

Constant voltage design; universal AC input/full range. Dimmable with in-line dimmers and 0-10V dimming modules. Cooling by free air convection. Fully encapsulated IP67 rating. Class 2 power unit; no FG.

Job Name:

Type:



SPECIFICATIONS		NF-PS-35W-12V-HW	NF-PS-35W-24V-HW
OUTPUT	DC Voltage	12V	24V
	Rated Current	3A	1.5A
	Current Range	0 ~ 3A	0 ~ 1.5A
	Rated Power	36W	36W
	Ripple & Noise (max) <i>Note 2</i>	120mVp-p	150mVp-p
	Voltage Tolerance <i>Note 3</i>	±5.0%	±5.0%
	Line Regulation	±1.0%	±1.0%
	Load Regulation	±2.0%	±2.0%
INPUT	Hold Up Time (Typ.)	50ms/230VAC	16ms/115VAC at full load
	Dimmability	In-line, 0-10V with module	
	Voltage Range <i>Note 4</i>	90 ~ 264VAC 127 ~ 370VDC	
	Frequency Range	47 ~ 63Hz	47 ~ 63Hz
	Efficiency (Typ.)	84%	85%
	AC Current (Typ.)	1.1A/115VAC 0.7A/230VAC	
PROTECTION	Inrush Current (max.)	Cold Start 55A (t _{width} =510µs measured at 50% I _{peak}) at 230VAC	
	Leakage Current	0.25mA / 240 VAC	
	Overload	110 ~ 150% rated output power Protection type: Hiccup mode, recovers automatically after fault condition is removed	
	Over Voltage	13.8 ~ 16.2V	27.6 ~ 32.4V
ENVIRONMENT	Working Temp.	-30 ~ +65° (Refer to "Derating Curve")	
	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 AND ENC	Safety Standards	UL1310, CAN/CSA C22.2 No. 223-M91, IP67 approved ; design refer to TUV EN60950-1	
	Withstand Voltage	I/P-O/P:3KVAC	
	Isolation Resistance	I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH	
	EMC Emission	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3	
OTHER	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A	
	MTBF	743.5K hrs min.	MIL-HDBK-217F (25°C)
	Dimensions (L*W*H)	5.8" * 1.6" * 1.2"	
NOTES	Packing	0.75 lbs	
		<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance : includes set up tolerance, line regulation and load regulation. Derating may be needed under low input voltage. Please check the static characteristics for more details. The power supply is considered 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. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. LPV-35-5 can provide 6A of output current continuously. Based on the requirement of UL1310 class 2, the output current is only certified up to 5A for the test report of LPV-35-5. The unit might not be suitable for lighting applications in EU countries. Please check with your local authorities for the possible use of the unit. Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immersion in water for over 30 minutes. 	



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SPECIFICATIONS		NF-PS-60W-12V-HW	NF-PS-60W-24V-HW
OUTPUT	DC Voltage	12V	24V
	Rated Current	5A	2.5A
	Current Range	0 ~ 5A	0 ~ 2.5A
	Rated Power	60W	60W
	Ripple & Noise (max) Note 2	120mVp-p	150mVp-p
	Voltage Tolerance Note 3	±5.0%	±5.0%
	Line Regulation	±1.0%	±1.0%
	Load Regulation	±2.0%	±2.0%
	Hold Up Time (Typ.)	50ms/230VAC	16ms/115VAC at full load
Dimmability	In-line, 0-10V with module		
INPUT	Voltage Range Note 4	90 ~ 264VAC 127 ~ 370VDC	
	Frequency Range	47 ~ 63Hz	47 ~ 63Hz
	Efficiency (Typ.)	83%	86%
	AC Current (Typ.)	1.2A/115VAC 1A/230VAC	
	Inrush Current (max.)	Cold Start 60A (twidth=525µs measured at 50% Ipeak) at 230VAC	
	Leakage Current	0.25mA / 240 VAC	
PROTECTION	Overload	110 ~ 150% rated output power	
	Over Voltage	13.8 ~ 16.2V	27.6 ~ 32.4V
ENVIRONMENT	Working Temp.	-30 ~ +70°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 AND ENC	Safety Standards	UL1310, UL 879, CSA C22.2 No. 207-M89, CAN/CSA C22.2 No. 223-M91, IP67 approved; design refer to TUV EN60950-1	
	Withstand Voltage	I/P-O/P:3KVAC	
	Isolation Resistance	I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH	
	EMC Emission	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3	
OTHERS	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A	
	MTBF	732K hrs min. MIL-HDBK-217F (25°C)	
	Dimensions (L * W * H) Packing	6.4in * 1.67in * 1.26in 0.88 lbs., 32pcs.	
NOTES	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance : includes set up tolerance, line regulation and load regulation. Derating may be needed under low input voltage. Please check the static characteristics for more details. The power supply is considered 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. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. The unit might not be suitable for lighting applications in EU countries. Please check with your local authorities for the possible use of the unit. Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immersion in water for over 30 minutes. For all 12V lights, the maximum length exceeds the maximum run. 		



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SPECIFICATIONS		NF-PS-CLG-100W-24V-HW
OUTPUT	DC Voltage	24V
	Constant Current Region Note 7	18~24V
	Rated Current Note 5	4A
	Rated Power Note 5	96W
	Ripple & Noise (max) Note 2	150mVp-p
	Voltage Adj. Range	Fixed, Can be modified between 0% ~ 15% rated output voltage
	Current Adj. Range	Fixed, Can be modified between 3% ~ 25% rated output current
	Voltage Tolerance	±3.0%
	Line Regulation	±1%
	Load Regulation	±2.0%
INPUT	Hold Up Time (Typ.)	60ms/230VAC 30ms/115VAC at full load
	Dimmability	In-line, 0-10V with module
	Voltage Range Note 4	90 ~ 295VAC 127 ~ 417VDC
	Frequency Range	47 ~ 63Hz
	Power Factor (Typ.)	PF>0.95/115VAC, PF>0.95/230VAC, PF>0.92/277VAC at full load
	Efficiency (Typ.)	88.5%
	AC Current (Typ.)	12V:0.8A/115VAC, 0.4A/230VAC, 0.3A/277VAC, 15V:0.9A/115VAC, 0.45A/230VAC, 0.35A/277VAC, 20V ~ 48V:1.1A/115VAC, 0.55A/230VAC, 0.45A/277VAC
	Inrush Current (max.)	Cold Start 40A (twidth=1030µs measured at 50% Ipeak) at 230VAC
	Leakage Current	<0.75mA / 240 VAC
	PROTECTION	Over Current
Short Circuit		Hiccup mode, recovers automatically after fault condition is removed
Over Voltage		27 ~ 34V Protection type: Shut down and latch off o/p voltage, re-power on to recover
Over Temperature		90°C ±10°C (RTH2) Protection type: Shut down o/p voltage re-power on to recover
ENVIRONMENT	Working Temp.	-30 ~ +70° (Refer to "Derating Curve")
	Working Humidity	20 ~ 95% RH non-condensing
	Storage Temp, Humidity	-40 ~ +80°C, 10 ~ 95% RH
	Temp Coefficient	±0.03% / °C (0 ~ 50°C)
SAFETY AND ENC	Vibration	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes
	Safety Standards Note 8	UL879, UL8750, UL1310, TUV EN61347 1, EN61347 2 13 independent, CAN/CSA C22.2 No. 223 M91, CSAC22.2 No. 250.0 08, CSA C22.2 No. 207 M89, TUV EN60950 1, IP67, J61347 1, J61347 2 13 (option) approved.
	Withstand Voltage	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P - FG:0.5KVAC
	Isolation Resistance	I/P O/P: 100M Ohms / 500VDC / 25°C / 70% RH
	EMC Emission	Compliance to EN55015, EN55022 (CISPR22) Class B, EN6100-3-2 Class C (≥75% load); EN6100-3-3
OTHERS	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A
	MTBF	301K hrs min. MIL-HDBK-217F (25°C)
	Dimension	(L * W * H) - 8.75in * 2.67in * 1.5in
NOTES	Packing	2.2 lbs, 12 pieces
	Notes	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance : includes set up tolerance, line regulation and load regulation. Derating may be needed under low input voltage. Please check the static characteristics for more details. This is the maximum possible output current and power, overload protection may be activated slightly below this level to comply with the requirement of UL1310 class 2. Constant current operation region is within 75% ~ 100% rated output voltage. This is the suitable operation region for LED related applications but please reconfirm special electrical requirements for some specific system design. Safety and EMC design refer to EN60598 1, subject 8750(UL), CNS15233, GB7000.1, FCC part 18 The power supply is considered 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.



Constant voltage design; universal AC input/full range. Protections include short circuit, overload, and over voltage. Cooling by free air convection. Fully encapsulated IP67 rating. Not Class 2.

Job Name:

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MODEL	NF-PS-CLG-150W-12V-HW	
OUTPUT	DC Voltage	12V
	Constant Current Region Note 4	9 ~ 12V
	Rated Current	11A
	Rated Power	132W
	Ripple & Noise (max) Note 2	150mVp-p
	Voltage Adj. Range	9 ~ 13V
	Current Adj. Range	Can be adjusted by internal potentiometer A type and C type only 5.5 ~ 11A
	Voltage Tolerance Note 3	±2.0%
	Line Regulation	±.5%
	Load Regulation	±1.0%
INPUT	Hold Up Time (Typ.)	50ms/230VAC 16ms/115VAC at full load
	Dimmability	In-line, 0-10V with module
	Voltage Range Note 5	90 ~ 295VAC 127 ~ 417VDC
	Frequency Range	47 ~ 63Hz
	Power Factor (Typ.)	PF>0.98/115VAC, PF>0.95/230VAC, PF>0.93/277VAC at full load
	Efficiency (Typ.)	88%
	AC Current (Typ.)	2A/115VAC 1A/230VAC .68A/277VAC
	Inrush Current (max.)	Cold Start 65A (twidth=595µs measured at 50% Ipeak) at 230VAC
PROTECTION	Leakage Current	<1mA / 240 VAC
	Over Current (Typ.) Note 4	95 ~ 108% Protection type: Constant current limiting, recovers automatically after fault condition is removed
	Short Circuit	Hiccup mode, recovers automatically after fault condition is removed
	Over Voltage	13.5 ~ 16V Protection type: Shut down and latch off o/p voltage, re-power on to recover.
	Over Temperature	100°C ±10°C (RTH2) Protection type: Shut down o/p voltage re-power on to recover
ENVIRONMENT	Working Temp.	-30 ~ +70°C
	Working Humidity	20 ~ 95% RH non-condensing
	Storage Temp, Humidity	-40 ~ +80°C, 10 ~ 95% RH
	Temp Coefficient	±0.03% / °C (0 ~ 50°C)
SAFETY AND ENC	Vibration	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes
	Safety Standards Note 6	UL8750, CSA C22.2 No. 250.0-08, UL1012, CAN/CSA-C22.2 No. 107.1-01, EN61347-1, EN61347-2-13 independent, UL60950-1, TUV EN60950-1, IP67, J61347-1, J61347-2-13 approved
	Withstand Voltage	I/P-O/P, I/P-FG, O/P-FG: 2KVAC O/P - FG: 0.5KVAC
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms / 500VDC / 25°C/70% RH
	EMC Emission	Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (≥75% load); EN61000-3-3
OTHERS	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A
	MTBF	303.7K hrs min. MIL-HDBK-217F (25°C)
	Dimensions	8.75" * 2.7" * 1.5"
NOTES	Packing	2.2 lbs, 12 pieces
	Notes	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf & 47µf parallel capacitor. Tolerance : includes set up tolerance, line regulation and load regulation. Constant current operation region is within 75% ~ 100% rated output voltage. This is the suitable operation region for LED related applications but please reconfirm special electrical requirements for some specific system design. Derating may be needed under low input voltages. Please check the static characteristics for more details. Safety and EMC design refer to EN60598-1, subject 8750(UL), CNS15233, GB7000.1, FCC part18. The power supply is considered 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. Maximum length exceeds maximum run.

