

**Features**

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

**Applications**

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

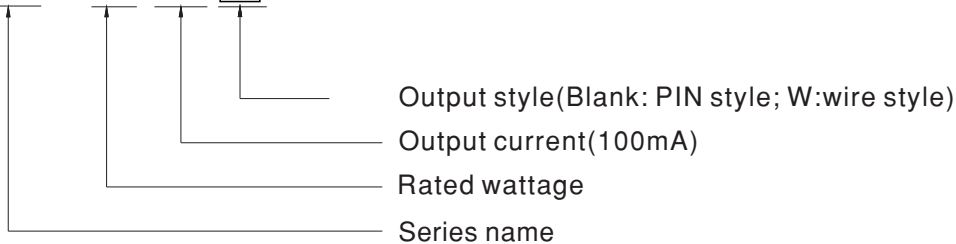
Note: Driver on board (DoB) solution is available, including circuit diagram and key components such as Driver IC or choke, please contact MEANWELL for detail.

**Description**

NHDD-40 series is a DC/DC LED driver. It operates from 360 ~ 400VDC and offers constant current output. Thanks to the efficiency up to 95%, with the fanless design, the entire series is able to operate for -30°C ~ +90°C case temperature under free air convection. In addition, NHDD is a particular design for DC 380V Bus lighting application which can be combination with green energy storage and also can be an intelligent lighting system.

**Model Encoding**

**NHDD - 40 - 100 W**

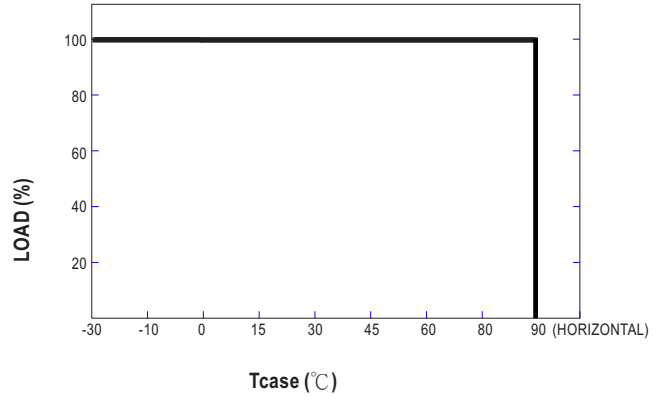
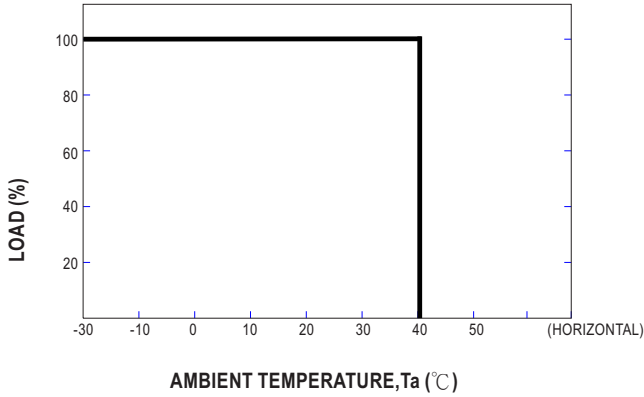




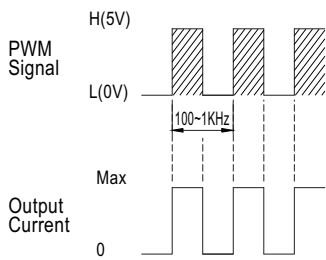
## SPECIFICATION

MODEL		NHDD-40-100 <input type="checkbox"/>
OUTPUT	CURRENT LEVEL	100mA
	RATED POWER	36W (typical)
	DC VOLTAGE RANGE <small>Note.7</small>	355V (typical)
	CURRENT RIPPLE	40% max. @rated current
	CURRENT TOLERANCE	±15%
	SETUP TIME <small>Note.3</small>	500ms / 380VDC
INPUT	VOLTAGE RANGE <small>Note.7</small>	360 ~ 400VDC(typical 380VDC) (Please refer to "STATIC CHARACTERISTIC" section)
	EFFICIENCY (Typ.) <small>Note.4</small>	95%
	DC CURRENT (Typ.)	0.1A/380VDC
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed
	OVER TEMPERATURE	Tj 150°C typically(IC1) detect on main control IC Protection type: Shut down, recovers automatically after temperature goes down
FUNCTION	PWM DIMMING	Please refer to "DIMMING OPERATION" section
ENVIRONMENT	WORKING TEMP.	Tcase=-30 ~ +40°C (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)
	MAX. CASE TEMP.	Tcase=+90°C
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes
SAFETY & EMC	SAFETY STANDARDS	IEC61347 and EAC TP TC004 approved
	EMC EMISSION <small>Note.6</small>	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	213.3K hrs 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	NHDD: 15.6g; NHDD-W: 18g
	POTTING MATERIAC	Expoxy(UL94-V0)
NOTE	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 380VDC input, rated current and 25°C of ambient temperature.</li> <li>De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.</li> <li>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.</li> <li>Efficiency is measured at 100mA/380VDC.</li> <li>The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.</li> <li>The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</li> <li>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.</li> </ol> <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>	

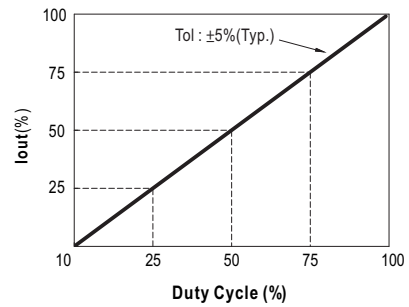
■ **OUTPUT LOAD vs TEMPERATURE**



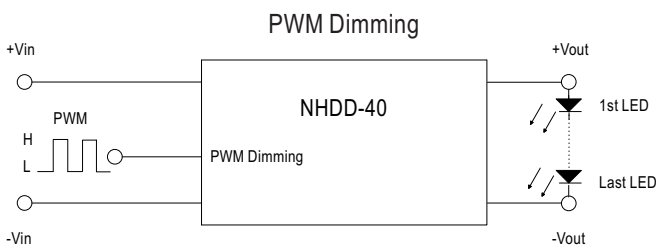
■ **PWM Dimming Control**



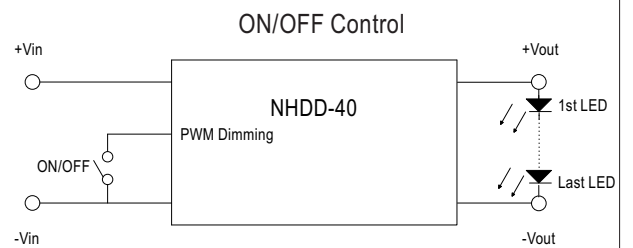
- ⊙ Short circuit PWM PIN can realize dimming turn off.
- ⊙ During PWM dimming operation, the output current will change to PWM style.



⊙ Dimming and ON/OFF control diagram



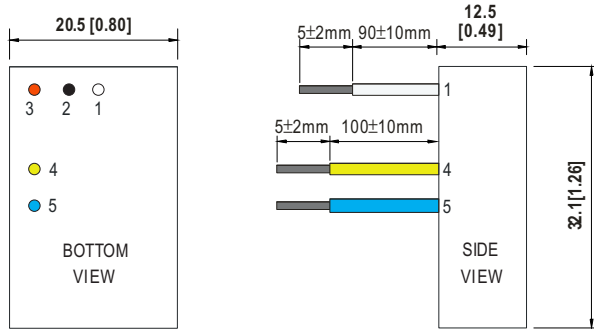
H: >1.5~5VDC or open circuit  
L: <0.9VDC or short



Switch open: DIM ON(100%)  
Switch close: DIM OFF

### Mechanical Specification

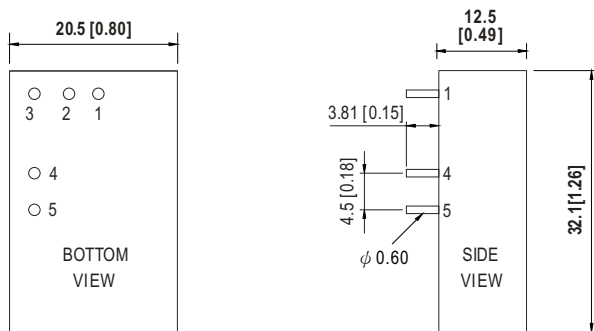
※ Wire style



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

NOTE: All wires UL1569 22AWG

※ PIN style

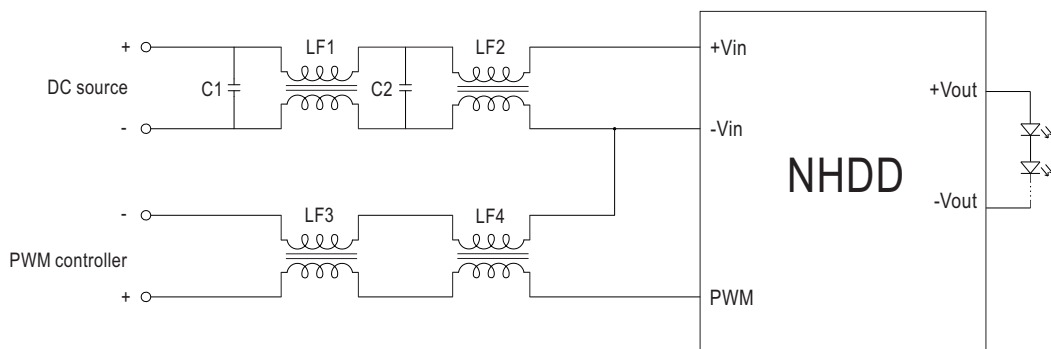


Pin No.		Comment
1	PWM DIM	ON/OFF and PWM Dimming (Leave open if not used)
2	-Vin	Don't connect to -Vout
3	+Vin	DC Supply
4	+Vout	LED + Connection
5	-Vout	LED - Connection
others	N.C	No connection

NOTE: Pin tolerance  $\pm 0.05$ mm

### EMI Filter Suggestions

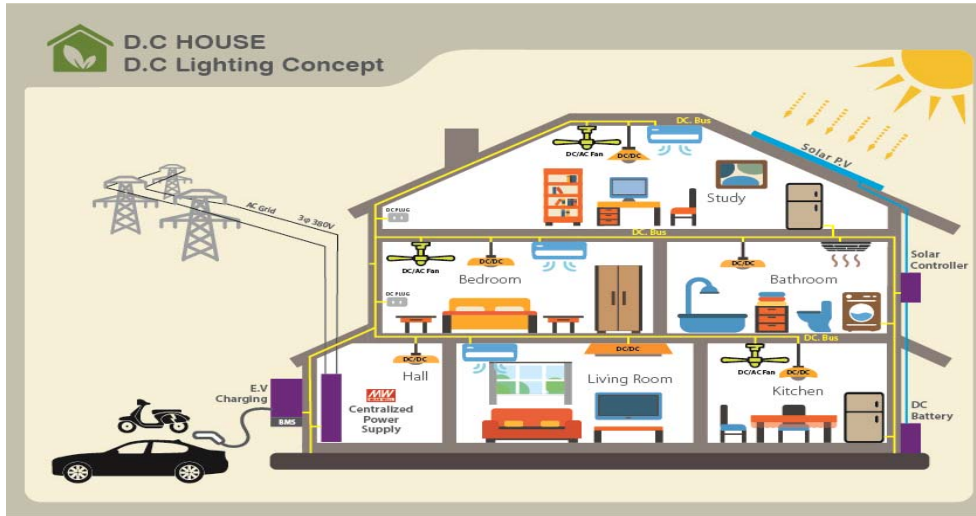
Input Filter to meet Class B Conducted Emissions



※ Parameter description

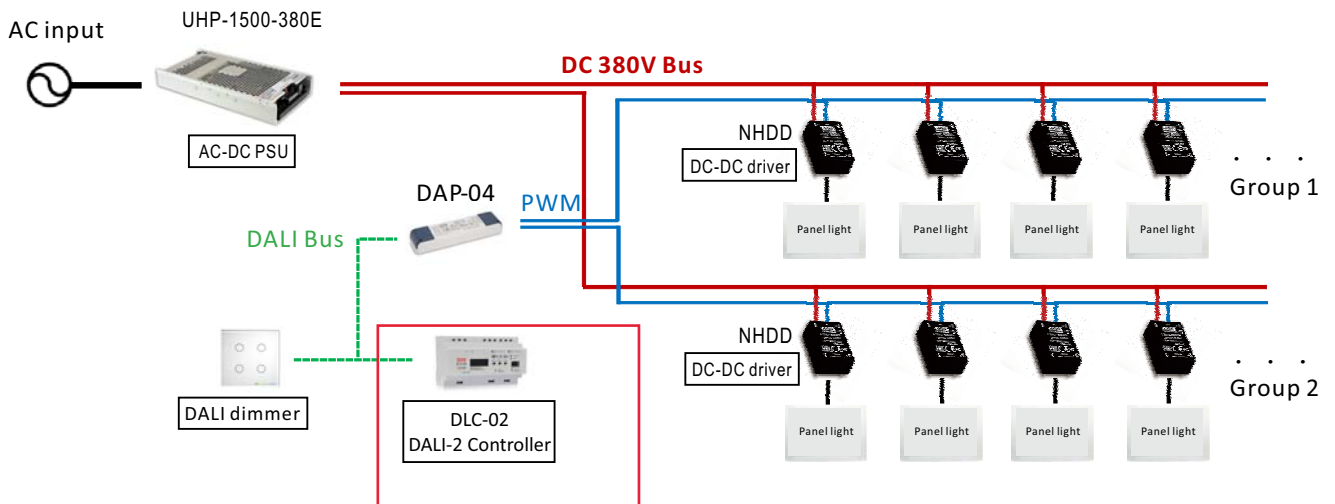
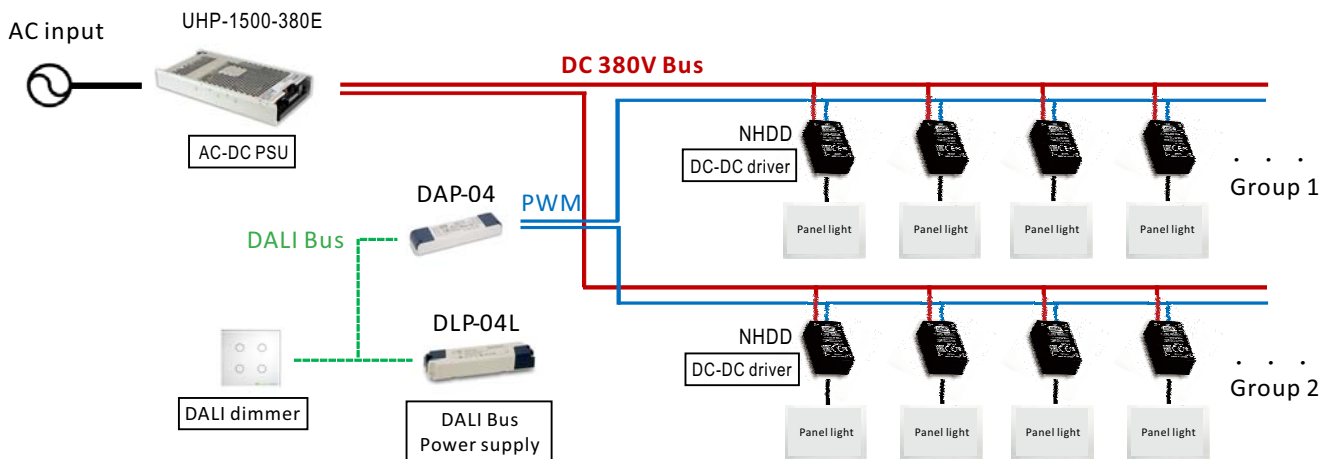
Parameter description	
LF1/LF2	Common Mode Choke(Separate) 11.5mH/Ring code(T22×14×8)/40Turns (Mn-Zn Ferrite/ $\mu$ =10000±30%/AL=7230±30% $nH/N^2$ )
LF3	Common Mode Choke(Separate) 10mH/EE code(EE8.3)/wire(0.13mm×1)/70Turns (Mn-Zn Ferrite/ $\mu$ =12000±25%/AL=3500±30% $nH/N^2$ )
LF4	Common Mode Choke(parallel) 10.4mH/Ring code(T6×3×3)/wire(0.1mm×1)61Turns (Mn-Zn Ferrite/ $\mu$ =10000±25%/AL=4000±30% $nH/N^2$ )
C1/C2	MPP, Metalized polypropylene capacitors,2.2U/450V

■ DC House -DC lighting concept



■ Application diagram

Indoor lighting application with DC 380V Bus



■ Installation Manual

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