Product Features

- Built-in photocell, support 0~10V and resistance dimming, multi-power optical control parallel and dimming parallel performance
- Dimming circuit and photocell circuit are isolated from input and output, comply with the UL8750 standard
- International standard AC voltage input. (100~277V_{AC})
- Up to 88% efficiency
- Active power factor correction ,THD<20%.
- Protections: Short circuit protection and Open circuit protection.
- Surge impact immunity: L- N: 2KV.
- 5 years warranty

c UL us E359491

FC

Description

The MSPI-NIS50W21S -XXX series input voltage ranges from 100 to 277Vac, which has the advantages of Built-in photocell, support 0~10V and resistance dimming, multi-power optical control parallel and dimming parallel performance and so on. All aspects of protection, including short circuit protection and open circuit protection, ensure the accessible operation of this product.

Model List

Specification model	Output current	Input Voltage Range(1)	Max Output Voltage	Max Output Power	PF(2)	Efficiency (2)
MSPI-NIS50W21S -810	810mA	100~277Vac	62Vdc	50.22W	0.96	89%
MSPI-NIS50W21S -780	780mA	100~277Vac	62Vdc	48.3W	0.94	88%
MSPI-NIS50W21S -740	740mA	100~277Vac	62Vdc	45.8W	0.94	88%

Note: 1. UL and FCC Certified input voltage range: 100 ~ 277Vac
2.Test conditions: 230Vac, 100% load, 25℃ ambient temperature.

Input Specification

Parameter	Min	Typ	Max	Remarks
AC input range	100Vac	-	277Vac	
Input frequency range	47Hz	-	63Hz	
Input AC Current	-	-	0.59A	100Vac，100% full load.
PF	0.9	-	0.99	100~277Vac，75%~100% full load.
THD	-	-	20%	100~277Vac，75%~100% full load.

Output Specification

Parameter		Min	Typ	Max	Remarks
Output current tolerance		-3% Io	-	+3% Io	
No-load output voltage	Io=810mA	-	-	78Vdc	
	Io=780mA	-	-	78Vdc	
	Io=740mA	-	-	78Vdc	
Start-up current overshoot		-	No	-	100% full load.
Line Regulation		-	±3%	-	

Load Regulation	-	±3%	-	
Start-up time	-	500ms	700ms	120Vac，75% ~ 100% full load.
	-	400ms	600ms	277Vac，75% ~ 100% full load.

Note: All performance parameters are measured at ambient temperature of 25℃, unless otherwise specified.

General Specification

Parameter		Min	Typ	Max	Remarks
Efficiency@ 100Vac	Io=810mA	87.8%	88%	-	It is measured at ambient temperature 25℃, 100% load.
	Io=780mA	87.6%	87.9%	-	
	Io=740mA	87.9%	88%	-	
Efficiency@ 120Vac	Io=810mA	88.3%	88.7%	-	It is measured at ambient temperature 25℃, 100% load.
	Io=780mA	87.8%	88%	-	
	Io=740mA	88.1%	88.7%	-	
Efficiency@ 230Vac	Io=810mA	88.2%	88.8%	-	It is measured at ambient temperature 25℃, 100% load.
	Io=780mA	87.7%	88.2%	-	
	Io=740mA	87.9 %	88.5%	-	
Efficiency@ 277Vac	Io=810mA	88.5%	89%	-	It is measured at ambient temperature 25℃, 100% load.
	Io=780mA	87.9%	88.1%	-	
	Io=740mA	88.3%	89.1%	-	
No-load power consumption		-	-	0.42W	277Vac / 60Hz
Lifespan		-	50,000 Hours	-	Case Temperature 75℃， 100% full load.
Switch illumination		-	30Lux	-	Turn on the light (3 minutes: delay 3S; 3 minutes later: delay 15min)
		-	130Lux	-	Turn off the light (3 minutes: delay 3S; 3 minutes later: delay 15min)
Operating Case Temperature for Safety Tc_s		-40℃	-	+90℃	
Operating Case Temperature for Warranty Tc_w		-30℃	-	+75℃	Humidity: 10%RH to 90%RH, No condensation.
Storage Temperature		-40℃	-	+95℃	
Size （mm）		L89×W48×H25			
Net Weight		-	180g	-	

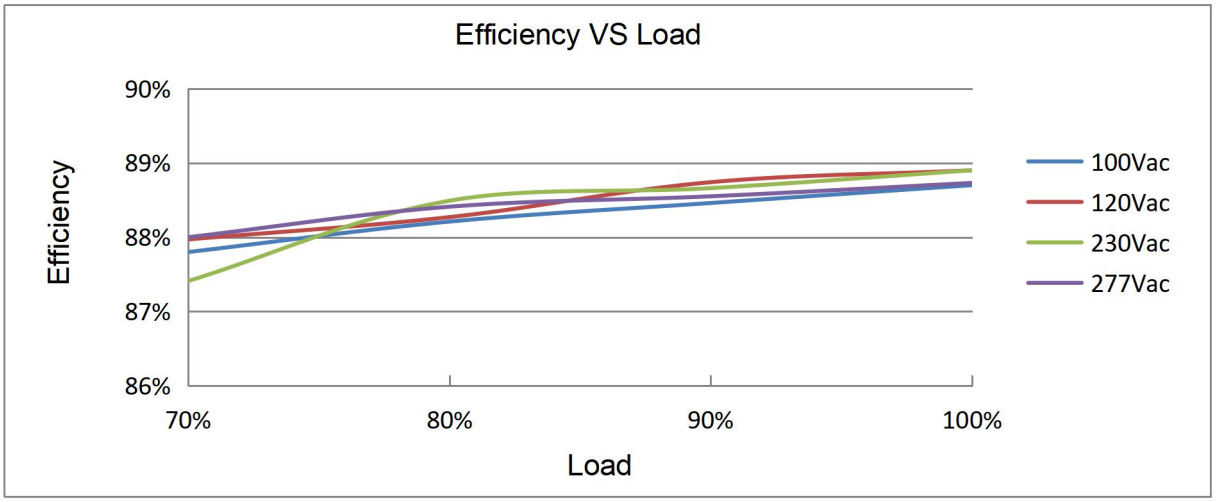
Note: Case temperature testing point location at the arrowhead.

Safety & EMI Compliance

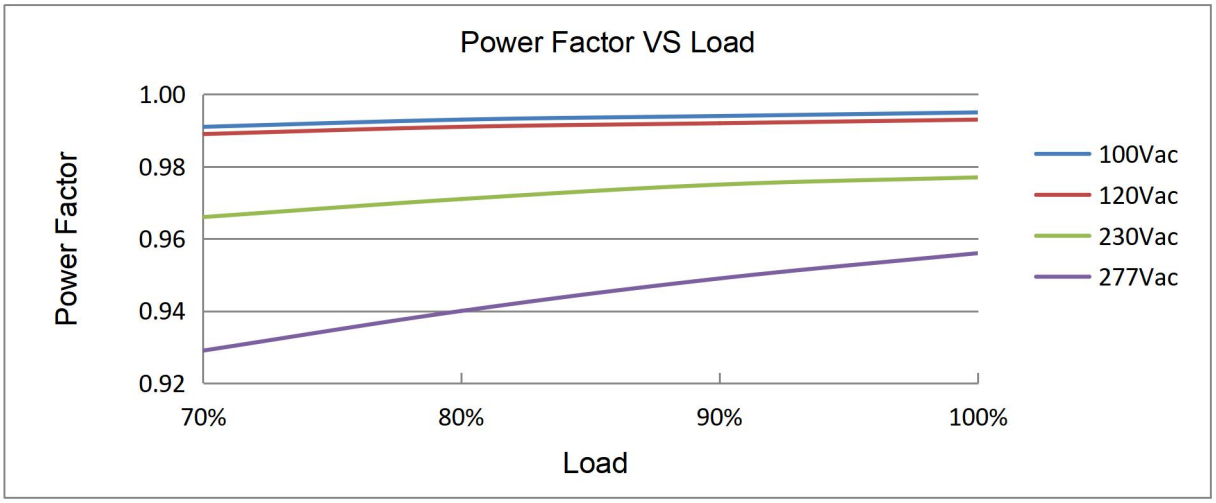
Safety Category	Standard
UL/CUL	UL 8750(photoelectric control isolation meets the UL8750 standard).
EMI Standards	**Remarks**
CISPR15	Conducted Emission Test & Radiated Emission Test
FCC Part 15	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: The power supply meets the EMI standard, but since the power supply is a part of the lamp system, EMI related confirmation shall be conducted in combination with the lamp (terminal equipment).

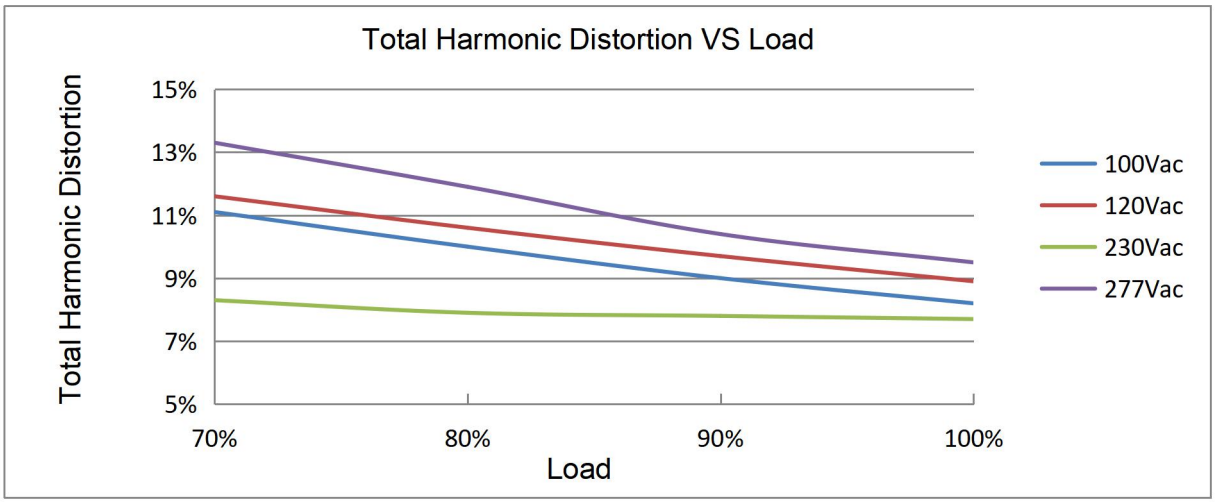
Performance Curve



Power Factor Curve

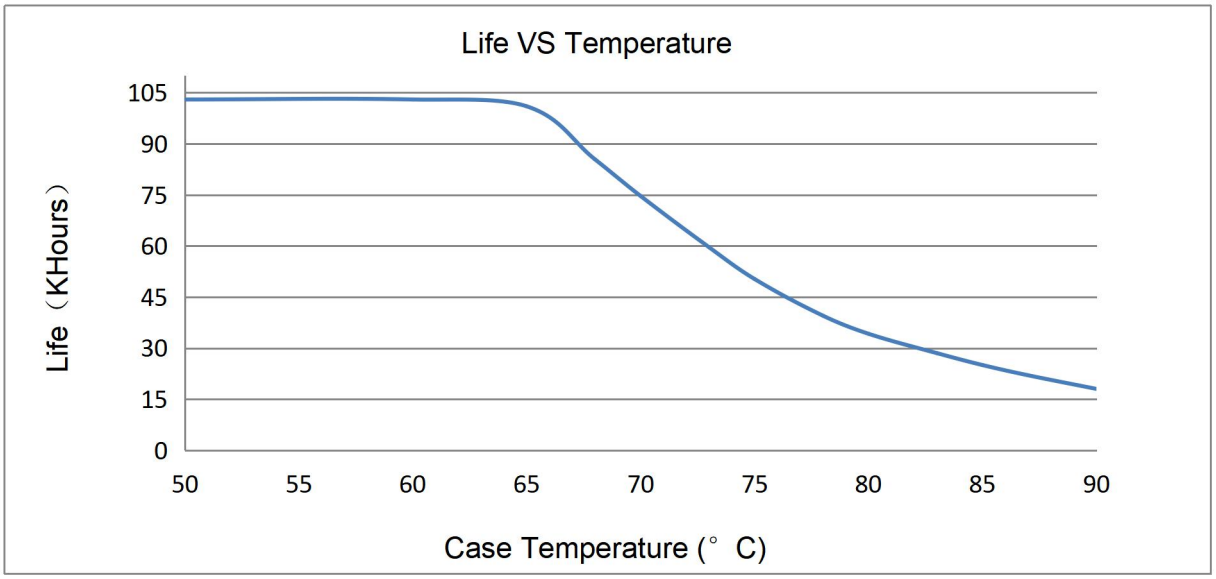


Total Harmonic Distortion Curve



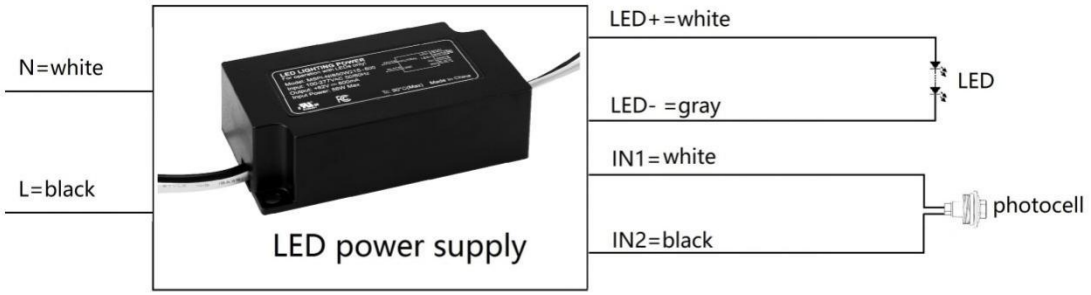
Note: The above data is derived from the MSPI-NIS50W21S -810 test.

Life curve

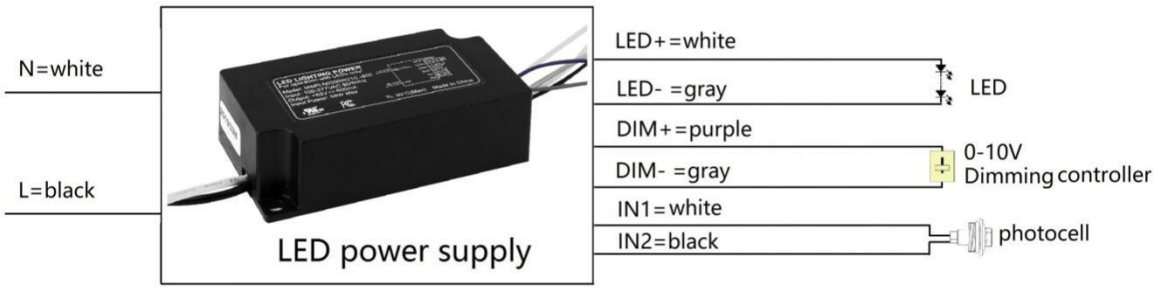

Life VS Temperature
105
90
75
60
45
30
15
0
Life（KHours）
50
55
60
65
70
75
80
85
90
Case Temperature (° C)

Wiring diagram

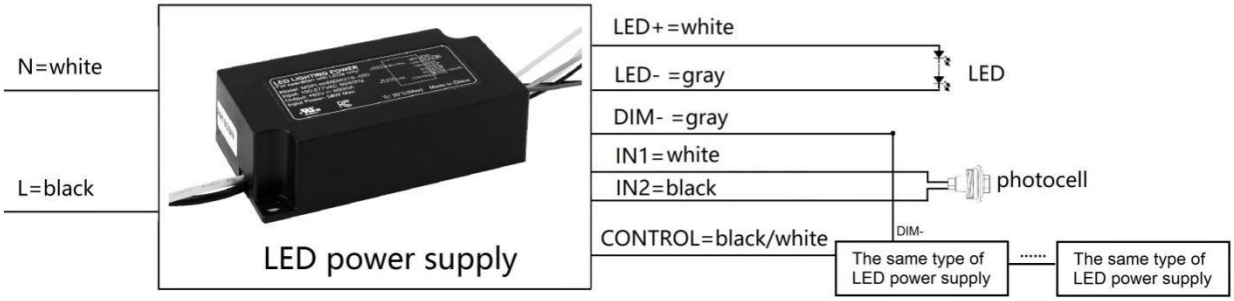
(1).The wiring diagram of the photocell function is shown below:



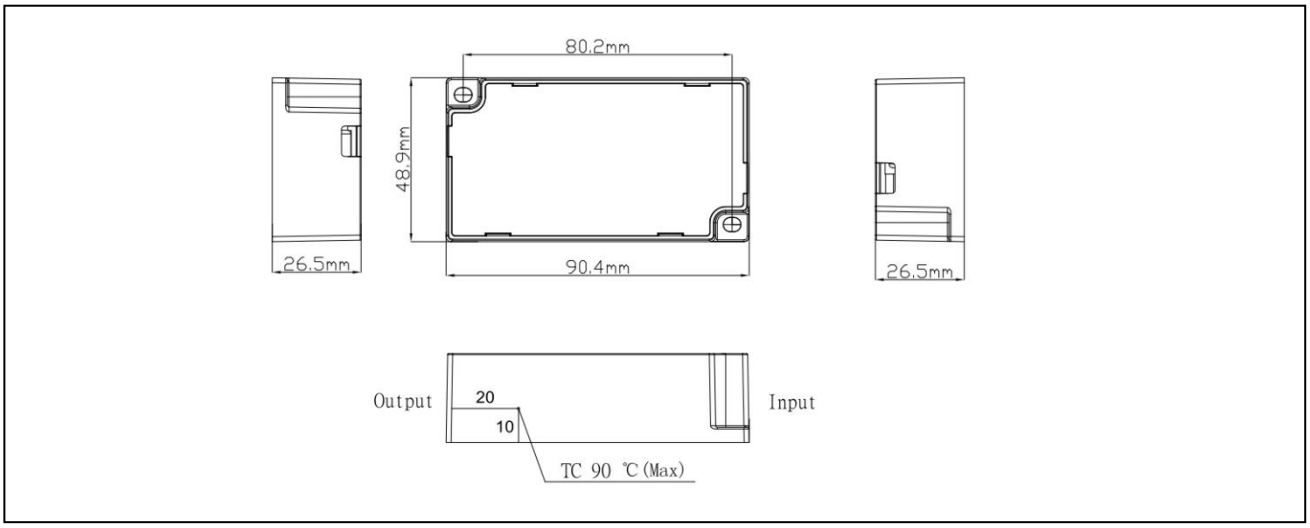
(2).The wiring diagram of the dimming and photocell functions is shown below:



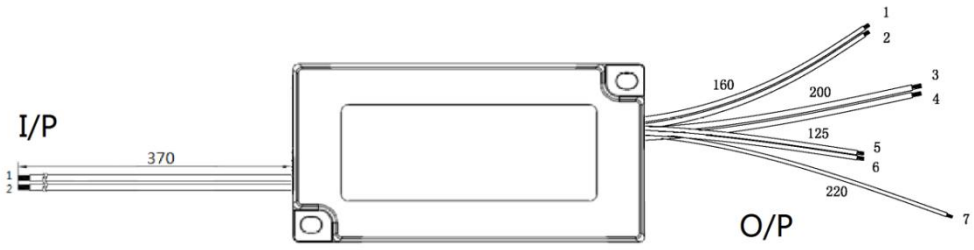
(3).The wiring diagram of the photocell and parallel functions is shown below:



Mechanical Dimensions (Unit: mm)



Recommended Mounting Direction(Unit: mm)



AC Input Pin Definition	
Num	Pin Function
1	AC/L(black)
2	AC/N(white)

DC Output Pin Definition	
Num	Pin Function
1	DC/LED+(white)
2	DC/LED-(gray)
3	DIM+(purple)
4	DIM-(gray)
5	IN1(white)
6	IN2(black)
7	CONTROL(black / white)

Block Diagram