

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

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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

GTIN CODE

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

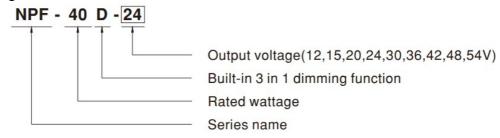
Description

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.

Model Encoding



SPECIFICATION

MODEL		NPF- 40D- 12 □	NPF- 40D-1 5 □	NPF- 40D-2 0 □	NPF- 40D-2 4 □	NPF- 40D-3 0 □	NPF- 40D-3 6 □	NPF- 40D-4 2 □	NPF- 40D-4 8 □	NPF- 40D-5 4 □	
OUTPUT	RATED CURREN T	3.34A	2.67A	2A	1.67A	1.34A	1.12A	0.96A	0.84A	0.76A	
	RATED POWER	40.08 W	40.08 W	40W	40.08 W	40.2 W	40.32 W	40.32 W	40.32 W	41.04 W	
	CONSTANT CURRENT REGI ON	7.2 ~ 12V	9 ~ 15 V	12 ~ 2 0V	14.4 ~ 24V	18 ~ 3 0V	21.6 ~ 36V	25.2 ~ 42V	28.8 ~ 48V	32.4 ~ 54V	
	CURRENT RIPP LE	5.0% max. @rated current									
	CURRENT TOLE RANCE	±5.0%									
	SET UP TIME No te.3	500ms/115VAC, 230VAC									
VOLTAGE RANG 90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section					ion)						
	FREQUENCY RA NGE 47 ~ 63Hz POWER FACTO R (Typ.) PF≥0.97/115VAC, PF≥0.95/230VAC, PF≥0.92/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" sections.										
							on)				
	R (Typ.)	(Please	e refer to	"POWEI	R FACTC	OR (PF) (CHARAC	TERISTI	C" sectio	n)	

INPUT	TOTAL HARMO NIC DISTORTIO N	THD< 20%(@load≧60%/115VC, 230VAC; @load≧75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)									
	EFFICIENCY(Typ .)	86%	87%	88%	89%	89%	90%	90%	90%	90%	
	AC CURRENT (T yp.)	0.6A / 115VAC 0.3A / 230VAC 0.25A / 277VAC									
	INRUSH CURRE NT(Typ.)	COLD START 50A(twidth=270µs measured at 50% lpeak) at 230VAC; Per NEMA 410									
	MAX. NO. of PS Us on 16A CIRC UIT BREAKER	9 units (circuit breaker of type B) / 16 units (circuit breaker of type C) at 230VAC									
	LEAKAGE CUR RENT	<0.25mA / 277VAC									
	STANDBY POW ER CONSUMPTI ON	<0.5W									
PROTECTION	OVER	95 ~ 108%									
	CURRENT	Constant current limiting, recovers automatically after fault condition is removed									
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed									
	OVER VOLTAGE	15 ~ 17V	17.5 ~ 21V	23 ~ 2 7V	28 ~ 3 4V	34 ~ 4 0V	41 ~ 4 6V	46 ~ 5 4V	54 ~ 6 0V	59 ~ 6 6V	
		Shut down o/p voltage, re-power on to recover									
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover									
ENVIRONME NT	WORKING TEM P.	Tcase=-40 ~ +85°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)									
	MAX. CASE TEMP.	Tcase=+85°C									
	WORKING HUMI DITY	20 ~ 95% RH non-condensing									
	STORAGE TEMP., HUMIDIT Y	-40 ~ +80°C, 10 ~ 95% RH									
	TEMP. COEFFICI ENT	±0.03%/°C (0 ~ 50°C)									
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes									
	SAFETY STAND ARDS	UL8750(type"HL"), UL879(for 12V,24V only), CSA C22.2 No. 250.13-12, E NEC BS EN/EN61347-1, BS EN/EN61347-2-13, BS EN/EN62384 independent, EAC TP TC 004, GB19510.1,GB19510.14, IP67 approved; Design refer to BS EN/EN60335-1									

SAFETY & E	WITHSTAND VO LTAGE	I/P-O/P:3.75KVAC							
MC	ISOLATION RES	I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH							
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@ load≧6 0%) ; BS EN/EN61000-3-3; GB/T 17743, GB17625.1,EAC TP TC 020							
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11; BS EN/EN61547, light in dustry level(surge immunity Line-Line 2KV); EAC TP TC 020							
OTHERS	MTBF	3084.3K hrs min. Telcordia SR-332 (Bellcore); 288.2K hrs min. MIL-HDBK-217F (25°C)							
	DIMENSION	150*53*35mm (L*W*H)							
	PACKING	0.49Kg;30pcs/15.7Kg/1.0CUFT							
	 All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERIS TIC" sections for details. 								
	 3. Length of set up time is measured at first cold start. Turning ON/OFF the driver increase of the set up time. 4. The standby power consumption is specified for 230VAC. 								
	5. The driver is considered as a component that will be operated in combination with final equi pment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.								
NOTE	(as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf) 6. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, par ticularly to point (or TMP, per DLC), is about 75°C or less. 7. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.								
	com 2. The architect term eventure devetion of 0.5% (1000 monits for less models and of 5% (1000 monits).								

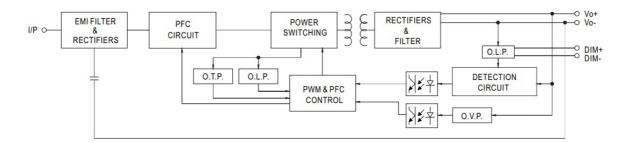
- 8. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).
- 9. For any application note and IP water proof function installation caution, please refer our us er manual before using.

https://www.meanwell.com/Upload/PDF/LED_EN.pdf

* Product Liability Disclaimer For detailed information, please refer to https://www.meanwell. com/serviceDisclaimer.aspx

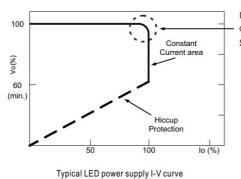
BLOCK DIAGRAM

PFC fosc: 50~120KHz PWM fosc: 60~130KHz



DRIVING METHODS OF LED MODULE

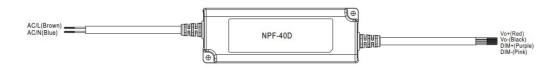
* This series works in constant current mode to directly drive the LEDs.



In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

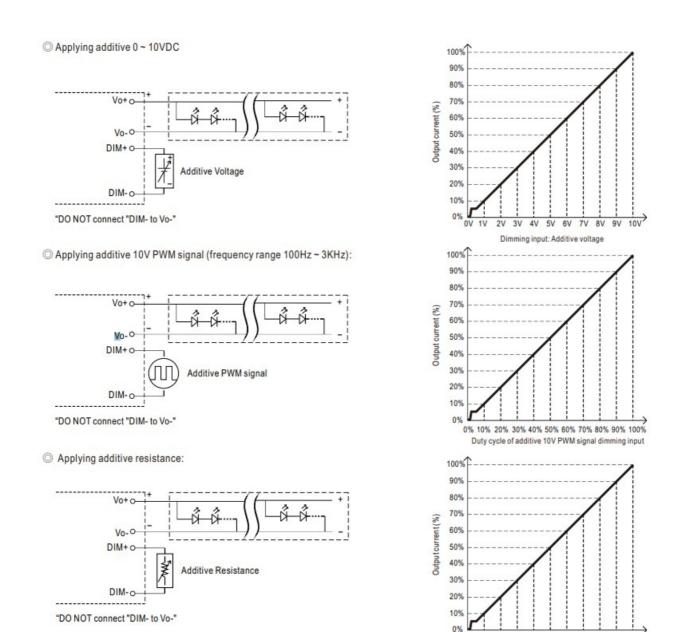
Should there be any compatibility issues, please contact MEAN WELL.

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. Itis not suitable to be used with additional drivers.
- Dimming source current from power supply: 100pA (typ.)
 - Applying additive 0 ~ 10VDC

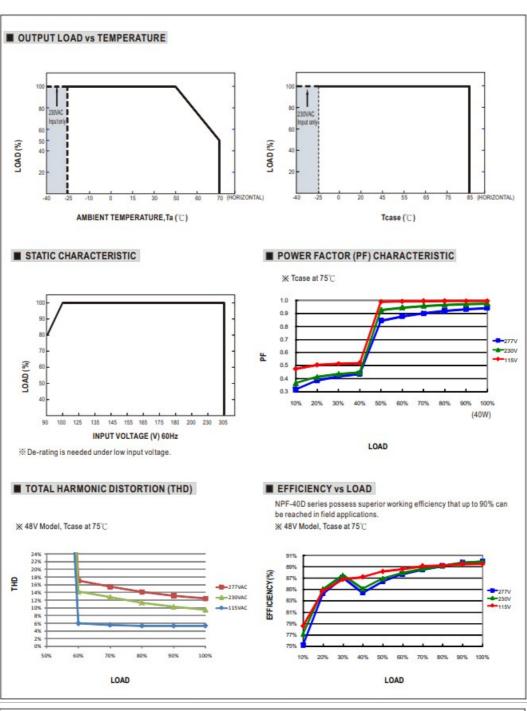


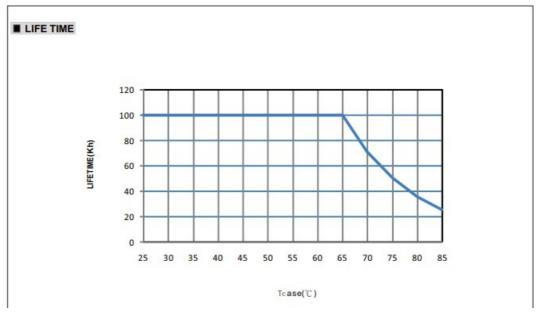
Note:

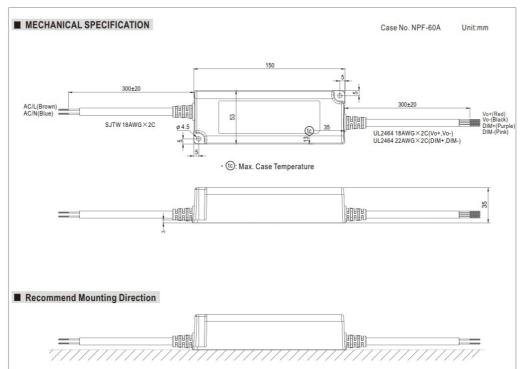
- 1. Min. dimming level is about 6% and the output current is not defined when 0%< lout<6%.
- 2. The output current could drop down to 0% when dimming input is about $Ok\Omega$ or OVdc, or 10V PWM signal with 0% duty cycle.

Short 10KIN 20KIN 30KIN 40KIN 50KIN 60KIN 70KIN 80KIN 90KIN 100KIN (N=driver quantity for synchronized dimming operation)

Dimming input: Additive resistance







INSTALLATION MANUAL

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



Documents / Resources



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

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

References

• User Manual

Manuals+, Privacy Policy

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