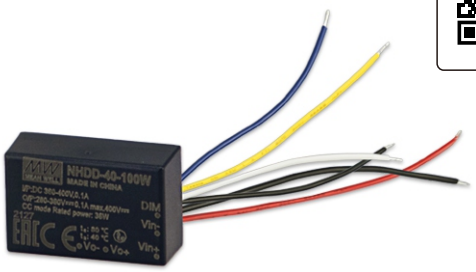
DC-DC Constant Current Driver With DC 380V Input NHDD-40 series

User's Manual
Click Me





TPTC004

Features

- Constant Current mode output
- For DC 380V Bus lighting application
- Driver on Board (DOB) Solution available
- Plastic housing and Fully encapsolated
- Built-in PWM and Remote ON/OFF control
- Protections: Short circuit/Over temperature
- 5 years warranty

Applications

- Panel lighting
- Indoor LED lighting
- Recessed lighting
- Linear lighting
- DC house lighting system
- Industrial lighting

GTIN CODE

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

Note: Driver on board (DOB) solution is available, including circuit diagram and key components such as Driver IC or choke,please contact MEANWELL for detail.

Description

NHDD-40 series is a DC/DC LED driver. It operates from 360 ~ 420VDC and offers constant current output. Thanks to the efficiency up to 94%, with the fanless design, the NHDD-40 is able to operate for -30℃~+90℃ case temperature under free air convection. In addition,NHDD is a particular design for DC 380V Bus lighting application which can be combination with storage. This coincides with the developing trend that countries around the world have begun to implement of energy saving and carbon neutrality, how to combine renewable energy sources, and effectively integrate DC power grid and energy storage systems. MEAN WELL will continue to provide products corresponding with this goal in order to reduce the loss in the power conversion and create new DC power grid lighting applications.

Model Encoding

NHDD - 40 -100 W

- W: Output style(Blank: Pin style; W:Wire style)
- 100: Output current(100mA)
- 40: Rated wattage
- NHDD: Series name

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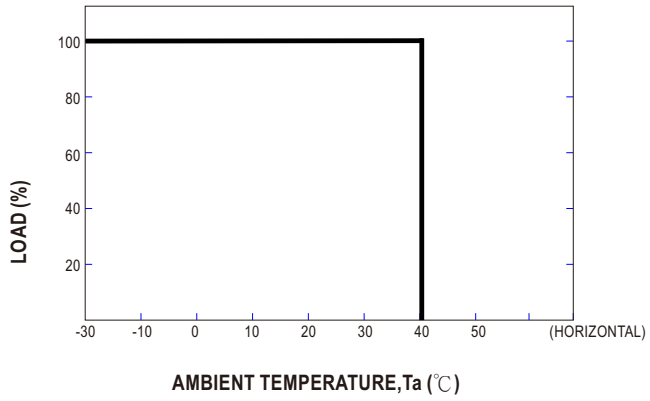
DC-DC Constant Current Driver With DC 380V Input **NHDD-40 series**

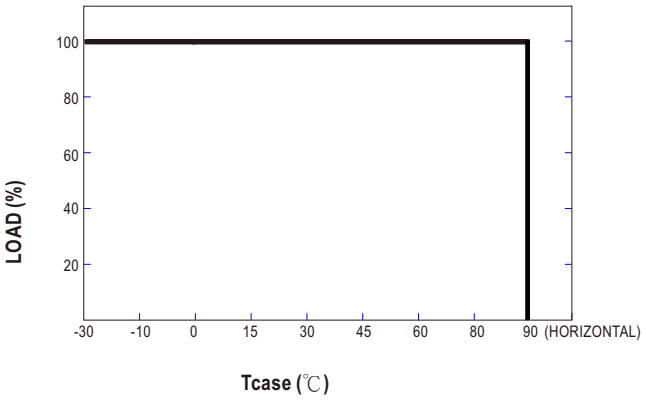
SPECIFICATION

MODEL		**NHDD-40-100** ☐
OUTPUT	**CURRENT LEVEL**	100mA
	RATED POWER	35W (typical)
	DC VOLTAGE RANGE Note.7	350V (typical)
	CURRENT RIPPLE	40% max. @rated current
	CURRENT TOLERANCE	±15%
	SETUP TIME Note.3	500ms / 380VDC
INPUT	**VOLTAGE RANGE** Note.7	360 ~ 420VDC(typical 380VDC) (Please refer to "STATIC CHARACTERISTIC" section)
	EFFICIENCY (Typ.) Note.4	94%
	DC CURRENT (Typ.)	0.1A/380VDC
PROTECTION	**SHORT CIRCUIT**	Hiccup mode, recovers automatically after fault condition is removed
	OVER TEMPERATURE	Tj 150℃ typically(IC1) detect on main control IC
		Protection type: Shut down, recovers automatically after temperature goes down
	REVERSE POLARITY	No damage
	UNDER INPUT VOLTAGE	The input voltage is less than 359V ,the driver will be shut down.
FUNCTION	**PWM DIMMING**	Please refer to "DIMMING OPERATION" section
	REMOTE ON/OFF	Power ON: Leave it open or PWM DIM PIN>1.5~5VDC, Power OFF: PWM DIM PIN <0.9VDC or short
	POWER FREQUENCY	100~1K Hz
	QUIESCENT INPUT CURRENT IN SHUTDOWN MODE(MAX.)	2mA at PWM dimming off at 380V input.
ENVIRONMENT	**WORKING TEMP.**	Tcase=-30 ~ +40℃ (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)
	MAX. CASE TEMP.	Tcase=+90℃
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes
	SOLDERING TEMPERATURE	Wave soldering: 265℃,5s (max.); Manual soldering: 390℃,3s (max.)
SAFETY & EMC	**SAFETY STANDARDS**	LVD BS EN/EN61347 and EAC TP TC004 approved
	EMC EMISSION Note.6	Compliance to BS EN/EN55015, EAC TP TC 020
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,6,8, light industry level, criteria A, EAC TP TC 020
OTHERS	**MTBF**	15362.0K hrs min. Telcordia SR-332 (Bellcore) 2779.1Khrs min. MIL-HDBK-217F (25℃)
	DIMENSION	32.1*20.5*12.5mm or 1.26"*0.8"*0.49" inch (L*W*H)
	WEIGHT	NHDD: 15.6g; NHDD-W: 18g (Please refer to Page 6 for packing)
	POTTING MATERIAC	Expoxy(UL94-V0)
NOTE	1. All parameters NOT specially mentioned are measured at 380VDC input, rated current and 25℃ of ambient temperature. 2. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details. 3. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time. 4. Efficiency is measured at 100mA/380VDC. 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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf) 6. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft). 7. Please evaluate this notice carefully to prevent high unexpected output current. Output voltage and total forward voltage of LED must step down at least 40VDC from input voltage. Maximum step down voltage should not exceed 80VDC. ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx	

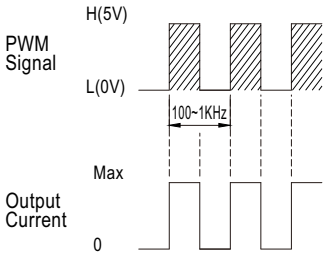
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■ OUTPUT LOAD vs TEMPERATURE



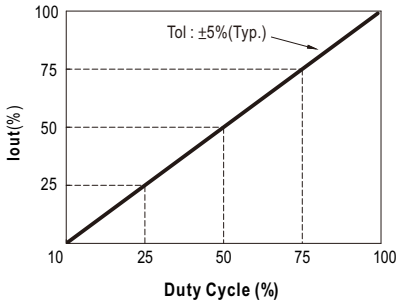


■ PWM Dimming Control



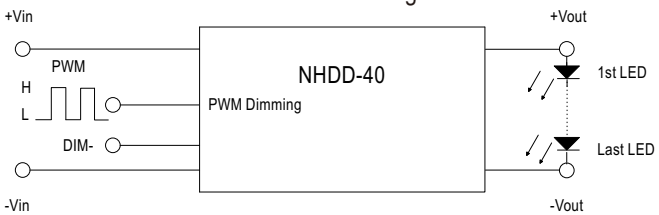
◎ Short circuit PWM PIN can realize dimming turn off.

◎ During PWM dimming operation, the output current will change to PWM style.



◎ Dimming and ON/OFF control diagram

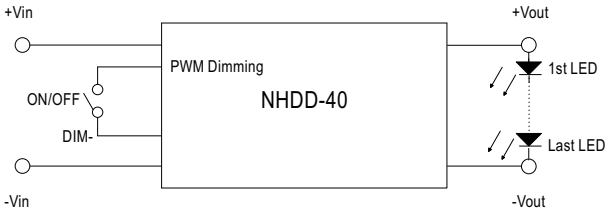
PWM Dimming



H: >1.5~5VDC or open circuit

L: <0.9VDC or short

ON/OFF Control



Switch open: DIM ON(100%)

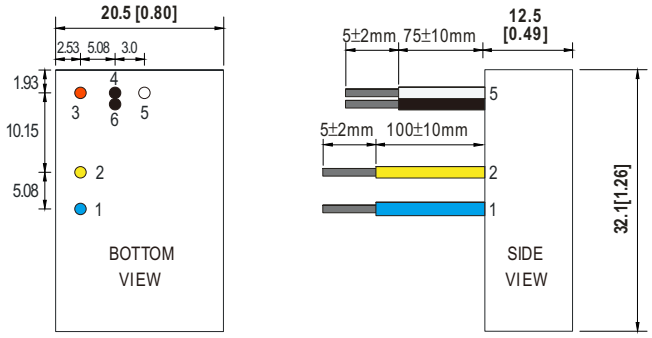
Switch close: DIM OFF

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■ Mechanical Specification

Unit: mm [inch] Tolerance:±1

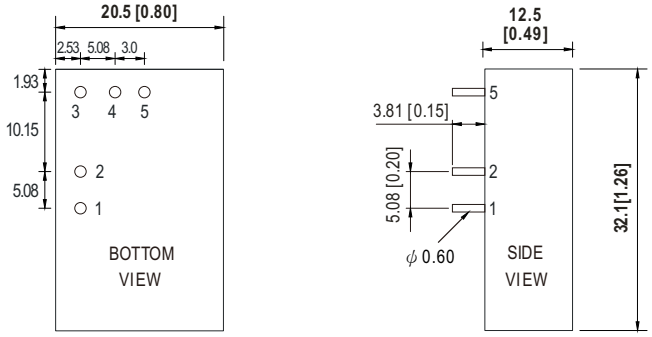
※ **Wire style**



NOTE: All wires UL1569 22AWG

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

※ **PIN style**



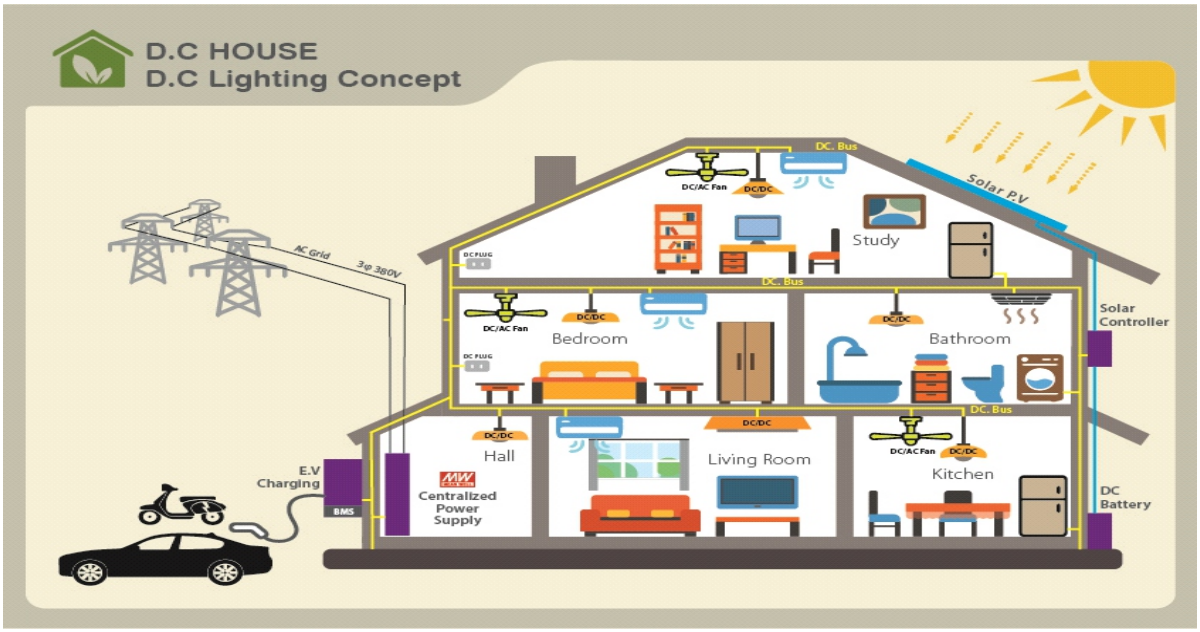
Pin No.		Comment
1	-Vout	LED - Connection
2	+Vout	LED + Connection
3	+Vin	DC Supply
4	-Vin	Don't connect to -Vout
5	PWM DIM+	ON/OFF and PWM Dimming (Leave open if not used)
others	N.C	No connection

NOTE: 1. Pin tolerance ±0.5mm
2. PWM DIM- is better to use with a separating wire from -Vin

■ Pin Configuration

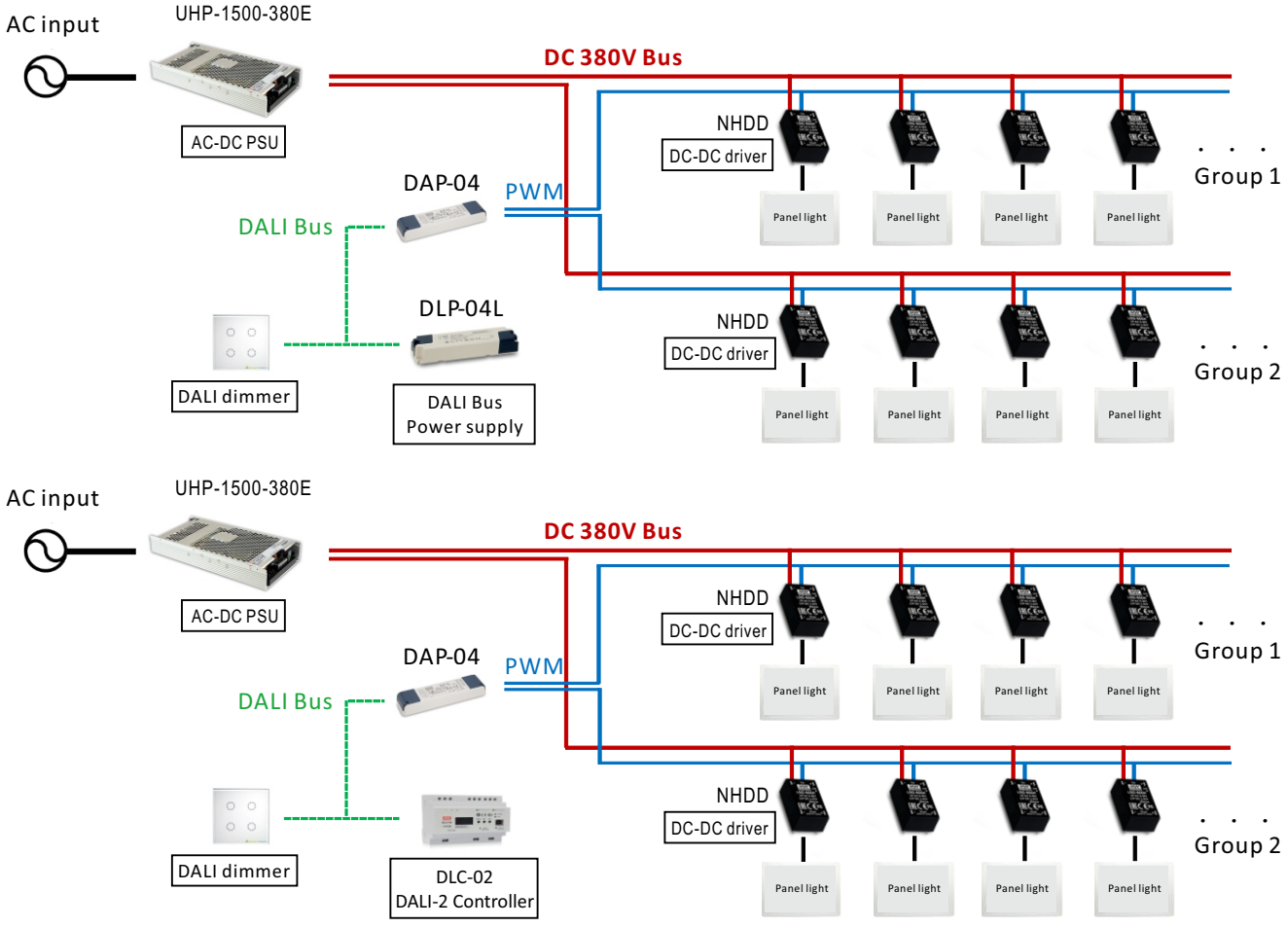
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■ DC House -DC lighting concept



■ Application diagram

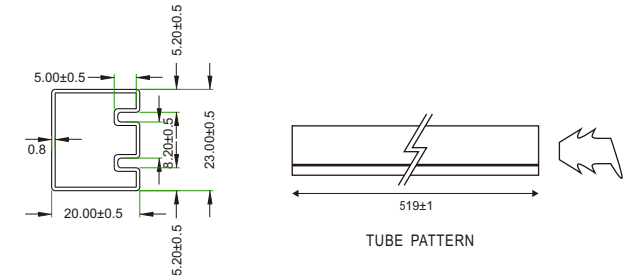
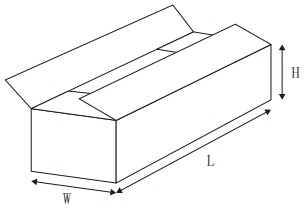
Indoor lighting application with DC 380V Bus

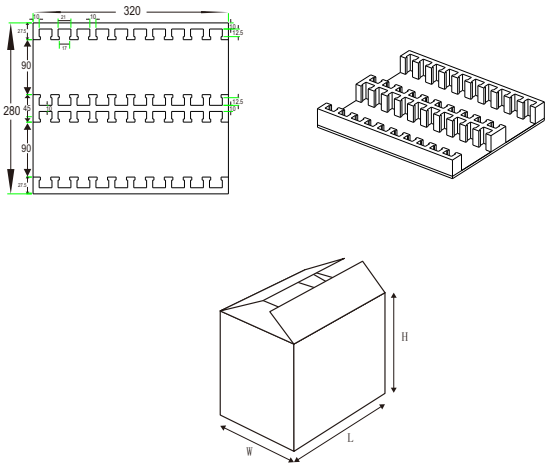


Note: MEANWELL's PBM Partner can support with DC 380V LED Luminaires, please contact MEANWELL for detail.

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■ PACKING

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

■ Installation Manual

Please refer to : http://www.meanwell.com/manual.html

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