE(max.) <small>Note.2</small>	150mVp-p	150mVp-p	200mVp-p	350mVp-p	350mVp-p	350mVp-p	
	SWITCHING FREQUENCY	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 <small>Note.3</small>	350mA	490mA	700mA	1100mA	1200mA	1360mA
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	Tj 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						
	SOLDERING TEMPERATURE	Wave soldering: 265°C, 5s (max.); Manual soldering: 390°C, 3s (max.)						
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, EAC TP TC 020						
OTHERS	MTBF	29984.3K hrs min. Telcordia SR-332 (Bellcore) 2881.6Khrs 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 (Please refer to Page 6 for packing)						
	POTTING MATERIAL	Epoxy(UL94-V0)						
NOTE	<p>1.All parameters are specified at normal input(48VDC), rated load, 25°C 70% RH ambient.</p> <p>2.Ripple &amp; noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1µf capacitor.</p> <p>3.Test condition: 48VDC input.</p> <p>4.Output voltage will always step down by 4 volts from input DC voltage.</p> <p>5.The output of NLDD-H should not be connected to the input of the same unit or output from other sources.</p> <p>6.The power supply is regarded as a part of the components in the system, and the final EMI test needs to be tested with the final device. If an additional EMI filter circuit is required to meet the electromagnetic compatibility requirements, please refer to the EMC test report for details.</p> <p>7.Please refer to the warranty statement on MEAN WELL's website at <a href="http://www.meanwell.com">http://www.meanwell.com</a></p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>							



■ Mechanical Specification

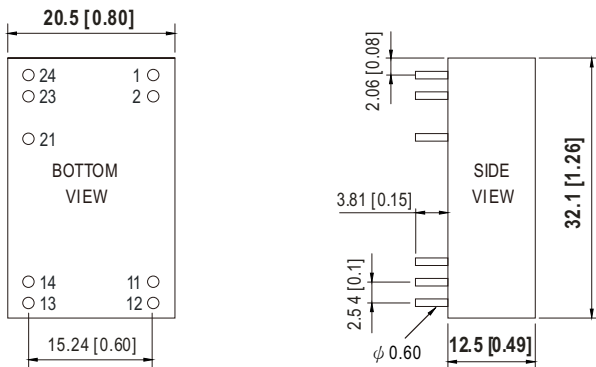
◎ Blank type(NLDD – 350~1050H):

Unit: mm (inch)



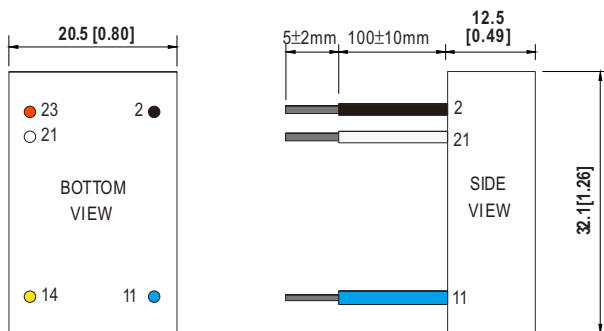
NOTE: Pin tolerance  $\pm$ 0.5mm

◎ Blank type(NLDD – 1200~1400H):



NOTE: Pin tolerance  $\pm$ 0.5mm

◎ W type(NLDD – 350~1400HW):



NOTE: All wires UL1569 22AWG

■ Pin Configuration

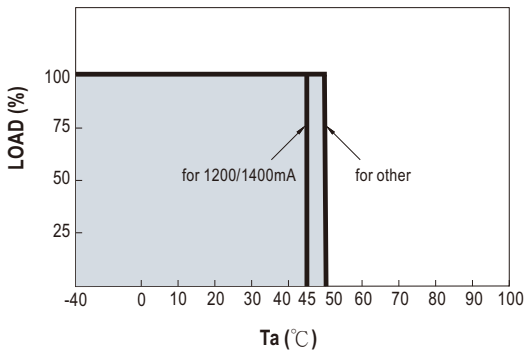
Pin No.		Comment
1,2	-Vin	Don't connect to -Vout
11,12	-Vout	LED - Connection
13,14	+Vout	LED + Connection
22	PWM DIM	ON/OFF and PWM Dimming (Leave open if not used)
23,24	+Vin	DC Supply
others	N.C	No connection

Pin No.		Comment
1,2	-Vin	Don't connect to -Vout
11,12	-Vout	LED - Connection
13,14	+Vout	LED + Connection
21	PWM DIM	ON/OFF and PWM Dimming (Leave open if not used)
23,24	+Vin	DC Supply
others	N.C	No connection

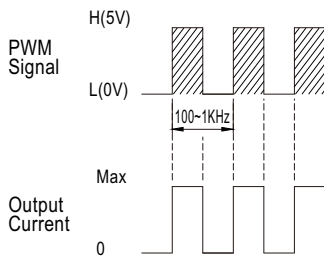
Pin No.		Comment
2	-Vin (Black)	Don't connect to -Vout
11	-Vout (Blue)	LED - Connection
14	+Vout (Yellow)	LED + Connection
21	PWM DIM (White)	ON/OFF and PWM Dimming (Leave open if not used)
23	+Vin (Red)	DC Supply
others	N.C	No connection



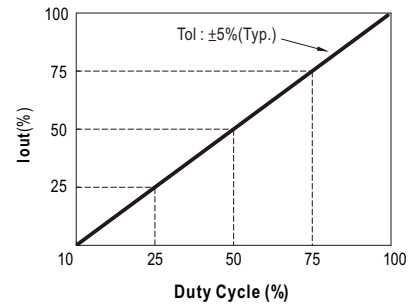
Derating Curve



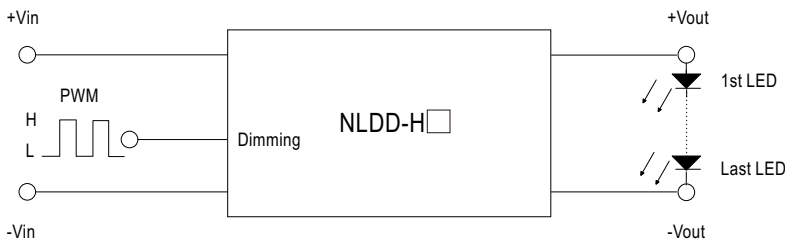
PWM Dimming Control



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



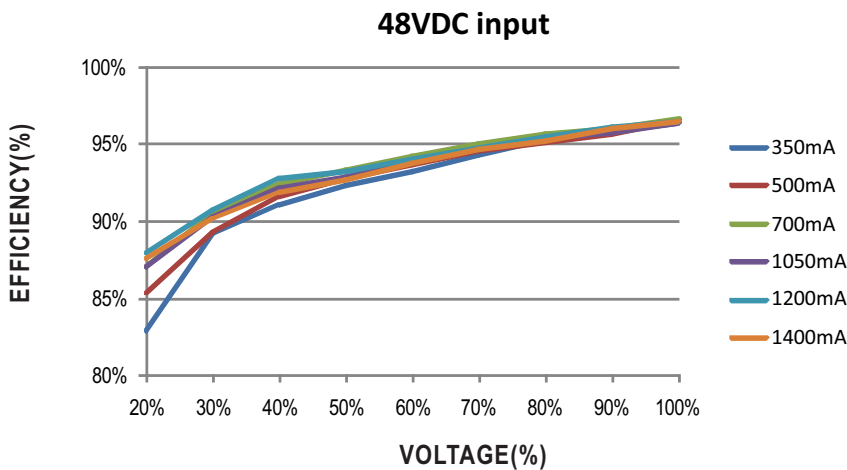
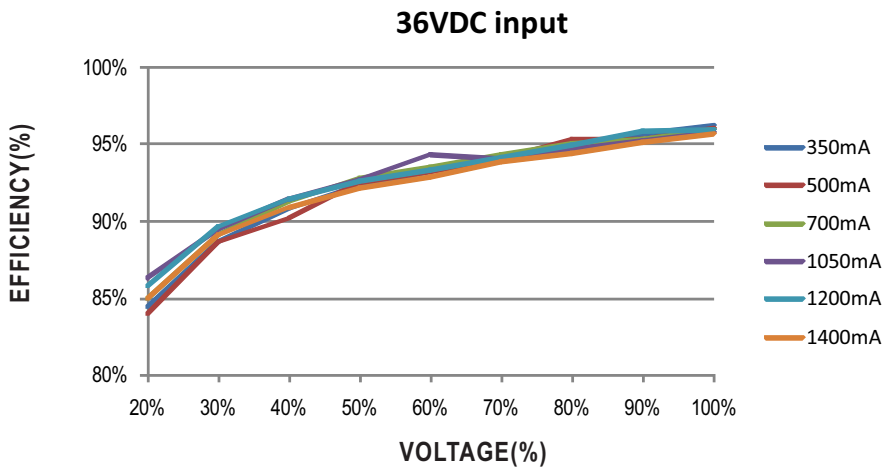
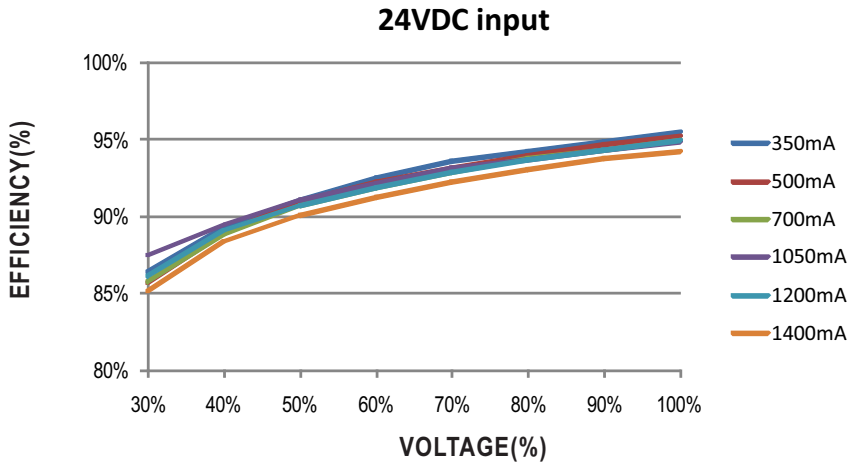
Standard Application



H: >2.5~5VDC or open circuit  
L: <0.8VDC or short



■ Efficiency VS Output Voltage





■ PACKING

Standard Tube Packing	MPQ Per Tube (PCS)	One Box G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
<p>Unit : mm</p> <p>TUBE PATTERN</p> <p>CARTON L540 x W242 x H125</p>	15	0.3Kg	750	15.6Kg
Tray Packing	MPQ Per Tray (PCS)	One Box G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
<p>Unit : mm</p> <p>OUTER CARTON L332*W292*H215</p>	40	1.0Kg	200	5.03Kg