ANS320AS-1W*

Product Feature

- Input voltage range: 90-305Vac
- Supports isolated dimming (0-10V active signal, PWM signal, resistor)
- Adjustable Output Current (AOC) with Potentiometer
- High Efficiency up to 96.5%
- Auxiliary Power: 12VDC, 200mA
- Support for external DIP switches to adjust power
- Support for external light control switch
- Protection: IUVP,SCP,OVP, OTP
- Input surge protection: Differential mode: 6kV, Common mode: 6kV(ANSI/C82 .77-5-2017)
- 5-year warranty
- Safety according to UL8750

c UL us LISTED LED DRIVER E490914

FC ClassP

0-10V | Short Circuit Protection | Overvoltage Protection | Under Voltage Protection | Temperature Protection

Models

Model Number	Input Voltage Range	Max. Output Power	Output Voltage Range	Output Current Range	Default Current	Efficiency (Typ.)	PF (Typ.)	THD (Typ.)
ANS320AS-1W*	90-305Vac	320W	180-260Vdc	1.0-1.5A	1.40A	96.5%	0.98	7%

Note:
[1]. All specifications are measured at 25℃ ambient temperature, input voltage 220Vac, and the typical value tested by full load
[2]. AS means 0-10V/PWM/res dimming and 12V auxiliary source.

* Means Additional Function

Models	0-10V/PWM/Res dimming	Auxiliary 12V/200mA	DIP switch	Light control switch
ANS320AS-1W	√	√		
ANS320AS-1WMC	√	√	√	
ANS320AS-1W-OP	√	√		√
ANS320AS-1WMC-OP	√	√	√	√

Technical Parameters

Model		ANS320AS-1W*			
Parameter		Min.	Typ.	Max.	Remark
Input	Rated Input AC Voltage	120Vac	-	277Vac	
	Input AC Voltage Range	90Vac	-	305Vac	Reference derating curve
	Frequency Range	47Hz	50/60Hz	63Hz	
	Input AC Current	-	-	3.8A	At 120Vac input and 100% load
	Input AC Power	-	-	375W	At 120Vac input and 100% load
	Leakage Current	-	-	0.75MIU	UL 8750; 277Vac/ 60Hz
		-	-	0.70mA	IEC 60598-1; 240Vac/ 60Hz,
	Inrush Current	-	-	60A	At 120Vac input and 100% load, 25 ℃Cold Start
		-	-	100A	At 220Vac input and 100% load, 25 ℃Cold Start
		-	-	130A	At 277Vac input and 100% load, 25 ℃Cold Start
	Standby Power	-	-	0.5W	At 220Vac input and Aux. power without load
	Power Factor	0.95	0.98	-	At 220Vac , 50-60Hz, 100% load
		0.90	-	-	At 120-277Vac , 50-60Hz, 70%-100% load
	THD	-	7%	10%	At 220Vac , 50-60Hz, 100% load
		-	-	20%	At 120-277Vac , 50-60Hz, 70%-100% load

Parameter		Min.	Typ.	Max.	Remark
Output	Output Voltage Range	180V	-	260V	
	Open Circuit Voltage	-	-	310V	
	Output Current Range	1.0A	-	1.5A	Adjustable Output Current with Potentiometer;
	Efficiency @120Vac	92.5%	94.0%	-	At 100% load and Io=1.23A
	Efficiency @220Vac	94.5%	96.0%	-	At 100% load and Io=1.23A
	Efficiency @277Vac	95.0%	96.5%	-	At 100% load and Io=1.23A
	Output Current Tolerance	-5%	-	+5%	At 100% load
	Output Current Ripple(PK-AV)	-	5%	10%	At 100% load, 20 MHz BW
	Startup Overshoot Current	-	-	10%	At 100% load
	Turn-on Delay Time	-	-	1.0s	At 120~277Vac input and 100% load
	Line Regulation	-5%	-	+5%	At 25°C ambient temperature, input voltage changes from 120Vac to 277Vac.
	Load Regulation	-5%	-	+5%	At 25°C ambient temperature, Input Voltage 240Vac, load changes from 70% to 100%.
	12V Auxiliary Output Voltage	10.8V	12V	13.2V	
	12V Auxiliary Output Current	-	-	200mA	Return terminal is "Dim-"

Parameter		Min.	Typ.	Max.	Remark
0-10V Dimming	Absolute Maximum Voltage	0V	-	12V	On Dim+ Pin
	Source Current on Dim+ Pin	90uA	110uA	120uA	
	Dimming Output Range	10%Ioset	-	100%Ioset	Ioset<1.23A, Dimming Min. is 0.123A
	Recommended Dimming Range for 0-10V	0V	-	10V	Dimming prohibits reverse connection
	Dim Off	0.7V	0.8V	0.9V	With afterglow (standard) Without afterglow (optional)
	Dim On	0.9V	1.0V	1.1V	
PWM Dimming	PWM_in High Level	9.8V	10V	10.2V	
	PWM_in Low Level	0V	-	0.3V	
	PWM_in Frequency Range	1KHz	-	2KHz	
	PWM_in Duty Cycle	0%	-	100%	
Resistor Dimming	Resistance	0Kohm	-	100Kohm	DIM+ source current 110uA.
	Dimming Output Range	10%Ioset	-	100%Ioset	
Other Characteristics	Operating Temperature For safety(Tc)	-40°C	25°C	+90°C	
	Operating Temperature For warranty(Tc)	-40°C	25°C	+85°C	Case temperature for 5 years warranty Humidity: 10% RH to 95% RH;
	Storage Temperature(Ta)	-40°C	25°C	+85°C	
	Storage Humidity	5%RH	-	95%RH	
	Altitude	-65m	-	4000m	
	Temperature Coefficient	-0.06%/°C	-	+0.06%/°C	Tc:0 °C~90°C
	Input under voltage protection	-	75Vac	90Vac	Self-recovery
	Over temperature protection	90°C	95°C	100°C	Drop current when OTP, and it can be self-recovery after the abnormality is removed.
	Short Circuit Protection	-	-	-	Self-recovery, short circuit without damage
	Lifetime(Tc≤90°C)	≥50,000 hours			At 80% load, please refer to lifetime vs. case temperature curve
	MTBF	200, 000 hours			At 220Vac,80% load,Ta=25 °C (MIL-HDBK-217F)
	Warranty	5 years			Tc ≤ 90°C
	Net Weight	680g			
	Dimension	225mm*52.5mm*33.5mm			L x W x H

Note: All the parameters above are tested Ta 25°C and LED load, unless specified.

Safety and EMI/EMS Standards

Safety Certification	Standard	Status	Remark
UL/cUL	UL8750, CSA C22.2 No.250.13	√	
CB	IEC61347-1, IEC61347-2-13		
CE	EN 61347-1, EN 61347-2-13, EN62493		
ENEC	EN 61347-1, EN 61347-2-13, EN IEC 62384		
CCC	GB/T 19510.213, GB/T 19510.1		
SAA	AS/NZS 61347.1,AS/NZS61347.2.13		
BIS	IS15885:2012 Part 2 Sec 13		

EMC Category	Standard	Status	Remark
FCC	FCC Part15: Subpart A ANSI 63.4:2014	√	
CE	EN 55015, EN 61000-3-2, EN 61000-3-3, EN 61547		
CE	EN61000-4-2,3,4,5,6,11		
Surge	ANSI/C82 .77-5-2017		Criterion B
Ring Wave	ANSI/C82 .77-5-2017		Criterion B

Safety Test Items:

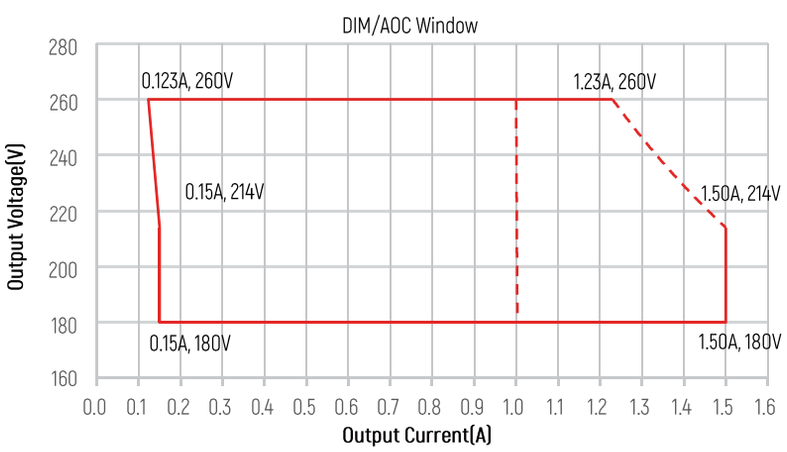
Safety Test Items	Technical Indicators		Remark
Insulation Requirements	UL Insulation Requirements	CE/ENEC Insulation Requirements	
Input-Case	2U+1000Vac	/	Basic insulation
Input-Dim	2U+1000Vac	/	Reinforced insulation
Dim-Case	500Vac	/	Basic insulation
Insulation Resistance	≥10MΩ		Input-Dim,Test voltage:500Vdc
Ground Resistance	≤0. 1Ω		25A/1min

Note:
1. LED Driver itself complies with EMC standard. However, LED Driver 's EMC should be re-checked when integrated into lighting systems due to unexpected interference of components.
2. Please short L and N, LED+ and LED-, Dim+ and Dim - and Vaux+ and Vaux- when Hi-pot test.

RoHS

Our products comply with RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

I-V Operation Area



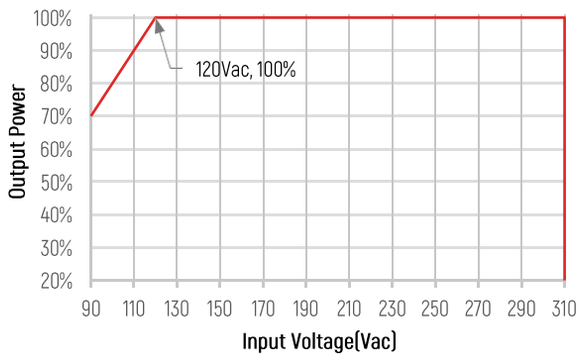
Adjustable output current

The current can be adjusted through build-in potentiometer

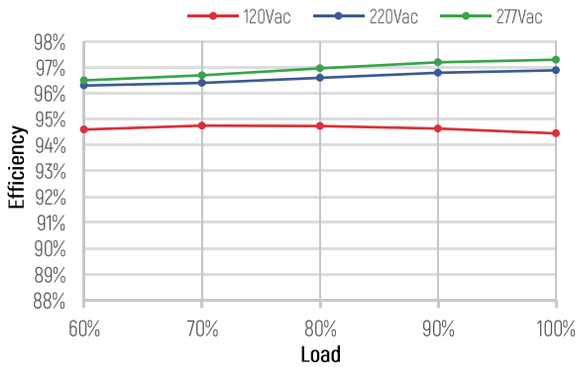
The table provides examples of partial currents:

Output Voltage	180Vdc	190Vdc	200Vdc	214Vdc	220Vdc	230Vdc	240Vdc	250Vdc	260Vdc
Output Current	1.50A	1.50A	1.50A	1.50A	1.45A	1.39A	1.33A	1.28A	1.23A
Output Power	270W	285W	300W	320W	320W	320W	320W	320W	320W

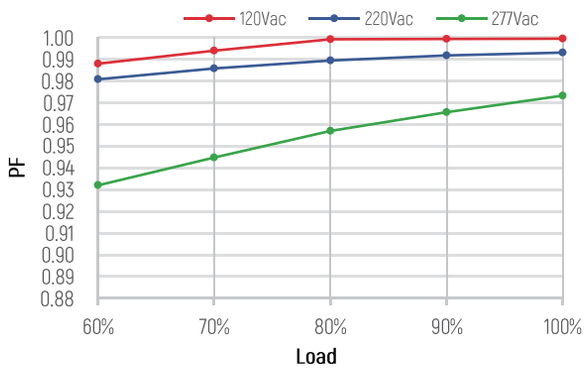
Derating



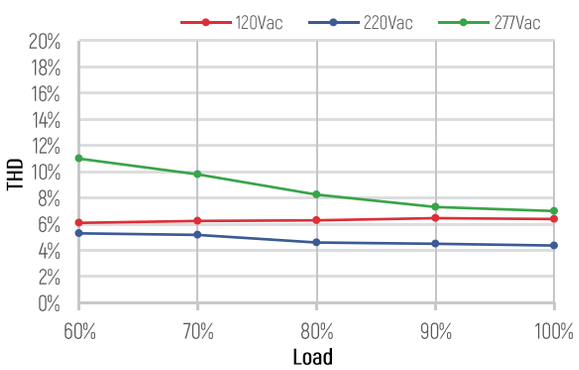
Efficiency vs. Load



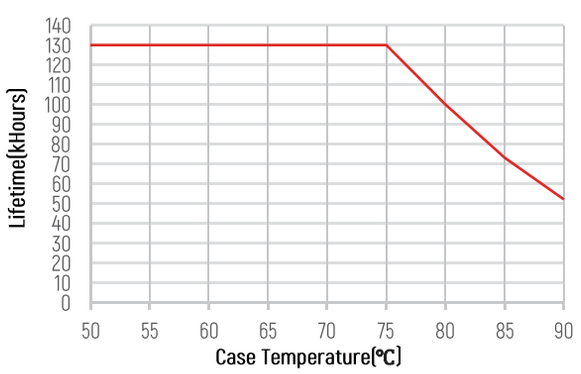
PF vs. Load



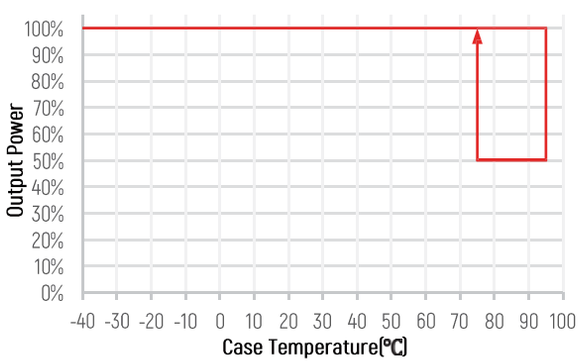
THD vs. Load



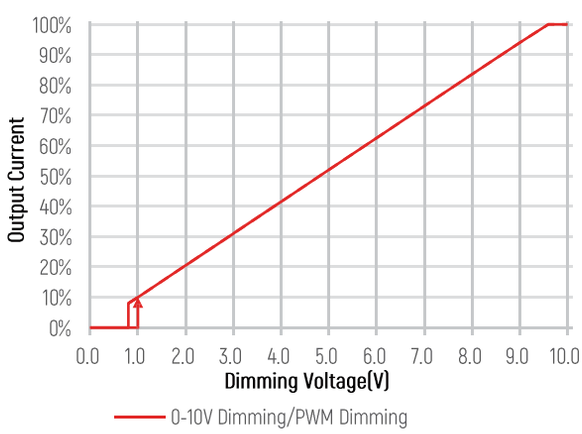
Lifetime vs. Case Temperature(Tc)



Output Power vs. Case Temperature(Tc)

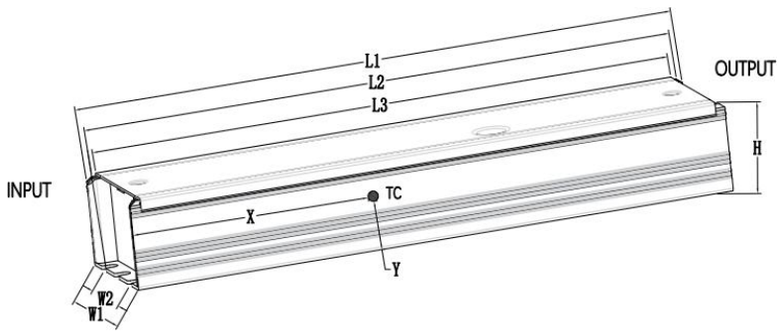


Dimming Curve



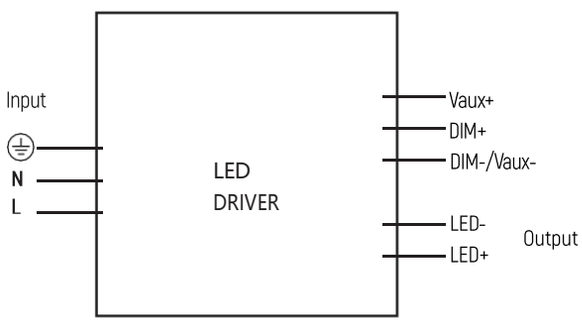
Dimension: mm (Inch)

Name Description	Standard Code	mm(In.)
Case Length	L3	217.5(8.563)
Case Width	W1	52.5(2.067)
Case Height	H	33.5(1.319)
Overall Length	L1	225(8.858)
Mounting Hole Length	L2	219(8.622)
Mounting Hole Width	W2	30(1.181)
TC Point Position	X	92(3.622)
TC Point Position	Y	19(0.748)

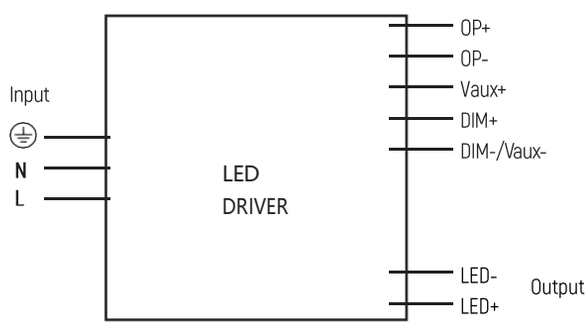


Wiring Diagram

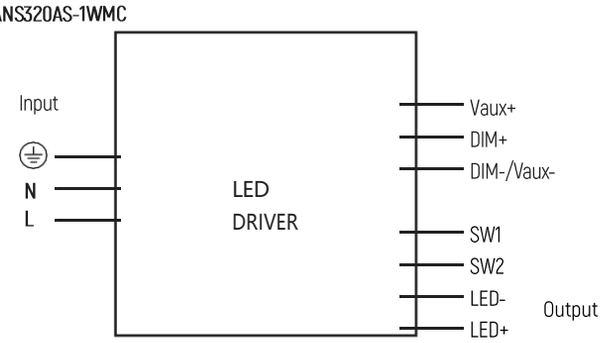
ANS320AS-1W



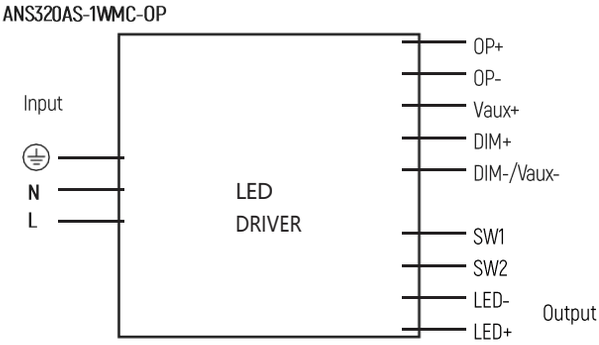
ANS320AS-1W-OP



ANS320AS-1WMC



ANS320AS-1WMC-OP



AC input wire (Exposed Wire Length: 300 ±10mm)
US Standard: UL1015 18AWG 105°C 600V, Black: L, White: N, Green: ⏚
DC output wire (Exposed Wire Length: 300 ±10mm)
US Standard: UL1569 18AWG 105°C 300V, Red: LED+, Black: LED-
DIP switch to adjust power wire
US Standard: UL1569 22AWG 105°C 300V, Orange: SW1, SW2
Light control wire with terminals
US Standard: UL3239 24AWG 200°C 3KV-DC, Red: OP+, Black: OP-
DIM signal/Aux power wire(Exposed Wire Length: 240±10mm)
US Standard: UL1569 22AWG 105°C 300V, Purple:DIM+, Black:Vaux+, Pink:DIM-/Vaux-

External DIP switch

PARAMETER	Min.	Typ.	Max.	Remark
Potentiometer adjustment range	1.0A	1.4A	1.5A	
Dial Resistance	Percentage of output current			Current after potentiometer setting
120K	50%			
180K	60%			
270K	70%			
510K	80%			
1.2M	90%			

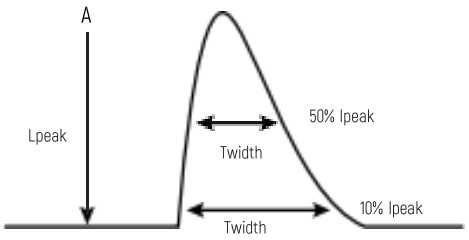
Note
1. Recommended design within the dialling resistance range.

Max. quantity of drivers per miniature circuit breaker

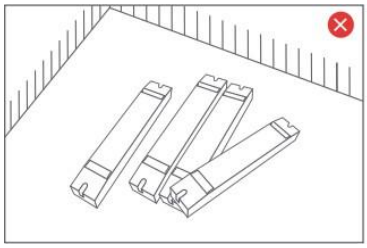
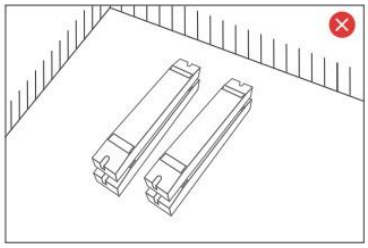
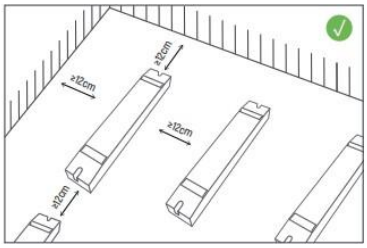
	120Vac input	277Vac input	Condition
Inrush Current Ipeak	60A	130A	
Inrush Current Twidth	300us	300us	50%-50% Ipeak
Inrush Current Twidth	650us	650us	10%-10% Ipeak

MCB	120Vac	277Vac	MCB	120Vac	277Vac
B10	3pcs	2pcs	C10	3pcs	3pcs
B13	4pcs	2pcs	C13	4pcs	4pcs
B16	5pcs	3pcs	C16	5pcs	5pcs
B20	6pcs	4pcs	C20	6pcs	6pcs
			D16	5pcs	10pcs

Inrush Current



Installation Precautions

Please do not stack the products. The distance between two products should be>12cm so as not to affect heat dissipation and the lifespan of the products.

Cautions

This product must be installed and adjusted by a qualified professional.		
1	Confirmation of installation conditions	· **Waterproof and Protection:** Install in a suitable location according to the waterproof and protection requirements of the power supply. Products without waterproof function should be protected from direct sunlight and rain. When installing outdoors, please use a waterproof box for protection. · **Heat dissipation requirements:** The drive power supply should avoid exposure to high temperature environments. Please ensure that the working environment temperature is within the recommended range. To ensure proper heat dissipation of the drive power supply, a well ventilated area should be selected for installation. Good heat dissipation conditions can help extend product lifespan.
2	Power check	· Before use, check the product parameters and confirm that the output voltage and current of the LED power supply meet the requirements
3	Safe wiring	· Use cables that meet the specifications to ensure that the cross-section of the wire matches the requirements of the driving power supply. Solid cables typically measuring 0.75-2.5 mm ², (Please refer to the silk screen printing or wiring diagram in the instruction manual for specific wire diameter requirements). · If the power supply (metal casing) is installed on a grounded lighting component or equipment, the power supply needs to be grounded.
4	Wiring confirmation	· Before power on debugging, ensure that the wiring is secure and avoid poor contact to prevent unstable current or equipment damage.
5	Repair suggestions	· If the product malfunctions, please do not repair it without authorization. If you have any questions, please contact the supplier or sales team for assistance.

※ The contents of this manual are updated without prior notice. If the function of the product you are using is inconsistent with the instructions,the function of the product shall prevail. Please contact us if you have any questions.

Warranty Agreement

1. Warranty periods from the date of delivery : 5 years.
2. Free repair or replacement services for quality problems are provided within warranty periods.

Warranty exclusions below:

The following situations are not covered by the free warranty or replacement service:

1. Exceeding the warranty period.
2. Damage caused by human factors such as high voltage, overload, and improper operation.
3. The appearance of the product is severely damaged or deformed.
4. Normal wear and tear or aging during regular product use.
5. Damage caused by natural disasters or force majeure factors.
6. The quality inspection label of the product is damaged (QC PASS).
7. No contract or valid invoice proof signed with EUCHIPS has been provided.

※ Remedies: Repair or replacement is the only remedy provided by EUCHIPS to the customer, and EUCHIPS shall not be liable for incidental damages arising from repair or replacement, unless within the scope of applicable law.

※ Adjustment of Warranty Terms: EUCHIPS reserves the right to modify or adjust the warranty terms, which shall be published in writing.

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