



NPF-40D-54 Single Output LED Driver Owner's Manual

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NPF



40W Single Output LED Driver
NPF-40 Dseries



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NPF-40D-54 Single Output LED Driver



http://www.meanwell.com.cn/Upload/PDF/LED_EN.pdf

Features

- Plastic housing with class II design
- Built-in active PFC function
- Class 2 power unit
- Standby power consumption <0.5W
- IP67 rating for indoor or outdoor installations
- Function: 3 in 1 dimming (dim-to-off)
- Typical lifetime >50000hours
- 5 years warranty

Applications

- LED panel lighting
- LED downlight
- LED decorative lighting
- LED tunnel lighting
- Moving sign
- Type “HL” for use in Class I, Division 2 hazardous (Classified) location

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

NPF-40D series is a 40W AC/DC LED driver featuring the constant current mode output. NPF-40D operates from 90~305VAC and offers models with different rated voltage ranging between 12V and 54V. Thanks to the high efficiency up to 90%, with the fanless design, the entire series is able to operate for -40°~+85°C case temperature under free air convection. The entire series is rated with IP67 ingress protection level and is suitable to work for a variety of applications at dry, damp or wet locations. NPF-40D is equipped with the 3 in 1 dimming function so as to provide the design flexibility for LED lighting system.

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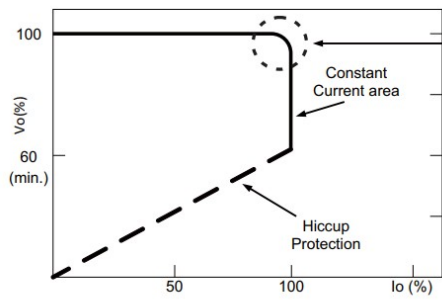
Output voltage(12,15,20,24,30,36,42,48,54V)

Built-in 3 in 1 dimming function

Rated wattage

Series name

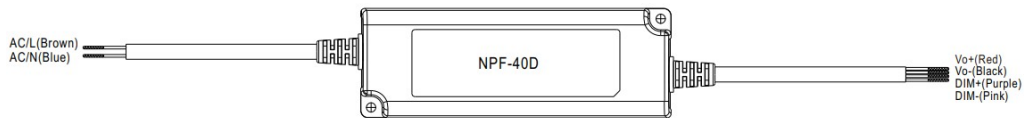
MODEL		NPF-40D-12 □	NPF-40D-15 □	NPF-40D-20 □	NPF-40D-24 □	NPF-40D-30 □	NPF-40D-36 □	NPF-40D-42 □	NPF-40D-48 □	NPF-40D-54 □
OUTPUT	RATED CURRENT	3.34A	2.67A	2A	1.67A	1.34A	1.12A	0.96A	0.84A	0.76A
	RATED POWER	40.08W	40.08W	40W	40.08W	40.2W	40.32W	40.32W	40.32W	41.04W
	CONSTANT CURRENT REGULATION	7.2 ~ 12V	9 ~ 15V	12 ~ 20V	14.4 ~ 24V	18 ~ 30V	21.6 ~ 36V	25.2 ~ 42V	28.8 ~ 48V	32.4 ~ 54V
	CURRENT RIPPLE	5.0% max. @rated current								
	CURRENT TOLERANCE	±5.0%								
	SET UP TIME Note.3	500ms/115VAC, 230VAC								
	VOLTAGE RANGE Note.2	90 ~ 305VAC 127 ~ 431VDC (Please refer to “STATIC CHARACTERISTIC” section)								
	FREQUENCY RANGE	47 ~ 63Hz								
	POWER FACTOR (Typ.)	PF≥0.97/115VAC, PF≥0.95/230VAC, PF≥0.92/277VAC@full load (Please refer to “POWER FACTOR (PF) CHARACTERISTIC” section)								



Typical LED power supply I-V curve

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.
Should there be any compatibility issues, please contact MEAN WELL.

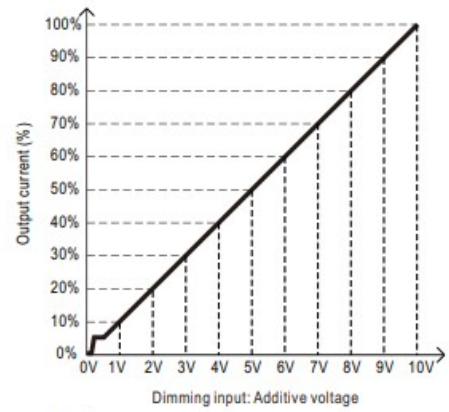
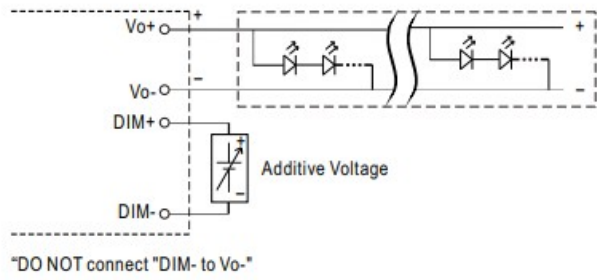
DIMMING OPERATION



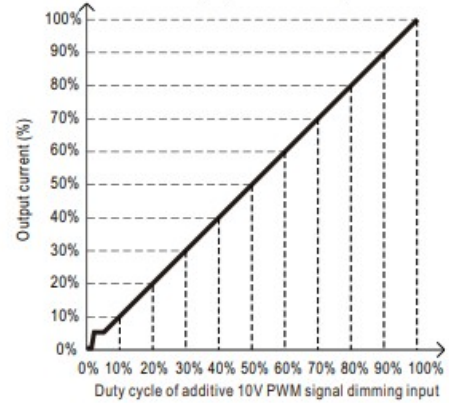
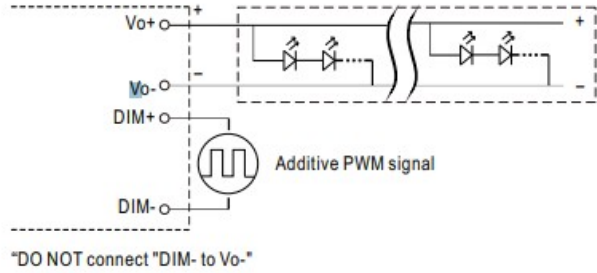
※ 3 in 1 dimming function

- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 0~ 10VDC, or 10V PWM signal or resistance.
 - Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
 - Dimming source current from power supply: 100pA (typ.)
- ◎ Applying additive 0 ~ 10VDC

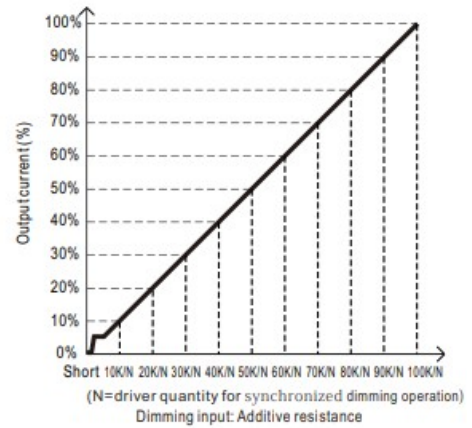
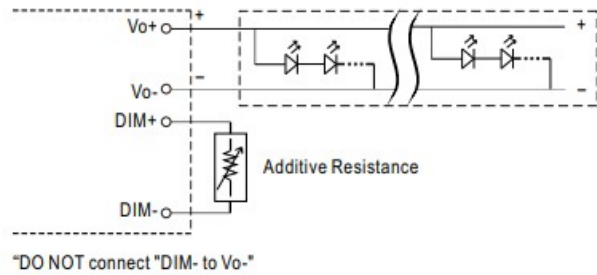
◎ Applying additive 0 ~ 10VDC



◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



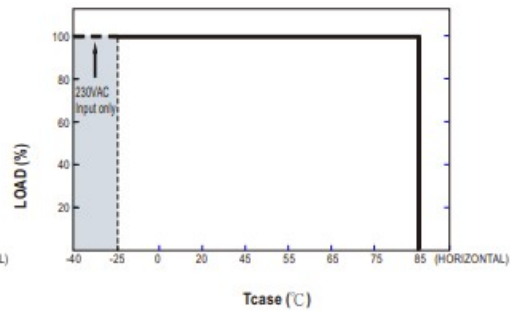
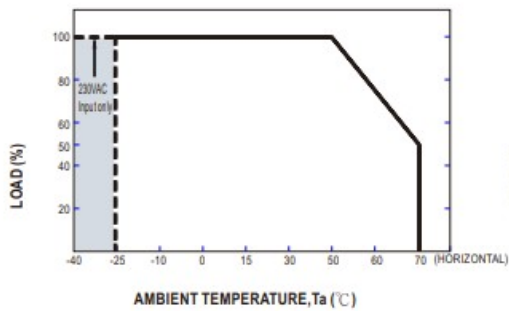
◎ Applying additive resistance:



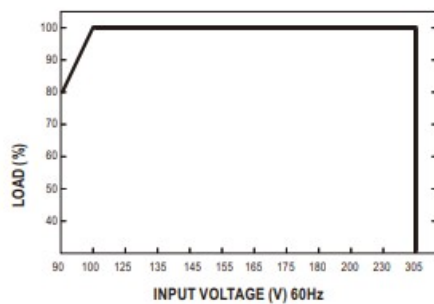
Note :

1. Min. dimming level is about 6% and the output current is not defined when $0\% < I_{out} < 6\%$.
2. The output current could drop down to 0% when dimming input is about $0k\Omega$ or 0Vdc, or 10V PWM signal with 0% duty cycle.

■ OUTPUT LOAD vs TEMPERATURE



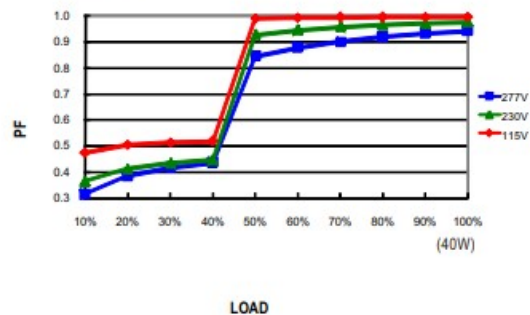
■ STATIC CHARACTERISTIC



※ De-rating is needed under low input voltage.

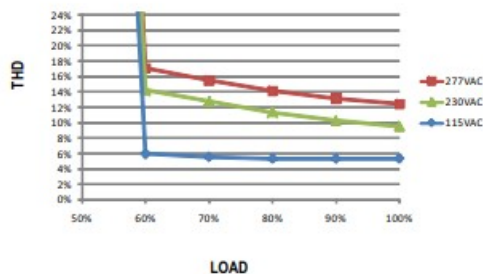
■ POWER FACTOR (PF) CHARACTERISTIC

※ T_{case} at 75°C



■ TOTAL HARMONIC DISTORTION (THD)

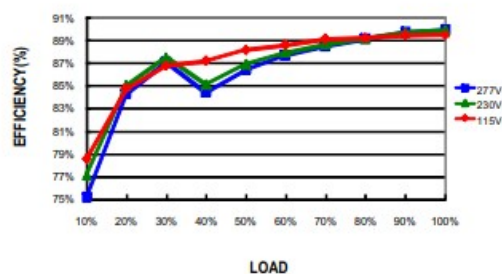
※ 48V Model, T_{case} at 75°C



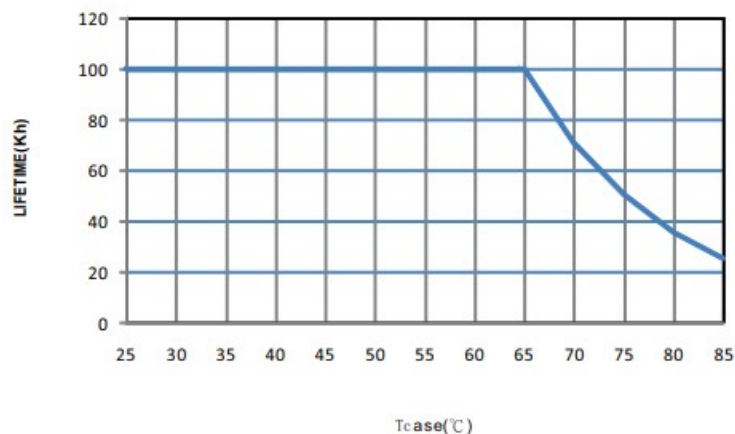
■ EFFICIENCY vs LOAD

NPF-40D series possess superior working efficiency that up to 90% can be reached in field applications.

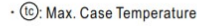
※ 48V Model, T_{case} at 75°C



■ LIFE TIME



Unit:mm



A technical drawing showing a cross-section of a cable joint assembly. A central rectangular component is mounted on a base. Two cables, each with a braided shield and a central conductor, enter from the left and right. The cables are connected to the central component via a series of vertical lines, representing a terminal or connector. The entire assembly is shown on a hatched base.

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

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[illegible]

NPF-40D-12, NPF-40D-15, NPF-40D-20, NPF-40D-24, NPF-40D-30, NPF-40D-36, NPF-40D-42, NPF-40D-48, NPF-40D-54, NPF-40D-54 Single Output LED Driver, NPF-40D-54, Single Output LED Driver, Output LED Driver, LED Driver, Driver

- User Manual

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