

















■ Features

- · Constant Voltage + Constant Current mode output
- Plastic housing with Class II design
- · Built-in active PFC function
- No load power consumption < 0.15W
- IP67 rating for indoor or outdoor installations
- Typical lifetime>50000 hours
- 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

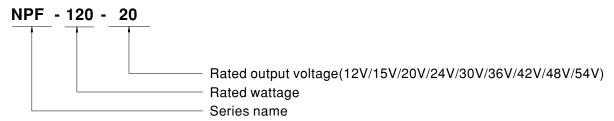
■ GTIN CODE

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

Description

NPF-120 series is a 120W AC/DC LED driver featuring the dual modes constant voltage and constant current output. NPF-120 operates from 90~305VAC and offers models with different rated voltage ranging between 12V and 54V. Thanks to the high efficiency up to 90.5%, with the fanless design, the entire series is able to operate for -40°C ~ +90°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.

■ Model Encoding





120W Constant Voltage + Constant Current LED Driver

NPF-120 series

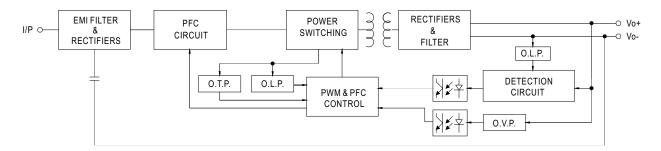
SPECIFICATION

MODEL		NPF-120-12	NPF-120-15	NPF-120-20	NPF-120-24	NPF-120-30	NPF-120-36	NPF-120-42	NPF-120-48	NPF-120-54		
	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V		
ОИТРИТ	CONSTANT CURRENT REGION Note.2	7.2 ~ 12V	9 ~ 15V	12 ~ 20V	14.4 ~ 24V	18 ~ 30V	21.6 ~ 36V	25.2 ~ 42V	28.8 ~ 48V	32.4 ~ 54V		
	RATED CURRENT	10A	8A	6A	5A	4A	3.4A	2.9A	2.5A	2.3A		
	RATED POWER Note.5	120W	120W	120W	120W	120W	122.4W	121.8W	120W	124.2W		
	RIPPLE & NOISE (max.) Note.3	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	250mVp-p	250mVp-p	350mVp-p		
	VOLTAGE TOLERANCE Note.4		±4.0%	±4.0%	±4.0%	±3.0%	±2.0%	±1.0%	±1.0%	±1.0%		
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
	LOAD REGULATION	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
	SETUP, RISE TIME Note.6	500ms, 80ms 115VAC / 230VAC										
	HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC										
INPUT	VOLTAGE RANGE Note.5	90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)										
	FREQUENCY RANGE	47 ~ 63Hz										
	POWER FACTOR	PF ≥ 0.97/115VAC, PF ≥ 0.96/230VAC, PF ≥ 0.94/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)										
	TOTAL HARMONIC DISTORTION		THD<20%(@load≧60%/115VC,230VAC; @load≧75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)									
	EFFICIENCY (Typ.)	89%	89%	90%	90.5%	89.5%	90%	90%	90%	90.5%		
H	AC CURRENT	1.3A / 115VAC	0.65A/	230VAC ().55A / 277VAC	;						
	INRUSH CURRENT(Typ.)						er NEMA 410					
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	COLD START 60A(twidth=520µs measured at 50% Ipeak) at 230VAC; Per NEMA 410 4 units (circuit breaker of type B) / 6 units (circuit breaker of type C) at 230VAC										
	LEAKAGE CURRENT	<0.25mA / 27	<0.25mA / 277VAC									
	NO LOAD POWER CONSUMPTION		-									
	NO LOAD I OWER COROUMI HOR											
	OVER CURRENT	95 ~ 108% Constant current limiting, recovers automatically after fault condition is removed										
	SHORT CIRCUIT	Hiccup mode,	recovers auto	matically after	fault condition	is removed						
PROTECTION	AV	15 ~ 17V	17.5 ~ 21V	23 ~ 27V	28 ~ 34V	34 ~ 40V	41 ~ 46V	46 ~ 54V	54 ~ 60V	59 ~ 66V		
	OVER VOLTAGE	Shut down an	d latch off o/p	voltage, re-pov	ver on to recove	er	'					
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover										
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +90°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)										
	MAX. CASE TEMP.	Tcase=+90°C										
	WORKING HUMIDITY	20 ~ 95% RH non-condensing										
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C. 10 ~ 95% RH										
	· · · · · · · · · · · · · · · · · · ·	- ,										
	TEMP. COEFFICIENT	±0.03%/℃ (0	,									
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes										
SAFETY &	SAFETY STANDARDS Note.8	UL8750(type"HL"), CSA C22.2 No. 250.13-12, EN BS EN/EN61347-1, BS EN/EN61347-2-13 independent, BS EN/EN62384, EAC TP TC 004, GB19510.14, IP67 approved; Design refer to BS EN/EN60335-1										
						, =						
	WITHSTAND VOLTAGE	I/P-O/P:3.75I	KVAC			,						
EMC	WITHSTAND VOLTAGE ISOLATION RESISTANCE	I/P-O/P:3.75I I/P-O/P:100N	KVAC 1 Ohms / 500V	/DC / 25°C / 70	% RH							
EMC		I/P-O/P:3.75I I/P-O/P:100N Compliance to	KVAC 1 Ohms / 500V	/DC / 25°C / 70 015, BS EN/EN	% RH		≧60%) ; BS EN	/EN61000-3-3;				
EMC -	ISOLATION RESISTANCE	I/P-O/P:3.75I I/P-O/P:100N Compliance to GB/T 17743, 0	VAC 1 Ohms / 500V 5 BS EN/EN55 GB17625.1, EA 5 BS EN/EN61	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020	% RH N61000-3-2 Cla	ass C (@load≧		/EN61000-3-3; (surge immunity		/);		
EMC .	EMC EMISSION Note.8	I/P-O/P:3.75I I/P-O/P:100M Compliance to GB/T 17743, 0 Compliance to	VVAC 1 Ohms / 500V D BS EN/EN55 GB17625.1, E/ D BS EN/EN61 20	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020	% RH N61000-3-2 Ck 3,8,11; BS EN/I	ass C (@load≧ EN61547, light		surge immunit		/);		
EMC .	EMC EMISSION Note.8 EMC IMMUNITY	I/P-O/P:3.751 I/P-O/P:100M Compliance to GB/T 17743, Compliance to EAC TP TC 02	VVAC 1 Ohms / 500V D BS EN/EN55 GB17625.1, E/ D BS EN/EN61 20 nin. Telcord	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020 000-4-2,3,4,5,0	% RH N61000-3-2 Ck 3,8,11; BS EN/I	ass C (@load≧ EN61547, light	industry level (surge immunit		/);		
OTHERS	EMC EMISSION Note.8 EMC IMMUNITY MTBF	I/P-O/P:3.75 I/P-O/P:100M Compliance to GB/T 17743, (Compliance to EAC TP TC 02 2632.6K hrs n 191*63*37.5m	VVAC 1 Ohms / 500V D BS EN/EN55 GB17625.1, E/ D BS EN/EN61 20 nin. Telcord	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020 000-4-2,3,4,5,0 ia SR-332 (Bel	% RH N61000-3-2 Ck 3,8,11; BS EN/I	ass C (@load≧ EN61547, light	industry level (surge immunit		/);		
OTHERS	EMC EMISSION Note.8 EMC IMMUNITY MTBF DIMENSION	I/P-O/P:3.75 I/P-O/P:100M Compliance to GB/T 17743, (Compliance to EAC TP TC 02 2632.6K hrs n 191*63*37.5m 0.97Kg; 15pc	VAC 1 Ohms / 500V b BS EN/EN55 GB17625.1, E/ b BS EN/EN61 20 nin. Telcord nm (L*W*H) s/15.6Kg/0.876	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020 000-4-2,3,4,5,1 ia SR-332 (Bel	% RH I61000-3-2 Cl; 6,8,11; BS EN/I Icore); 295.2	ass C (@load ≧ EN61547, light 2Khrs min. ■	industry level ((surge immunity		/);		
OTHERS	EMC EMISSION Note.8 EMC IMMUNITY MTBF DIMENSION PACKING 1. All parameters NOT speciall 2. Please refer to "DRIVING N	I/P-O/P:3.75 I/P-O/P:100M Compliance to GB/T 17743, Compliance to EAC TP TC 02 2632.6K hrs n 191*63*37.5m 0.97Kg; 15pc: y mentioned all ETHODS OF	AVAC 1 Ohms / 500V b BS EN/EN55 GB17625.1, E/ b BS EN/EN61 20 nin. Telcord Im (L*W*H) s/15.6Kg/0.870 re measured a	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020 000-4-2,3,4,5,6 ia SR-332 (Bel CUFT at 230VAC input:	% RH 161000-3-2 Cla 5,8,11; BS EN/I Icore); 295.2	ass C (@load ≧ EN61547, light 2Khrs min. I at and 25°C of	industry level (surge immunity F (25°C) erature.	y Line-Line 2K\	/);		
OTHERS	ISOLATION RESISTANCE EMC EMISSION Note.8 EMC IMMUNITY MTBF DIMENSION PACKING 1. All parameters NOT speciall 2. Please refer to "DRIVING N 3. Ripple & noise are measured	I/P-O/P:3.75I I/P-O/P:100M Compliance to GB/T 17743, Compliance to EAC TP TC 02 2632.6K hrs n 191*63*37.5m 0.97Kg; 15pc: y mentioned an IETHODS OF lat 20MHz of b	AVAC 1 Ohms / 500V b BS EN/EN55 GB17625.1, E/ b BS EN/EN61 20 hin. Telcord hm (L*W*H) s/15.6Kg/0.870 re measured a LED MODULE andwidth by us	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020 000-4-2,3,4,5,6 ia SR-332 (Bel CUFT at 230VAC inpu =".	% RH 161000-3-2 Cla 5,8,11; BS EN/I Icore); 295.2	ass C (@load ≧ EN61547, light 2Khrs min. I at and 25°C of	industry level (surge immunity F (25°C) erature.	y Line-Line 2K\	/);		
OTHERS	ISOLATION RESISTANCE EMC EMISSION Note.8 EMC IMMUNITY MTBF DIMENSION PACKING 1. All parameters NOT speciall 2. Please refer to "DRIVING N 3. Ripple & noise are measured 4. Tolerance: includes set up to	I/P-O/P:3.75I I/P-O/P:100M Compliance to GB/T 17743, 4 Compliance to EAC TP TC 02 2632.6K hrs in 191*63*37.5m 0.97Kg; 15pc: y mentioned at IETHODS OF It at 20MHz of bolerance, line re	AVAC 1 Ohms / 500V D BS EN/EN55 BB17625.1, E/ D BS EN/EN61 CO DINI. Telcord DM (L*W*H) S/15.6Kg/0.870 The measured at LED MODULE andwidth by usingulation and looks and the second color of the second color	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020 000-4-2,3,4,5,6 ia SR-332 (Bel CUFT at 230VAC inpu E". sing a 12" twist and regulation.	% RH M61000-3-2 Cli 5,8,11; BS EN/I Icore); 295.2 ut, rated currented pair-wire ter	ass C (@load ≧ EN61547, light 2Khrs min. I at and 25°C of	industry level (IIL-HDBK-217 ambient tempe 0.1uf & 47uf p	surge immunity F (25°C) erature. arallel capacitor	y Line-Line 2K\	/);		
OTHERS	ISOLATION RESISTANCE EMC EMISSION Note.8 EMC IMMUNITY MTBF DIMENSION PACKING 1. All parameters NOT speciall 2. Please refer to "DRIVING N 3. Ripple & noise are measured	I/P-O/P:3.75I I/P-O/P:100M Compliance to GB/T 17743, (Compliance to EAC TP TC 0/ 2632.6K hrs n 191*63*37.5m 0.97Kg; 15pc: y mentioned an IETHODS OF at 20MHz of boolerance, line re- nder low input	CVAC I Ohms / 500V D BS EN/EN55 GB17625.1, E/ D BS EN/EN61 CO D Inin. Telcord Inm (L*W*H) S/15.6Kg/0.870 The measured at LED MODULE andwidth by us gulation and lovoltages. Plea	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020 000-4-2,3,4,5,1 ia SR-332 (Bel CUFT at 230VAC inpu: "." sing a 12" twist and regulation. se refer to "ST	% RH 161000-3-2 Cl; 6,8,11; BS EN/I Icore); 295.2 ut, rated currented pair-wire ter	ass C (@load ≧ EN61547, light 2Khrs min. It and 25°C of minated with a	industry level (MIL-HDBK-217 ambient tempe 0.1uf & 47uf p ections for deta	surge immunity F (25°C) erature. arallel capacitoralis.	y Line-Line 2K\	/);		
OTHERS	ISOLATION RESISTANCE EMC EMISSION Note.8 EMC IMMUNITY MTBF DIMENSION PACKING 1. All parameters NOT speciall 2. Please refer to "DRIVING N 3. Ripple & noise are measured 4. Tolerance: includes set up to 5. De-rating may be needed up	I/P-O/P:3.75I I/P-O/P:100M Compliance to GB/T 17743, (Compliance to EAC TP TC 02 2632.6K hrs in 191*63*37.5m 0.97Kg; 15pc; y mentioned at IETHODS OF lat 20MHz of b olerance, line reinder low input assured at first of	CVAC 1 Ohms / 500V b BS EN/EN55 GB17625.1, E/ b BS EN/EN61 20 nin. Telcord nm (L*W*H) s/15.6Kg/0.870 re measured a LED MODULE andwidth by us gulation and lo voltages. Plea bold start. Turn	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020 000-4-2,3,4,5,1 ia SR-332 (Bel CUFT at 230VAC inpu ="". sing a 12" twist and regulation. se refer to "ST ing ON/OFF th	% RH 161000-3-2 Cli 6,8,11; BS EN/I Icore); 295.2 ut, rated currented pair-wire ter CATIC CHARAGe driver may I	ass C (@load in the control of the c	industry level (MIL-HDBK-217 ambient tempe 0.1uf & 47uf p ections for deta e of the set up	surge immunity F (25°C) erature. arallel capacitonals. time.	y Line-Line 2K\			
OTHERS	ISOLATION RESISTANCE EMC EMISSION Note.8 EMC IMMUNITY MTBF DIMENSION PACKING 1. All parameters NOT speciall 2. Please refer to "DRIVING N 3. Ripple & noise are measured 4. Tolerance : includes set up to 5. De-rating may be needed ui 6. Length of set up time is mea 7. The driver is considered as complete installation, the fin	I/P-O/P:3.75 I/P-O/P:100M Compliance to GB/T 17743, Compliance to EAC TP TC 02 2632.6K hrs n 191*63*37.5m 0.97Kg; 15pc: y mentioned an IETHODS OF at 20MHz of b olerance, line re ender low input assured at first of a component to all equipment n	AVAC 1 Ohms / 500V b BS EN/EN55 GB17625.1, E/ b BS EN/EN61 20 hin. Telcord him (L*W*H) s/15.6Kg/0.870 re measured a LED MODULE andwidth by us gulation and lo voltages. Plea bold start. Turn hat will be open anufacturers	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020 000-4-2,3,4,5,4 ia SR-332 (Bel CUFT at 230VAC inpu: "". sing a 12" twist ad regulation. see refer to "ST ing ON/OFF the prated in combi must re-qualify	% RH I61000-3-2 Cli 6,8,11; BS EN/I Icore); 295.2 ut, rated current ed pair-wire ter ATIC CHARACT ne driver may I ination with finate EMC Directive	ass C (@load ≥ EN61547, light 2Khrs min. I and 25°C of minated with a CTERISTIC" so ead to increas al equipment.	industry level (MIL-HDBK-217 ambient tempe 0.1uf & 47uf p ections for deta e of the set up Since EMC per	surge immunity F (25°C) erature. arallel capacitoralis. time. formance will l	y Line-Line 2K\			
OTHERS	ISOLATION RESISTANCE EMC EMISSION Note.8 EMC IMMUNITY MTBF DIMENSION PACKING 1. All parameters NOT speciall 2. Please refer to "DRIVING N 3. Ripple & noise are measured 4. Tolerance: includes set up to 5. De-rating may be needed up 6. Length of set up time is mea 7. The driver is considered as complete installation, the fin (as available on https://www.	I/P-O/P:3.75I I/P-O/P:100M Compliance to GB/T 17743, or Compliance to EAC TP TC 02 2632.6K hrs in 191*63*37.5m 0.97Kg; 15pc; y mentioned an IETHODS OF I at 20MHz of boolerance, line reinder low input desured at first of a component to all equipment in the equipment in the equipment in	AVAC 1 Ohms / 500V b BS EN/EN55 GB17625.1, E/ b BS EN/EN61 20 hin. Telcord Im (L*W*H) s/15.6Kg/0.870 re measured a LED MODULE andwidth by us gulation and lo voltages. Plea bold start. Turn hat will be ope anufacturers u//Upload/PDF.	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020 000-4-2,3,4,5,4 ia SR-332 (Bel CUFT at 230VAC inputant at 230VAC inputant at regulation. seing on 12" twist ing ON/OFF the reated in combination of the combination of th	% RH J61000-3-2 Cla 5,8,11; BS EN/I Jcore); 295.2 Jt, rated current ed pair-wire ter ATIC CHARAG ne driver may I ination with fina EMC Directive t_en.pdf)	ass C (@load ≥ EN61547, light 2Khrs min. It and 25°C of minated with a CTERISTIC" see add to increass al equipment. See on the comp	industry level (MIL-HDBK-217 ambient temper 0.1uf & 47uf predictions for detale of the set up Since EMC per lete installation	surge immunity F (25°C) erature. arallel capacitor ails. time. formance will I	y Line-Line 2K\ r. De affected by	the		
OTHERS	ISOLATION RESISTANCE EMC EMISSION Note.8 EMC IMMUNITY MTBF DIMENSION PACKING 1. All parameters NOT speciall 2. Please refer to "DRIVING N 3. Ripple & noise are measured 4. Tolerance: includes set up to 5. De-rating may be needed up 6. Length of set up time is mea 7. The driver is considered as complete installation, the fin (as available on https://www 8. This series meets the typica	I/P-O/P:3.75I I/P-O/P:100M Compliance to GB/T 17743, Compliance to EAC TP TC 02 2632.6K hrs in 191*63*37.5m 0.97Kg; 15pc: y mentioned at IETHODS OF I at 20MHz of be olerance, line re inder low input as under low input as	AVAC I Ohms / 500V BS EN/EN55 GB17625.1, E/ BS EN/EN61 CO Inin. Telcord Inin. (L*W*H) S/15.6Kg/0.870 The measured at LED MODULE andwidth by use gulation and loword ages. Plea andwidth start. Turn that will be open annufacturers In//Upload/PDF. Ey of >50,000 I To hat vill be open annufacturers In//Upload/PDF. Ey of >50,000 I	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020 000-4-2,3,4,5,1 ia SR-332 (Bellouter of the control of the contr	% RH 161000-3-2 Cla 165,8,11; BS EN/I 1core); 295.2 1t, rated current 1ed pair-wire ter 1ATIC CHARAC 1ed driver may I 1ed mother ter 1ed mother ter	ass C (@load } EN61547, light 2Khrs min. I at and 25°C of minated with a CTERISTIC" seed to increas al equipment. See on the comp see, particularly	industry level (MIL-HDBK-217 ambient temper 0.1uf & 47uf predictions for detale of the set up Since EMC per lete installation	surge immunity F (25°C) erature. arallel capacitor ails. time. formance will I	y Line-Line 2K\ r. De affected by	the		
OTHERS	ISOLATION RESISTANCE EMC EMISSION Note.8 EMC IMMUNITY MTBF DIMENSION PACKING 1. All parameters NOT speciall 2. Please refer to "DRIVING N 3. Ripple & noise are measured 4. Tolerance: includes set up to 5. De-rating may be needed up 6. Length of set up time is mea 7. The driver is considered as complete installation, the fin (as available on https://www.	I/P-O/P:3.75I I/P-O/P:100M Compliance to GB/T 17743, (Compliance to EAC TP TC 02 2632.6K hrs n 191*63*37.5m 0.97Kg; 15pc: y mentioned al IETHODS OF at 20MHz of be elerance, line re inder low input assured at first of a component to a component to an enemanwell.com I life expectance statement on	AVAC I Ohms / 500V BS EN/EN55 GB17625.1, E/ BS EN/EN61 CO Inin. Telcord Inim (L*W*H) S/15.6Kg/0.870 The measured a LED MODULE Audit Start. Turn That will be ope The proper of >50,000 of the proper of of	/DC / 25°C / 70 015, BS EN/EN AC TP TC 020 000-4-2,3,4,5,1 ia SR-332 (Bel CUFT at 230VAC inpu E". sing a 12" twist ad regulation. se refer to "ST ing ON/OFF the trated in combination of opera we will be the transport of the trated in combination of opera s website at ht	% RH 161000-3-2 Cla 6,8,11; BS EN/I Icore); 295.2 ut, rated current ed pair-wire ter ATIC CHARAC ne driver may I ination with fination with fination EMC Directive tt, en.pdf) tion when Tcas tp://www.mean	ass C (@load in the compose, particularly swell.com	industry level (MIL-HDBK-217 ambient tempe 0.1uf & 47uf p ections for deta e of the set up Since EMC per lete installation (tc) point (or Ti	F (25°C) erature. arallel capacitor ails. time. formance will lagain. MP, per DLC),	y Line-Line 2K\ c. be affected by is about 75°C	the or less.		

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

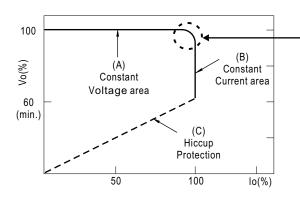
■ BLOCK DIAGRAM

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



■ DRIVING METHODS OF LED MODULE

X This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.

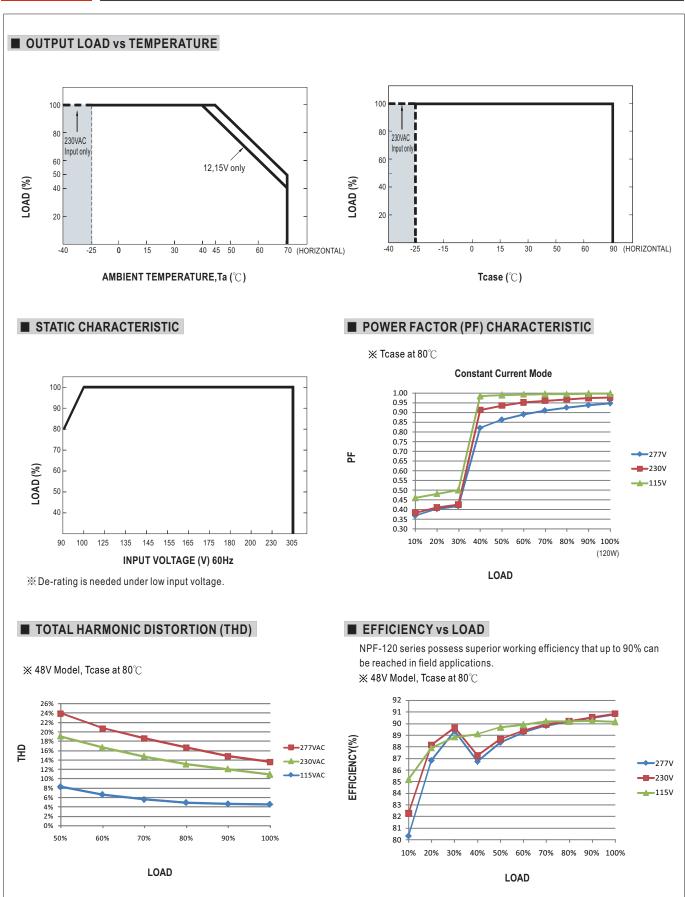


Typical output current normalized by rated current (%)

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

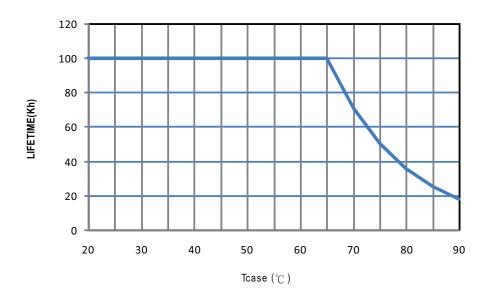
Should there be any compatibility issues, please contact MEAN WELL.





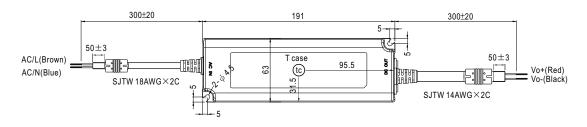


■ LIFE TIME



■ MECHANICAL SPECIFICATION

CASE NO.: PWM-120 Unit:mm



• tc : Max. Case Temperature



■ Recommend Mounting Direction



■ INSTALLATION MANUAL

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