SPECIFICATION

Product name：HAE-100W-38/56A

Release date：2024/1/12

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SUNCOM	Product Type	LED INTEGRATED SPECIAL DRIVER		
	Product Series	HAE-100W-38/56A Series	REV	V1.0

Features·

- Class I type for insulation
- Input voltage range:120-277V ～ 50/60Hz
- Efficiency 90%（Typ.）
- Constant current output ,with power limitation for control mode
- Metal material case, protection grade against water and dust: IP65
- Surge level：

  differential mode : 6kV

  common mode :10kV
- Function available：

  Output current is dimmed by external potentiometer
- guaranteed Lifetime ： 5 years
- It is recommended that this product be installed inside a lamp with waterproof function

Applications

Street lighting、Industrial lighting、Stadium lighting

Floodlight lighting、Landscape lighting 、Plant lighting

Model list

Model NO.	Rated Input voltage	Max Output power	Output voltage	The default current	Eff.
HAE-100W-38A	120-277V 50/60Hz	100W	19-38Vdc Rated Power（32-38V）	2.7A	≥90%
HAE-100W-56A	120-277V 50/60Hz	100W	28-56Vdc Rated Power（42-56V）	2.1A	≥90%

Note：

1. Test conditions: Ta=25℃, under 230Vac input,after running for 30 minutes with full load .

2. When the input is less than 90Vac, the output power gradually decreases to 50W±20%, and it recoveries full power of 100W when the input is above 90VAC again. Please refer to “THE OUTPUT POWER VS INPUT VOLTAGE” curve chart for details.

Input characteristics

Parameter	Min	Typ.	Max	Remark
Rated input voltage	120Vac	230Vac	277Vac	-
Input voltage range	100Vac	-	305Vac	-
Rated frequency range	47Hz	50/60Hz	63Hz	-
Power factor	0.95	-	-	@230Vac input ,with full load
Power factor	0.9	-	-	@200-277Vac input ,with 70%-100%
T.H.D.	-	-	10%	@230Vac input ,with full load
T.H.D.	-	-	20%	@120-277Vac input ,with 70%-100%
Input current	-	-	1A	@120Vac input ,with full load
Inrush current	-	-	130A	230Vac, cold start (25℃)

Output characteristics

Parameter	Min	Typ.	Max	Remark
Rated current	-		-	
HAE-100W-38A	-	2.63A	-	Rated Load :38VDC
HAE-100H-56A/B	-	1.78A	-	Rated Load: 56VDC
Output current range		-		-
HVE-100W-38A	1.8A	-	3A	-
HVE-100W-56A	1.5A	-	2.5A	-
Output voltage range		-		
HVE-100W-38A	19V	-	38V	Constant power output range:32-38VDC
HVE-100W-56A	28V	-	56V	Constant power output range:42-56VDC
Available power(90-180Vac)	-	50W	-	Decrease to a half once input voltage beingless than 90 Vac
Rated power(100-277Vac)	-	100W	-	-
No-load voltage	-	-		-
HVE-100W-38A	-	-	50V	-
HVE-100W-56A	-	-	70V	-
Efficiency@230Vac	-		-	
HAE-100W-38A	-	90%	-	@230Vac input ,with full load
HVE-100W-56A	-		-	
Accuracy of output current	-5%	-	+5%	For constant-power range , with full load
Line regulation	-3%	-	+3%	full load
Load regulation	-3%	-	+3%	full load
Starting time	-	-	500ms	Full load@230Vac

Note: 1.The output current is limited by the input and output voltage, please refer to "I-V WORKING AREA" for details;

Protections

Protection	description
under-voltage protection	When the input voltage is less than 90±15Vac, the output power decreases.Refer to derating curve for details
Output overload protection	Protection mode:hiccup mode,and recovers automatically when the fault condition is removed.
Output short circuit protection	Hiccup mode,and recovery automatically when the fault condition is removed.
Over temperature protection	Could recover automatically；when the temperature of the case is greater than 90℃, the output power decreases to a half.
Output over-voltage protection	Protection mode:Hiccup or clamp at a certain output highest voltage state, the product will not be damaged, when the fault is removed, the driver works normally

Note:

1. Unless otherwise specified, all parameters should be measured at the condition of 230Vac (50Hz) input ,with rated load ,and ambient temperature of 25℃;
2. Including setting error, linear adjustment rate and load adjustment rate;

Environmental characteristics

Environmental categories	Parameter
Working temperature	-40 ~ +55℃@120-277Vac((Refer to "Service Life Curve"))
Safety case temperature	-40 ~ 90℃
Working humidity	20 ~ 95% RH,non-condensing
Storage temperature、humidity	-40~+80℃, 10 ~ 95% RH
Resistant to vibration	10 ~ 500Hz, 5G 12 min/cycle, X, Y, Z axis 72 min each
MTBF	230Khrs min. MIL-HDBK-217F (Ta=25℃)
Lifetime	50000 hours @230Vac,80% load, Tcase=75℃,.Refer to” Tcase VS Lifetime” curve for details.

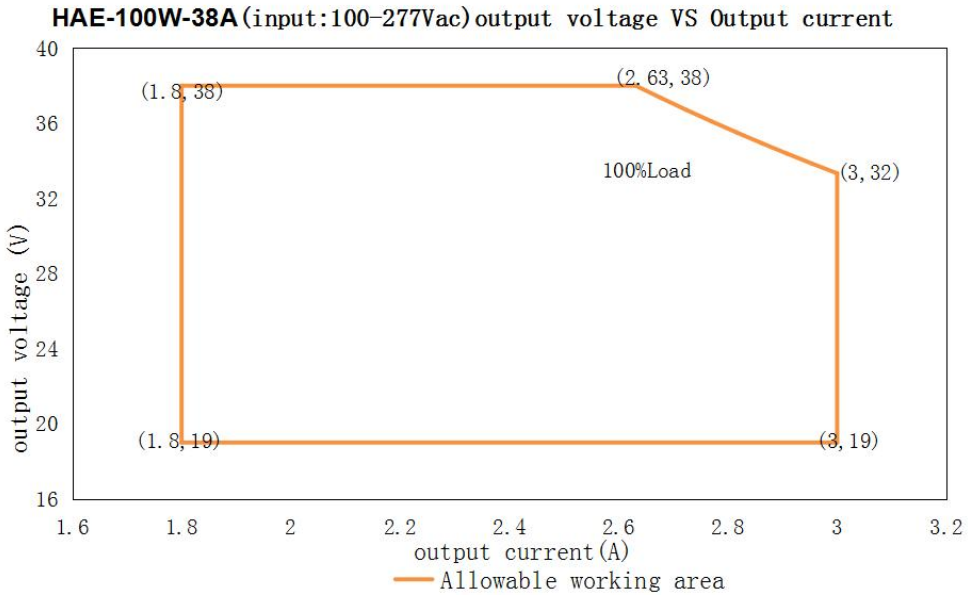
Safety and EMC

Safety categories	Standard
Safety	GB19510.1、GB19510.14、EN61347-1、EN61347-2-13、IEC61347-1、IEC61347-2-13、AS/NZS61347.1、AS61347.2.13、EN 62384；
EMC	EN 55015、EN 61547、EN 61000-3-2、GB/T 17743、GB17625.1、EN 61000-3-3
Surge level	Differential mode L-N ±6KV(2Ω),common mode L，N-PE±10KV (12Ω) Refer toIEC61000-4-5 2014
High-pot test	I/P-O/P:3.75KVac I/P-PE :1.5KVac O/P-PE : 0.5KVac
Insulation impedance	I/P-PE:100MΩ / 500VDC; I/P-O/P:100MΩ / 500VDC / 25℃/ 70% RH
Leakage current	<0.7mA@277Vac

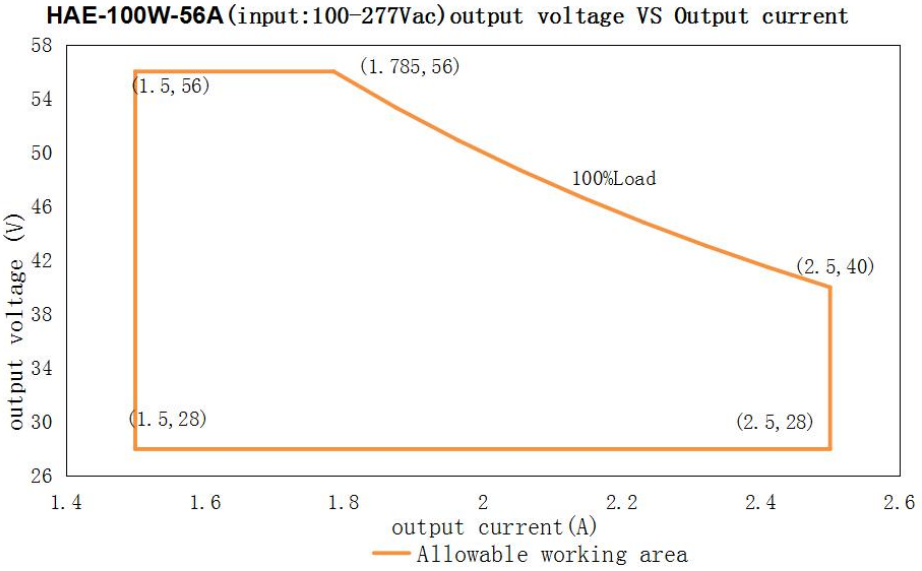
Note:

1.Attention! As a component of the whole, the EMC performance of the final product is not only decided by the driver, even if the driver is well-designed and fulfil all the required compliance. The final equipment manufacturers must re-qualify EMC Directive on the complete product.

I-V Working area

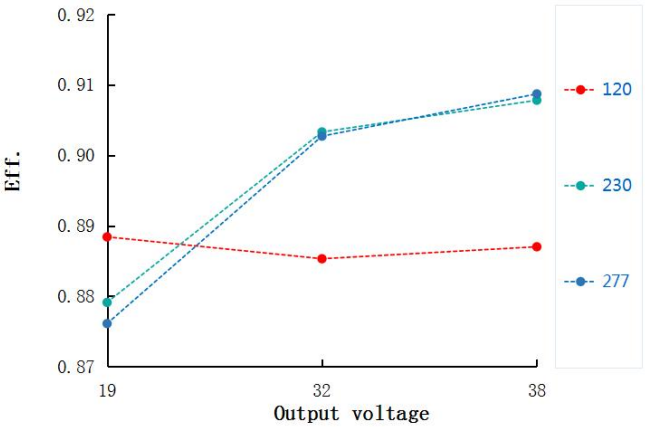


Load	Output								
Load working Voltage	20V	23V	25V	28V	30V	32V	34V	36V	38V
Io_MAX	3A	3A	3A	3A	3A	3.13A	2.94A	2.78A	2.63A
Po_MAX	60W	69W	75W	84W	90W	100W	100W	100W	100W

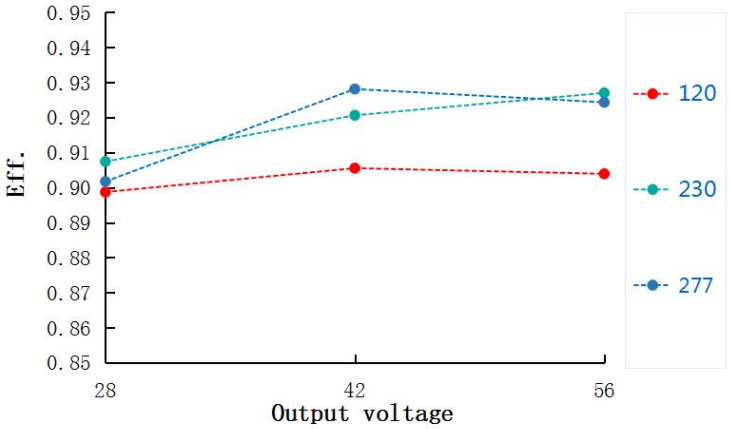


Load	Output								
Load working Voltage	28V	30V	32V	36V	38V	42V	46V	50V	56V
Io_MAX	2.5A	2.5A	2.5A	2.5A	2.5A	2.38A	2.173A	2.0A	1.785A
Po_MAX	70W	75W	80W	90W	95W	100W	100W	100W	100W

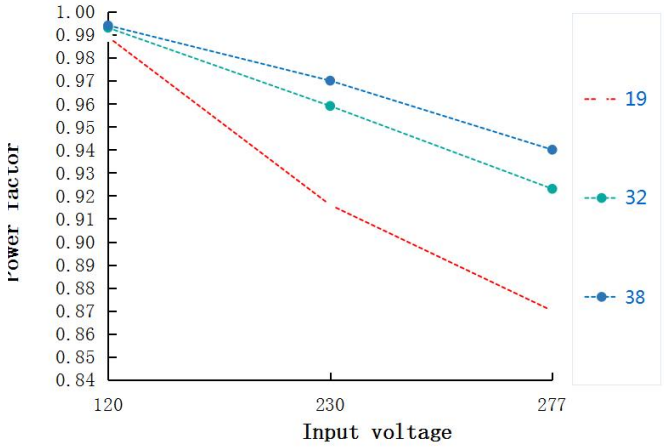
Eff. VS Output voltage HAE-100W-38A



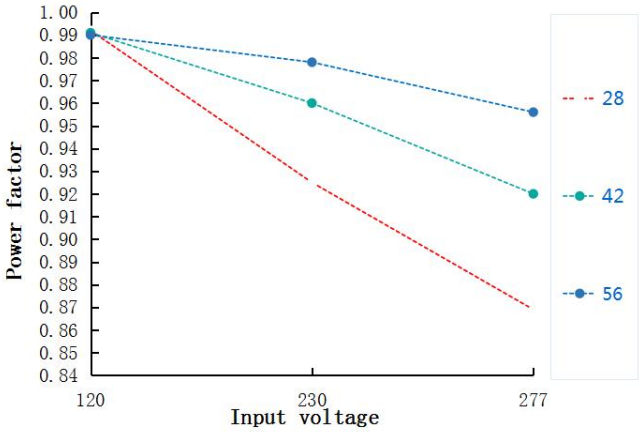
Eff. VS Output voltage HAE-100W-56A



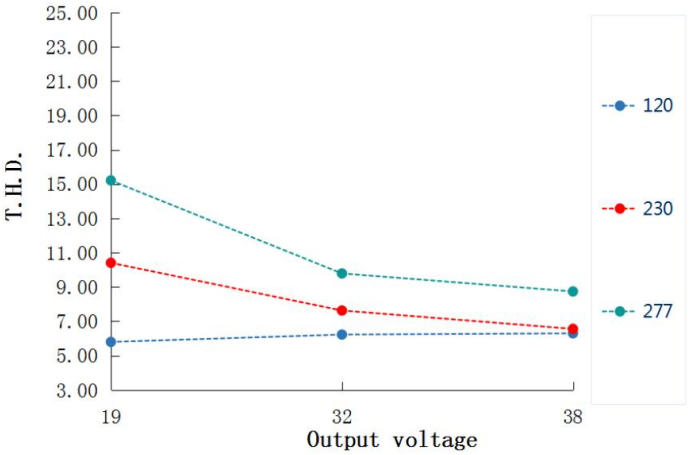
Power factor VS Input voltage HAE-100W-38A



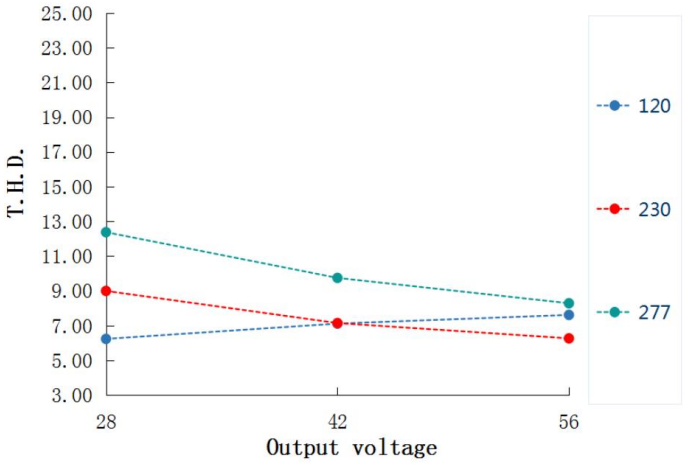
Power factor VS Input voltage HAE-100W-56A



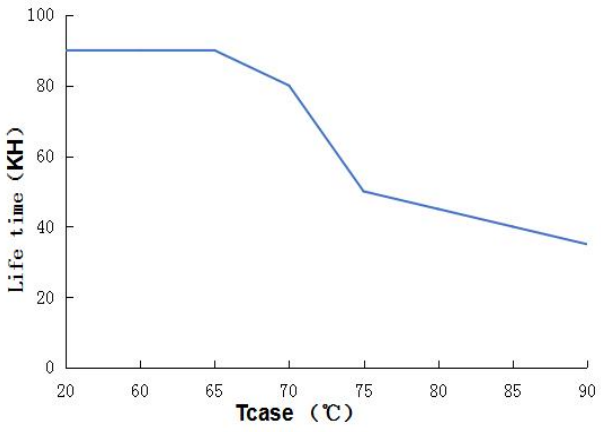
T.H.D. VS Output voltage HAE-100W-38A



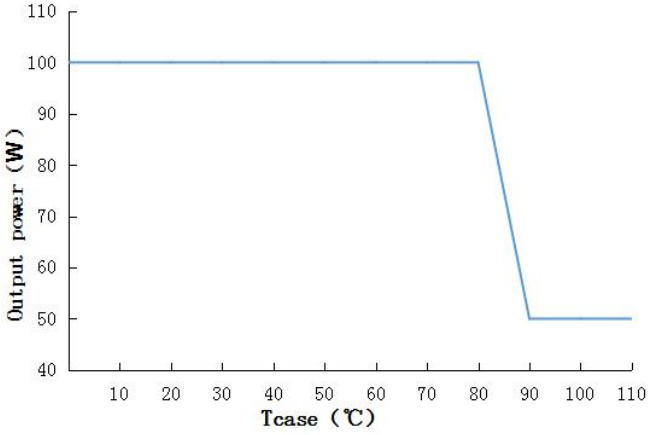
T.H.D. VS Output voltage HAE-100W-56A

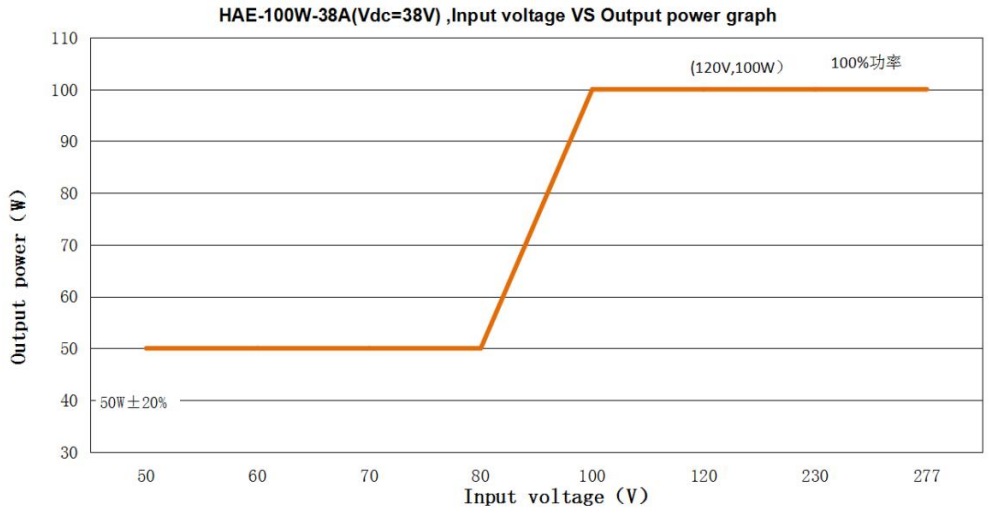


Tcase VS Life time (HAE-100W-38/56A)



Output power VS Tcase(HAE-100W-38/56A)

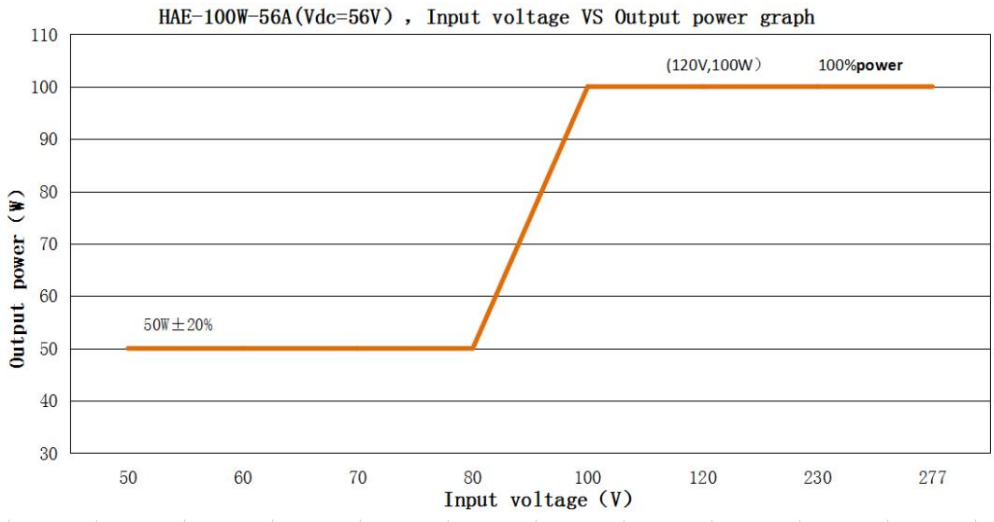




HAE-100W-38A (For output 38Vdc, the rated output current & power under different input voltage)								
Input Voltage	50Vac	60Vac	70Vac	80Vac	100Vac	120Vac	230Vac	277Vac
Io	1.315A	1.315A	1.315A	1.315A	2.631A	2.631A	2.631A	2.631A
Po	50W	50W	50W	50W	100W	100W	100W	100W

Note:

1. When the input voltage is below 90±15Vac,the output power decreases to 50W±20%。



HAE-100W-56A(For output 56Vdc, the rated output current & power under different input voltage)								
Input Voltage	50Vac	60Vac	70Vac	80Vac	100Vac	120Vac	230Vac	277Vac
Io	0.892A	0.892A	0.892A	0.892A	1.785A	1.785A	1.785A	1.785A
Po	50W	50W	50W	50W	100W	100W	100W	100W

Note:

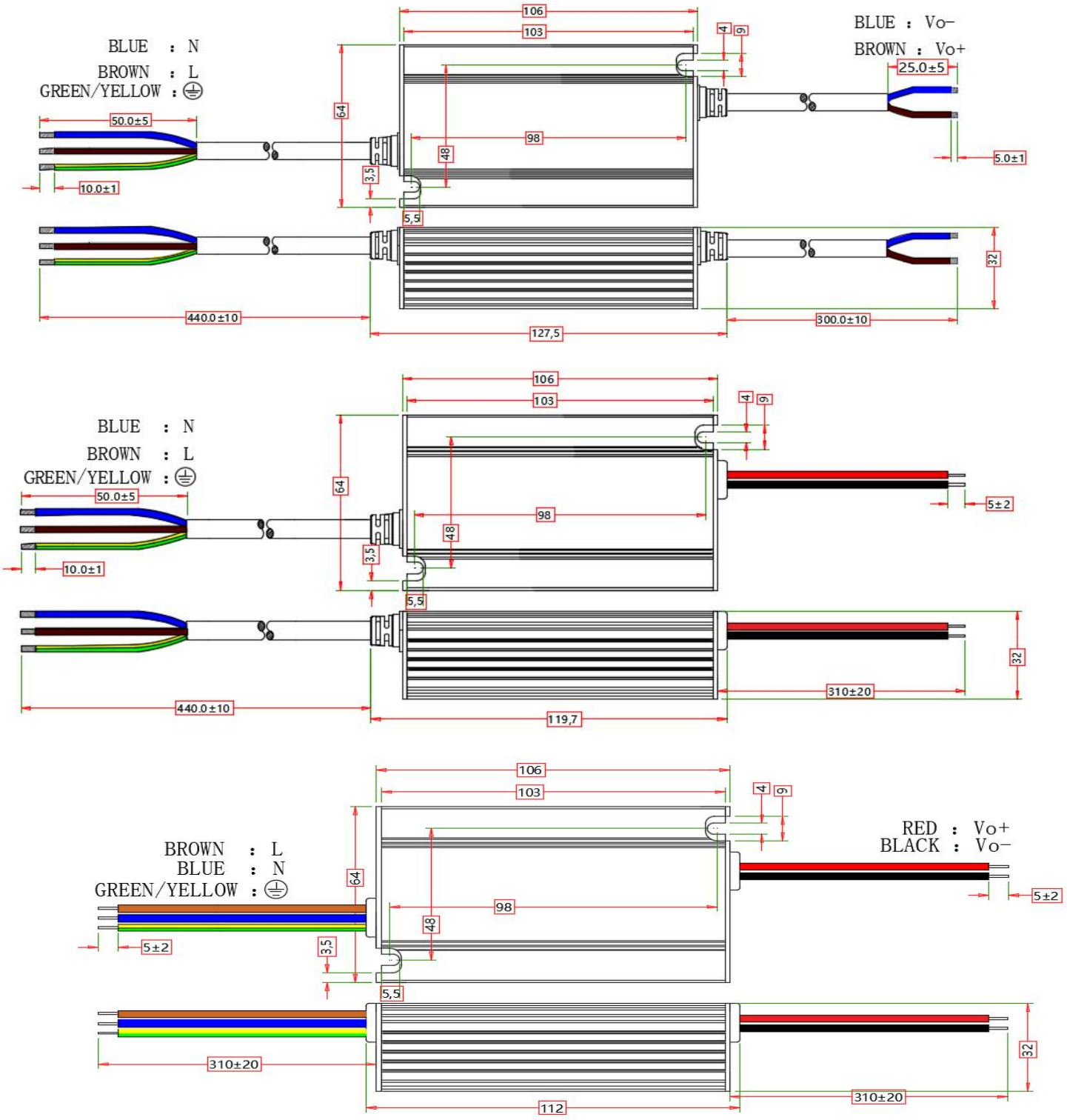
1.When the input voltage is below 90±15Vac,the output power decreases to 50W±20%。

SUNCOM	Product Type	LED INTEGRATED SPECIAL DRIVER		
	Product Series	HAE-100W-38/56A Series	REV	V1.0

Mechanical specification

Size（mm）	106*64*32mm(L*W*H)
Weight（Kg）	450g
Packaging（mm）	

HAE-100W-38/56A



The input electronic line has not yet obtained the certificate yet

Version

DATE	DESCRIPTION	REV.	CHECK
2024/1/12	Initial version.	V1.0	