

UCS50-1W56V

Product Features

- Current + Voltage Output Mode
- Short circuit, overcurrent, overload protection, V0 flame-retardant housing
- Slim-profile linear design for easy installation in confined spaces
- 50,000-hour lifespan with a 5-year warranty
- 100% full-load burn-in testing
- IP20 rating for indoor LED strip applications

Application

For LED constant voltage strip light only



LED Strip Light



LED Tube



CAN ICES(A)/NMB(A)

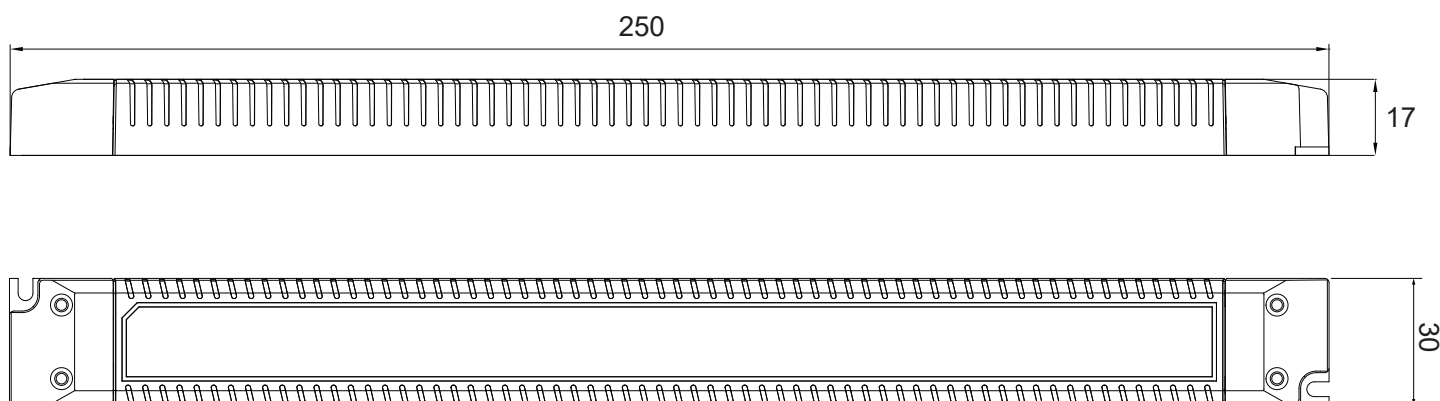


Technical Paramaters

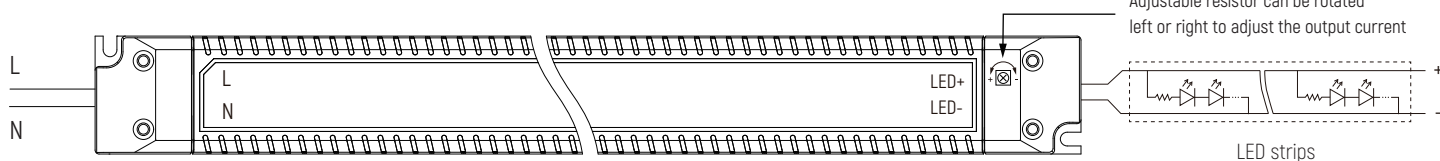
Model	UCS50-1W56V										
Input	Rated Voltage Range	110VAC-305VAC (Please refer to the "Static Characteristic Curve")									
	Rated Voltage	110VAC-277VAC (Please refer to Note 2)									
	Frequency Range(Hz)	50/60Hz									
	Input Current	0.6Amax@110VAC、 0.28Amax@230VAC、 0.26Amax@277VAC									
	Power Factor	0.97@110VAC , 0.95@277VAC, Full load									
	Efficiency	>87.5%@110VAC , >89.5%@277VAC, Full load									
	THD(full load)	<10%[@load≥60%/115VC,230VAC; @load≥75%/277VAC]									
	Leakage current	<0.25mA / 277VAC									
	Standby power	<0.5W									
	No load power	<0.5W									
	Inrush Current	Cold start 9.5A[Test twidth=256us at 50% Ipeak]/230VAC; Per NEMA 410									
Output	Output Voltage	56VDC									
	Constant Current Range	30-56V (Please refer to Note 3)		Potentiometer regulates the current range							
	Current adjustment range	0.45~1.4A									
	Full power current range	0.9~1.4A		<table><tr><td>Minimum value</td><td>Default value</td><td>Maximum value</td></tr><tr><td>450mA</td><td>1050mA</td><td>1400mA</td></tr></table>		Minimum value	Default value	Maximum value	450mA	1050mA	1400mA
	Minimum value	Default value	Maximum value								
	450mA	1050mA	1400mA								
	Output current accuracy	±5%		Note: The total output power does not exceed 50.4W							
	Output default current	1.05A									
	Output Power Range	50.4W									
	Strobe (depth of fluctuation)	IEC-Pst≤1, CIE SVM≤0.4,Meets the flicker free standard (IEEE Std 1789-2015)									
	Line regulation	±0.5% @Full load									
	Load regulation	±1.5% @Full load									
Turn on Time	500ms, 80ms/115VAC, 230VAC										
Current Ripple	5% of rated current, 240mVp-p (please refer to Note 7)										
Protection	Short circuit	Hiccup Protection, Auto-recovery after Fault Clearance									
	Overcurrent	Hiccup Protection, Auto-recovery after Fault Clearance									
	Overload	110-150% hiccup mode can automatically recover after the abnormal load conditions are removed									
	overvoltage	60-70V belching mode can automatically recover after the abnormal load conditions are removed									
Safety & EMC	Surge	L-N:1KV									
	Withstand Voltage	I/P-O/P: 3000VAC/1min/5mA									
	Safety standard	UL8750, CSA C22.2 No. 250.13-12; ENEC BS EN/EN61347-1, BS EN/EN61347-2-13 independent,									
		BS EN/EN62384; EAC TP TC 004,GB19510.1,GB19510.14,IS15885(Part2/Sec13) ,EN60335-1 Certification passed									
	EMC	CCC [China] GB/T17743 , GB17625.1 FCC Part 15 Subpart B, ICES-005 Issue 5, ANSI C63.4-2014									
		CE [European Union] EN55015, EN61000-3-2, EN61000-3-3, EN61547									
	EMI	RCM [Australia] EN55015, EN61000-3-2, EN61000-3-3, EN61547									
EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547											
Environment	Working Temp.	-20 ℃ ~50 ℃									
	Storage Temp.	-40 ℃ ~85 ℃									
	Storage Humidity	20-90%RH (No condensation)									

Others	RoHS	Comply with 2011/65/EU
	tc	90°C for safety & 85°C for life
	material	PC
	IP Rating	IP20
	Lifetime	50,000h@tc:85°C
	Warranty Condition	5years
	Switch Cycle	25,000times
	Body size	250*30*17mm (L*W*H)
	Packing(weight)	Net weight: 115g±5%/PCS; 50PCS/Carton; 6.25kg±5%/Carton; Carton Size:435*285*95mm(L*W*H)
	Noise	In a quiet environment, No noise outside 30-50cm
Remark	1. Unless otherwise specified, all specifications are measured at 230VAC input, rated current, and 25°C ambient temperature. 2. Output derating is required under low input voltage conditions; refer to the static characteristic curve. 3. Refer to "LED Module Driving Method". 4. When the maximum case temperature (Tc) of this series is below 75°C, the operating life exceeds 30,000 hours. Accuracy includes setting error, line regulation, and load regulation. 5. Startup time is measured under cold start; frequent on/off switching may extend startup time. 6. The power supply is considered a component to be used in combination with end equipment. Since EMC is affected by the entire installation, the end equipment manufacturer must re-confirm EMC compliance for the complete assembly. 7. Ripple and noise measurement method: use a 12" twisted pair, with 0.1 uF and 47 uF capacitors connected in parallel at the terminal, measured at 20MHz bandwidth. 8. For altitudes above 2000m (6500ft), the ambient temperature derating for fanless models is 3.5°C per 1000m; for fan-cooled models, it is 5°C per 1000m. 9. RCM certification is voluntary. This is not an IC-classified standalone LED power supply and is not intended for residential installation; it is recommended for commercial lighting, signage, and luminaire applications.	

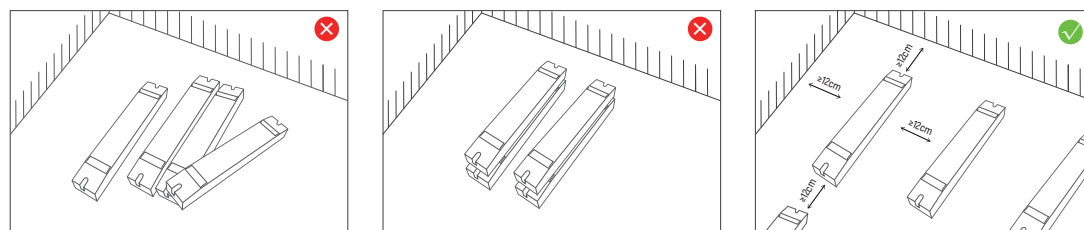
Dimension(mm)



Wiring



Installation Precautions



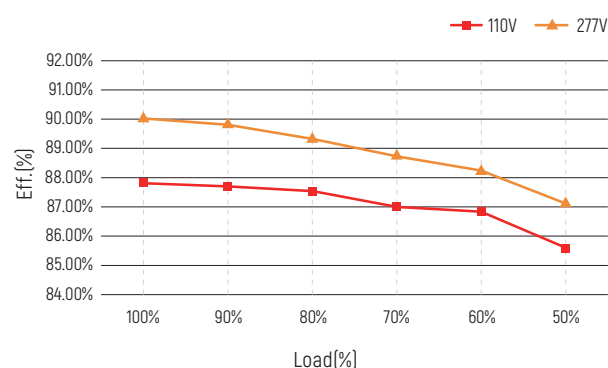
Please do not stack the products. The distance between two products should be >12cm so as not to affect heat dissipation and the lifespan of the products.

Max. quantity of drivers per miniature circuit breaker

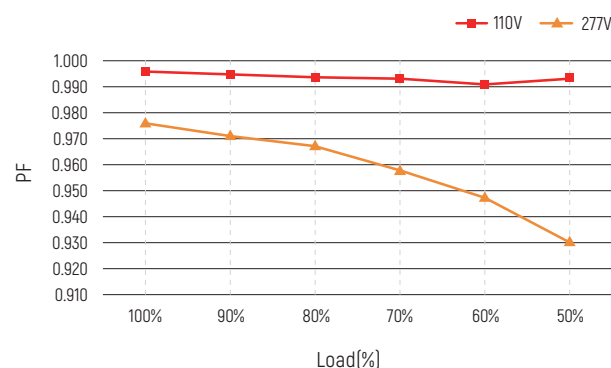
Specification item	Value	Value	Condition
Inrush current I_{peak}	7A (120V)	9.6A (277V)	Input Voltage 110V/277V
Inrush current T_{width}	296 μ s (120V)	500 μ s (277V)	Input Voltage 110V/277V, measured ta 50% I_{peak}

MCB	Input Voltage 110V Drivers	Input Voltage 277V Drivers	MCB	Input Voltage 110V Drivers	Input Voltage 277V Drivers
B10	16pcs	15pcs	C10	16pcs	26pcs
B13	21pcs	20pcs	C13	21pcs	34pcs
B16	26pcs	25pcs	C16	26pcs	42pcs
B20	33pcs	31pcs	C20	33pcs	53pcs
			D16	26pcs	61pcs

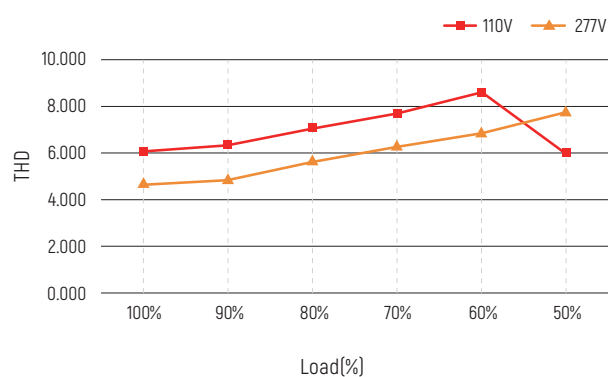
Efficiency vs Load Curve



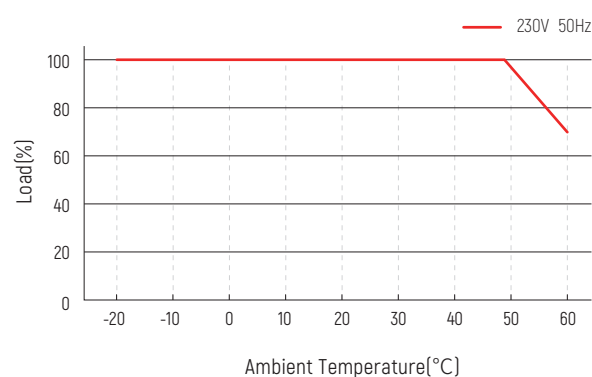
PF vs Load Curve



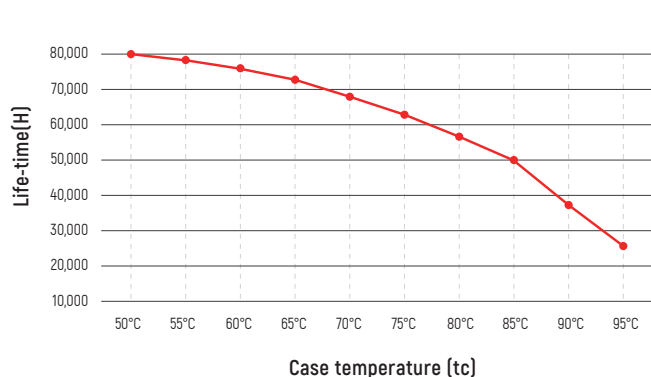
THD vs Load Curve



Derating Curve



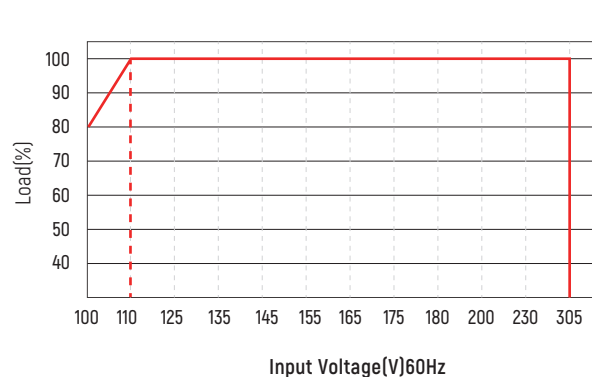
Life-time vs. case temperature



The life-time of the led driver is shown in the figure above (calculated based on the 90% survival rate).

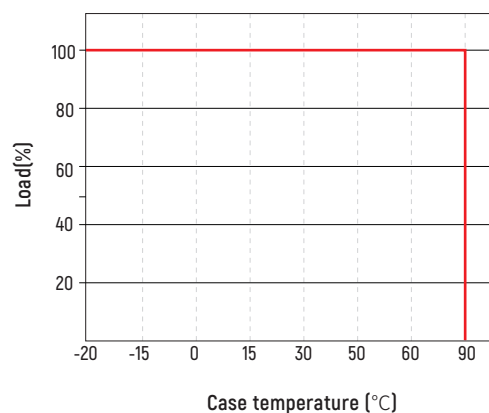
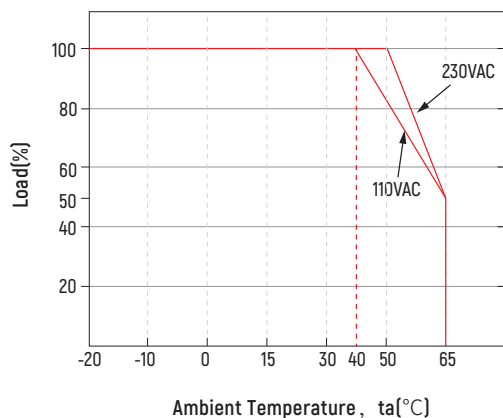
The relation of t_c to temperature depends also on the luminaire design.

Static Characteristic Curve

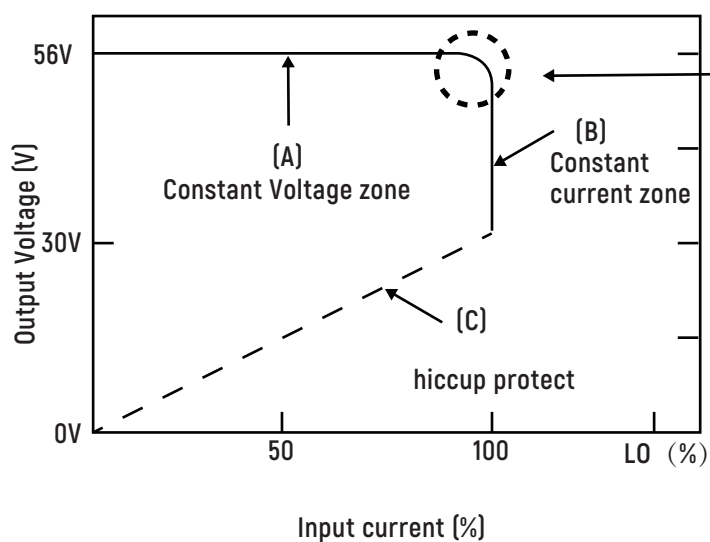


✖ Output derating is required under low input voltage conditions.

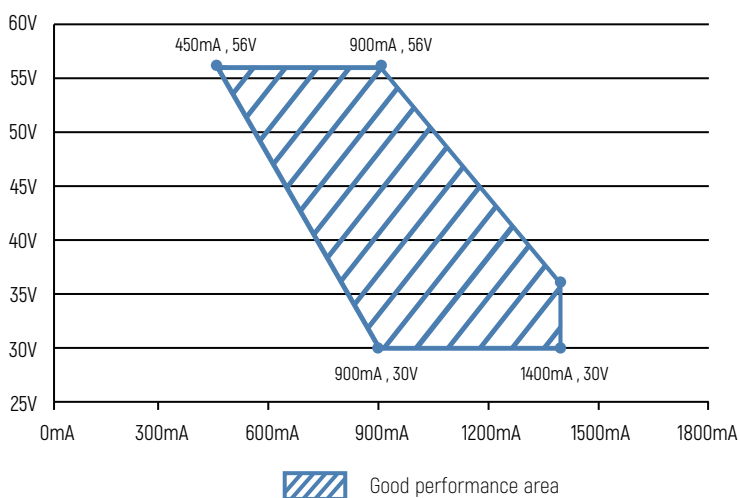
Life-time vs tc temperature



LED model drive mode



In the constant current region, the maximum output voltage of the driver depends on the configuration of the terminal system.



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 mm², (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. · To avoid hot swapping, power off and restart the driver before connecting the LED load.
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.

Revision history

Change date	Version	Item	From	To
2025.04.09	V1.0	First release		