



MEAN WELL NLDD-H series DC-DC Constant Current Step Down LED Driver Owner's Manual

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MEAN WELL NLDD-H series DC-DC Constant Current Step Down LED Driver




Features And Applications

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  class III application(SELV)

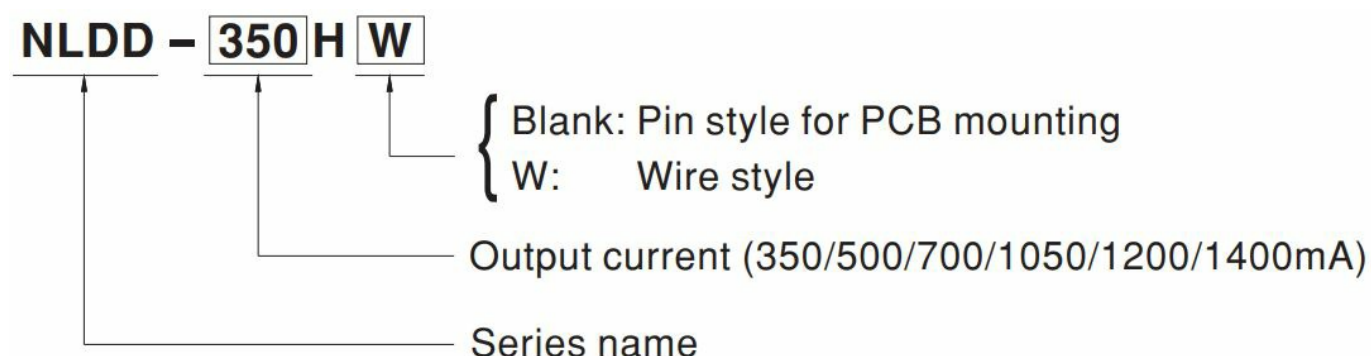
GTIN CODE

- 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-O 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



SPECIFICATION

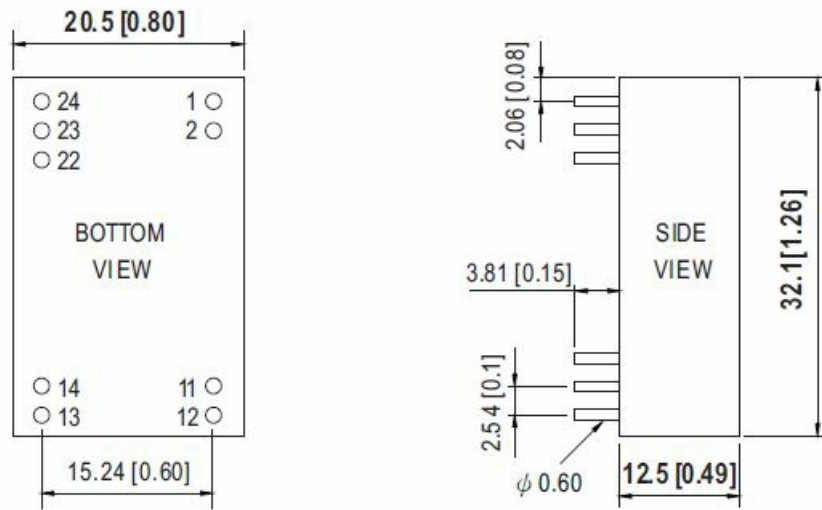
ORDER NO.		NLDD-350 H	NLDD-500 H	NLDD-700 H	NLDD-105 0H	NLDD-120 0H	NLDD-140 0H
OUTP UT	CURRENT RANG E	350mA	500mA	700mA	1050mA	1200mA	1400mA
	VOLTAGE RANG E Note.4	6 ~ 52VDC				6 ~ 46VDC	
	CURRENT ACCU RACY (Typ.)	±5% at 48VDC input					
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	200mVp-p	350mVp-p	350mVp-p	350mVp-p
	SWITCHING FRE QUENCY	200KHz					
	VOLTAGE RANG E	10 ~ 56VDC (59VDC Max.)					

INPUT	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	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					

MENT	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	Expoxy(UL94-V0)
NOTE	<p>1. All parameters are specified at normal input(48VDC), rated load, 25°C 70% RH ambient.</p> <p>2. Ripple & 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>3. Output voltage will always step down by 4 volts from input DC voltage.</p> <p>4. The output of NLDD-H should not be connected to the input of the same unit or output from other sources.</p> <p>5. 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. 7. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com</p> <p>❖ Product Liability Disclaimer: For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p>	

Mechanical Specification

Blank type(NLDD- 350~1050H):



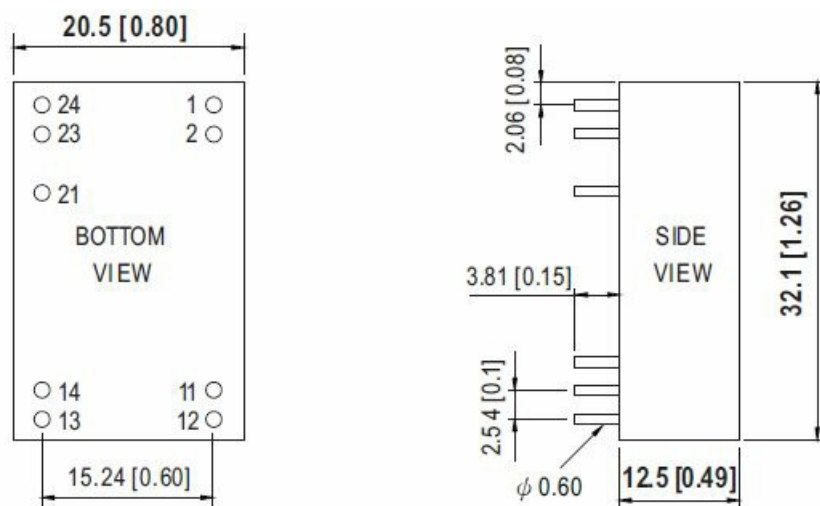
- **Unit:** mm (inch)

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

NOTE: Pin tolerance ± 0.05 mm

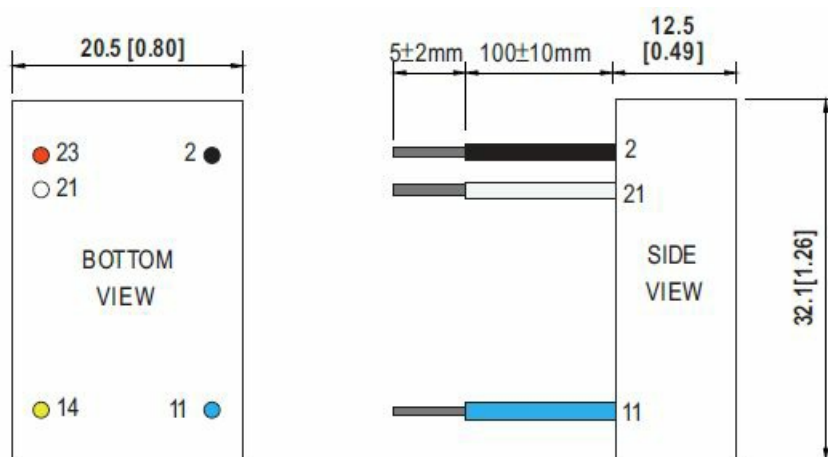
Blank type(NLDD-1200~1400H):



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

NOTE: Pin tolerance $\pm 0.05\text{mm}$

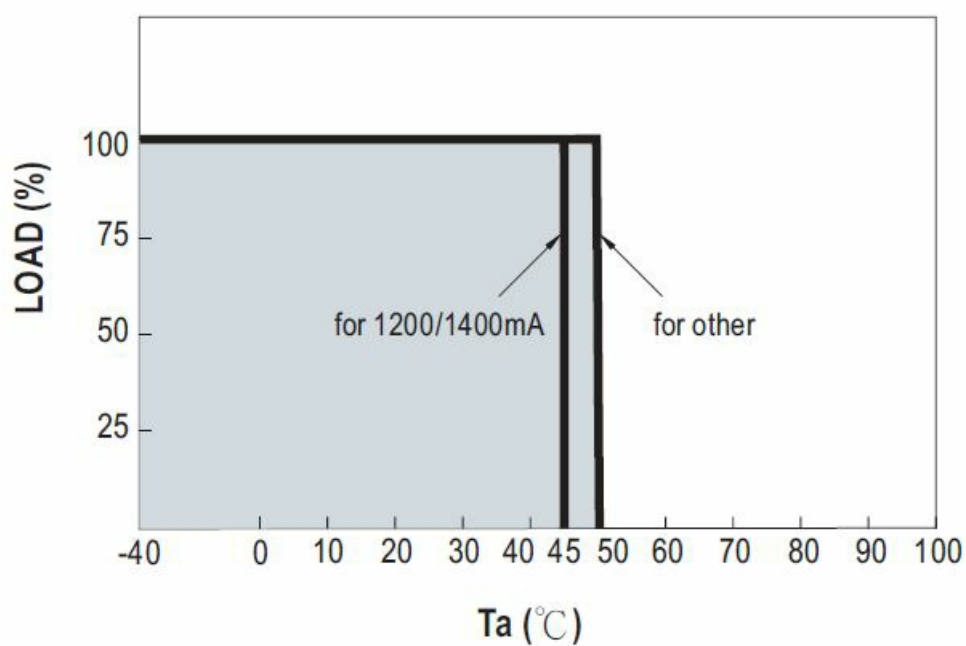
W type(NLDD-350~1400HW):



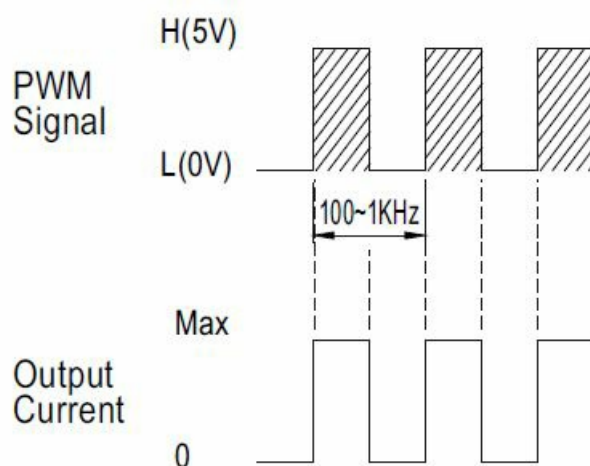
NOTE: All wires UL1569 22AWG

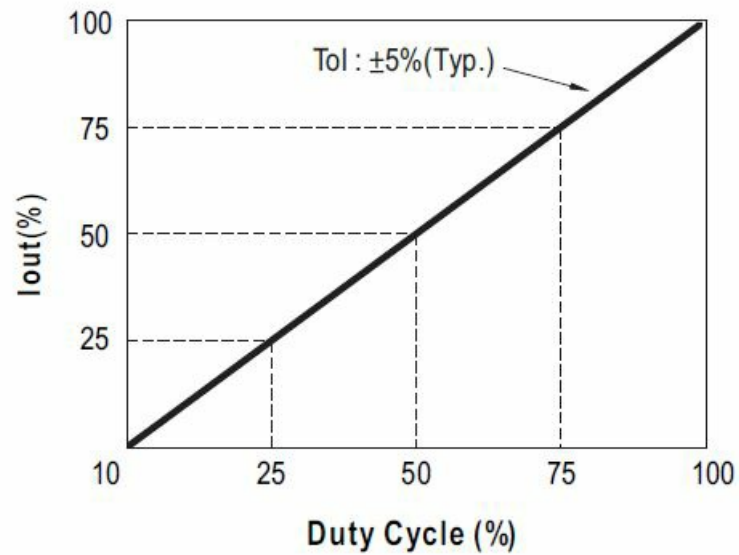
Pin No.		Comment
2	-Vin (Black)	Don't connect to -Vout
11	-Vout (Blue)	LED – Connection
14	+Vout (Yellow)	LED + Connection
21	PWM DIM (White)	ON/OFF and PWM Dimming (Leave open if not used)
23	+Vin (Red)	DC Supply
others	N.C	No connection

Derating Curve



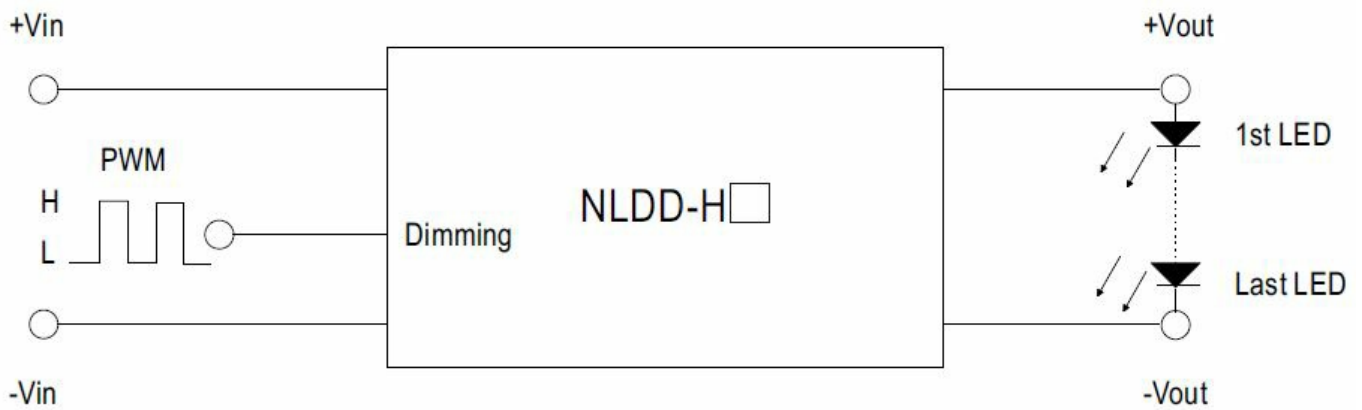
PWM Dimming Control





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

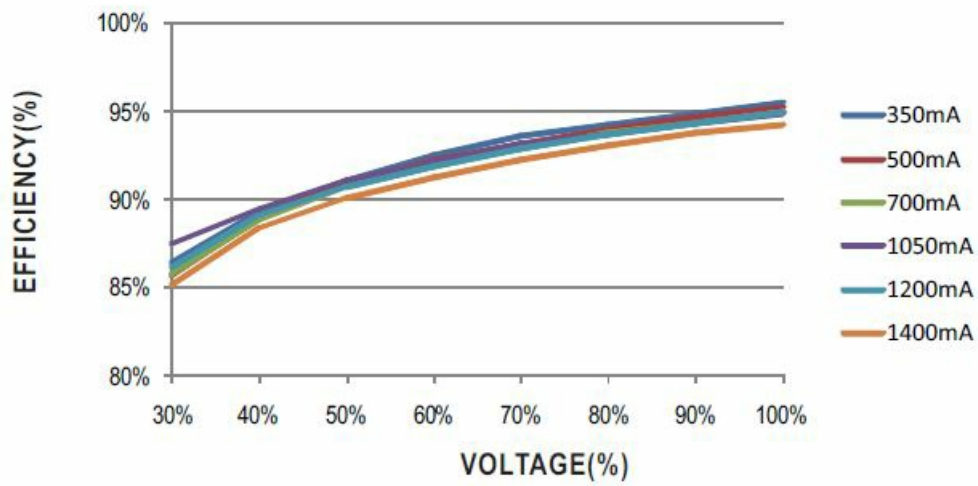
Standard Application



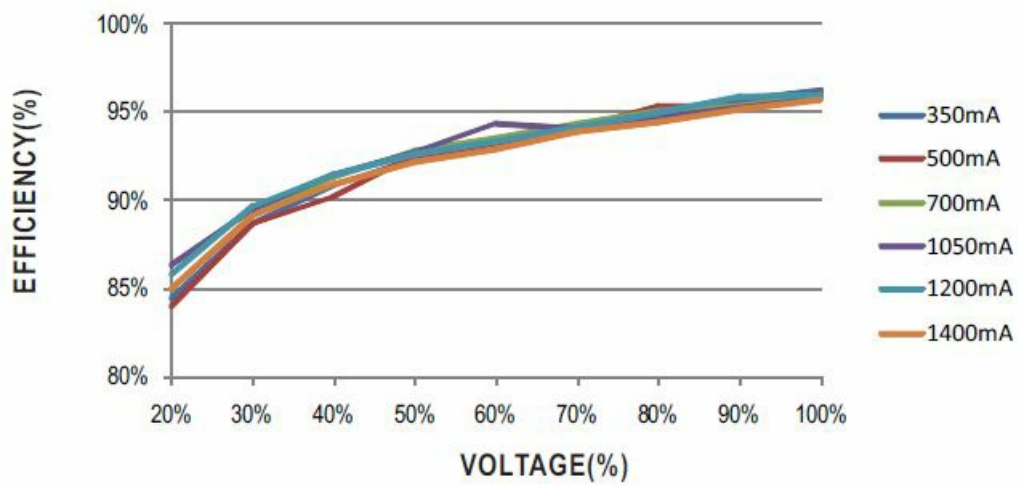
- **H:** $>2.5\sim 5\text{VDC}$ or open circuit
- **L:** $<0.8\text{VDC}$ or short

Efficiency VS Output Voltage

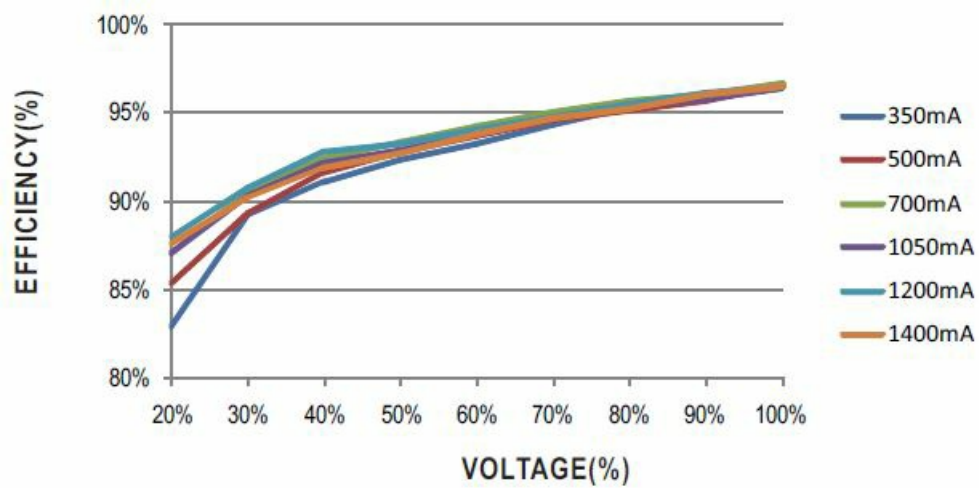
24VDC input



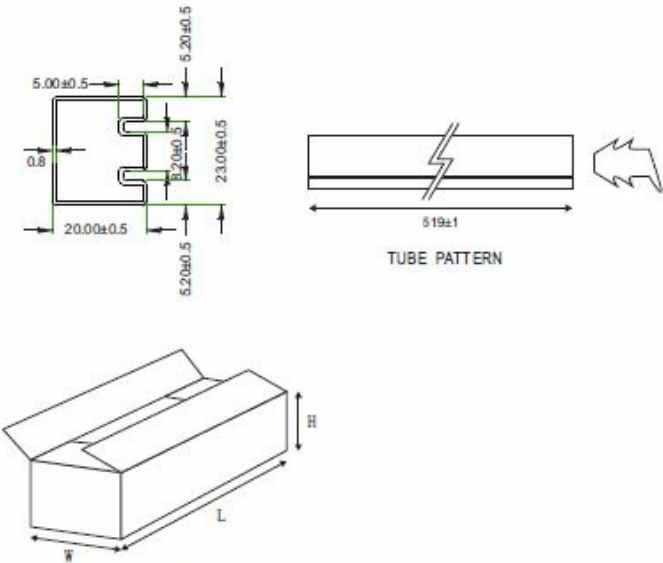
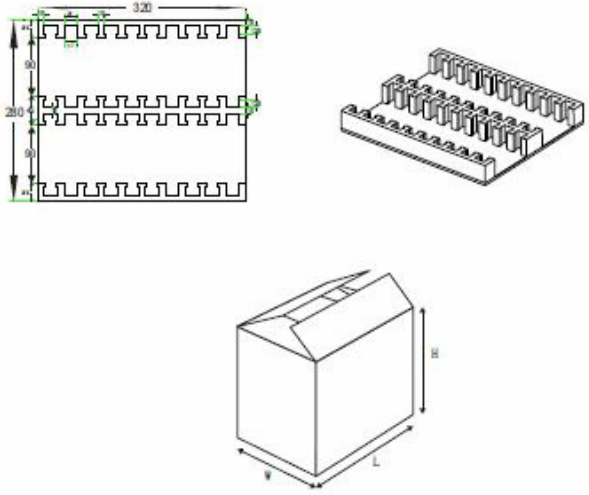
36VDC input



48VDC input



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

User's Manual



Documents / Resources



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NLDD-H series DC-DC Constant Current Step Down LED Driver, NLDD-H series, DC-DC Constant Current Step Down LED Driver, DC Constant Current Step Down LED Driver, Constant Current Step Down LED Driver, Current Step Down LED Driver, Step Down LED Driver, Down LED Driver, LED Driver, Driver

References

- [User Manual](#)