

Lab ID#: CM19750038

Receipt Date: Jul 5, 2019

Test Date: May 17, 2019

Report:

Report Date: Jun 21, 2019

DUT INFORMATION

Brand	Cooler Master
Manufacturer (OEM)	Gospower
Series	MWE Bronze
Model Number	
Serial Number	MPE7501ACAAB1191400001
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-6
Rated Frequency (Hz)	50-60
Rated Power (W)	750
Type	ATX12V
Cooling	120mm Fluid Dynamic Bearing Fan (HA1225H12F-Z)
Semi-Passive Operation	✓
Cable Design	Fixed cables

TEST EQUIPMENT

Electronic Loads	Chroma 63601-5 x4 Chroma 63600-2 x2 63640-80-80 x20 63610-80-20 x2
AC Sources	Chroma 6530, Keysight AC6804B
Power Analyzers	N4L PPA1530 x2
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2
Tachometer	UNI-T UT372 x2
Digital Multimeter	Keysight U1273AX, Fluke 289
UPS	CyberPower OLS3000E 3kVA x2
Transformer	3kVA x2

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RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6 (+-2°C / +- 3.6°F)
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓

115V

Average Efficiency	85.672%
Efficiency With 10W (≤500W) or 2% (>500W)	72.857
Average Efficiency 5VSB	78.167%
Standby Power Consumption (W)	0.0765161
Average PF	0.972
Avg Noise Output	42.09 dB(A)
Efficiency Rating (ETA)	SILVER
Noise Rating (LAMBDA)	Standard

230V

Average Efficiency	87.845%
Average Efficiency 5VSB	77.554%
Standby Power Consumption (W)	0.1901850
Average PF	0.907
Avg Noise Output	42.23 dB(A)
Efficiency Rating (ETA)	
Noise Rating (LAMBDA)	Standard

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	62.5	3	0.3
	Watts	120		750	15	3.6
Total Max. Power (W)		750				

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CABLES AND CONNECTORS

Captive Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (610mm)	1	1	18-20AWG	No
8 pin EPS12V (630mm) / 4+4 pin EPS12V (120mm)	1	1 / 1	18AWG	No
6+2 pin PCIe (530mm+120mm)	2	4	16-18AWG	No
SATA (530mm+120mm+120mm+120mm)	2	8	18AWG	No
4-pin Molex (520mm+120mm+120mm+120mm)	1	4	18AWG	No
AC Power Cord (1400mm) - C13 coupler	1	1	18AWG	-

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General Data	
Manufacturer (OEM)	Gospower
PCB Type	Single Sided
Primary Side	
Transient Filter	3x Y caps, 2x X caps, 2x CM chokes
Inrush Protection	NTC Thermistor & Relay
Bridge Rectifier(s)	1x GBU2508 (800V, 25A @ 100°C)
APFC MOSFETS	2x Sanrise Tech SRC60R140B (630V, 11.2A @ 125°C, 0.14Ohm)
APFC Boost Diode	1x Cengol CGC1S06510 (650V, 10A @ 150°C)
Hold-up Cap(s)	1x Elite (420V, 680uF, 2000h @ 85°C, GM)
Main Switchers	2x Jilin Sino Microelectronics JCS18N50FH (500V, 11A @ 100°C, 0.27Ohm)
APFC Controller	Champion CM6500UNX
Resonant Controllers	Champion CU6901V
Topology	Primary side: Half-Bridge & LLC converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETS	4x Nce Power NCEP40T11K (40V, 85A @ 100°C, 2.8mOhm)
5V & 3.3V	DC-DC Converters: 4x IPS FTD05N03NA (30V, 75A @ 100°C, 6mOhm) PWM Controllers: ANPEC APW7159C
Filtering Capacitors	Electrolytics: 4x Elite (2-5,000h @ 105°C, ED), 5x Elite (2,000h @ 105°C, EL), 2x CapXon (2-5,000h @ 105°C, KF), 1x CapXon (3-10,000h @ 105°C, GH) Polymers: CapXon
Supervisor IC	IN1S313I-SAG
Fan Model	Hong Hua HA1225H12F-Z (120mm, 12V, 0.58A, Fluid Dynamic Bearing Fan)
5VSB Circuit	
Rectifier	-
Standby PWM Controller	On-Bright OB2365SP

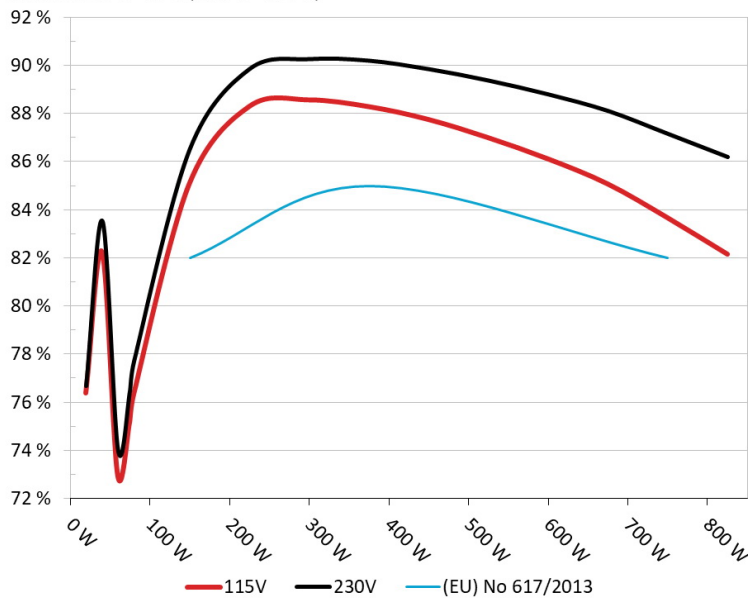
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Cooler Master MWE Bronze 750

Ambient: 32°C - 40°C (89.6°F - 104°F)



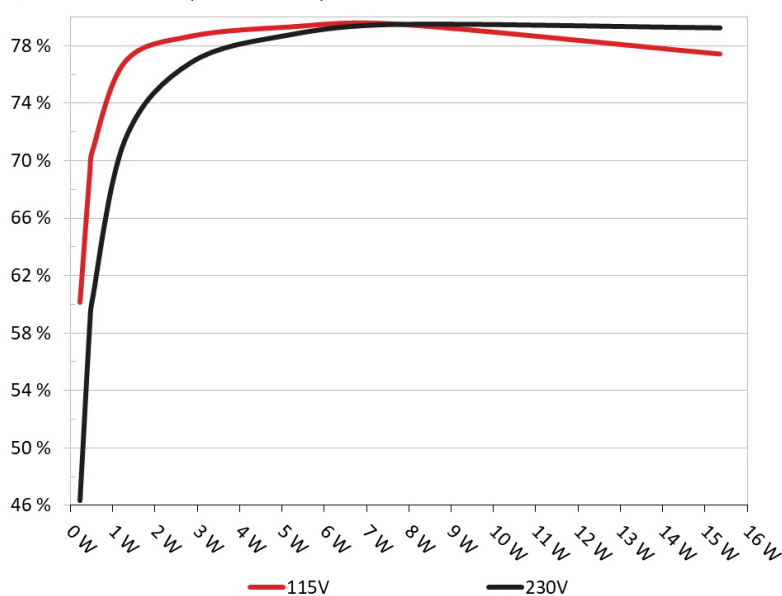
INFO

The PSU's efficiency under high ambient temperatures with 115V and 230V input. For this graph the results of the 10-110% load regulation table are used

5VSB EFFICIENCY

5VSB Efficiency: Cooler Master MWE Bronze 750

Ambient: 28°C - 32°C (82.4°F - 89.6°F)



INFO

This graph depicts the efficiency levels of the 5VSB rail with 115V and 230V input

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5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.234	60.154%	0.025
	5.188V	0.389		115.13V
2	0.090A	0.467	69.288%	0.043
	5.187V	0.674		115.13V
3	0.550A	2.848	78.696%	0.203
	5.177V	3.619		115.12V
4	1.000A	5.167	79.346%	0.304
	5.166V	6.512		115.12V
5	1.500A	7.733	79.541%	0.369
	5.154V	9.722		115.12V
6	3.000A	15.356	77.462%	0.447
	5.118V	19.824		115.12V

5VSB EFFICIENCY -230V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.234	46.337%	0.010
	5.188V	0.505		230.30V
2	0.090A	0.467	58.742%	0.016
	5.187V	0.795		230.30V
3	0.550A	2.848	76.828%	0.070
	5.177V	3.707		230.33V
4	1.000A	5.167	78.765%	0.120
	5.166V	6.560		230.31V
5	1.500A	7.733	79.500%	0.169
	5.154V	9.727		230.31V
6	3.000A	15.356	79.261%	0.276
	5.119V	19.374		230.31V

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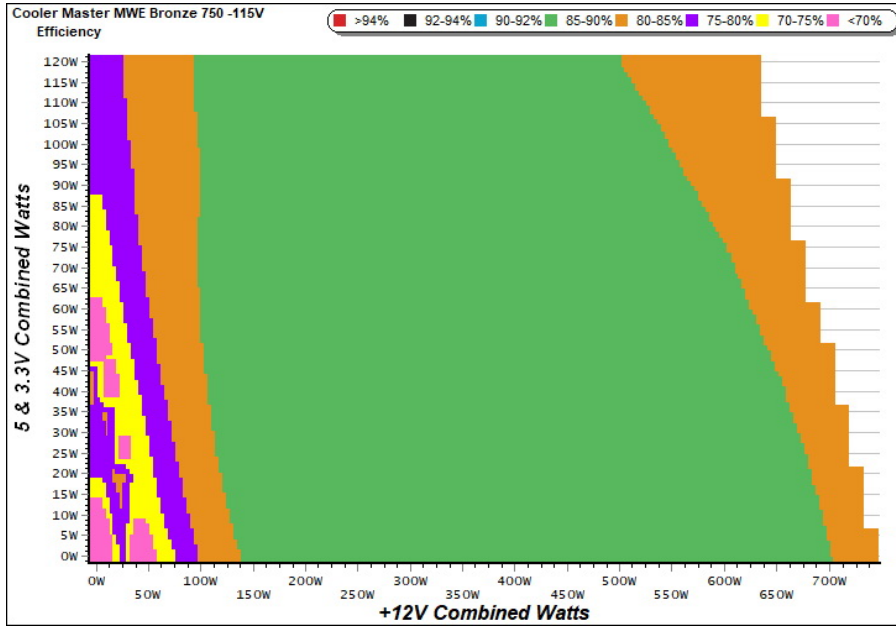
115V

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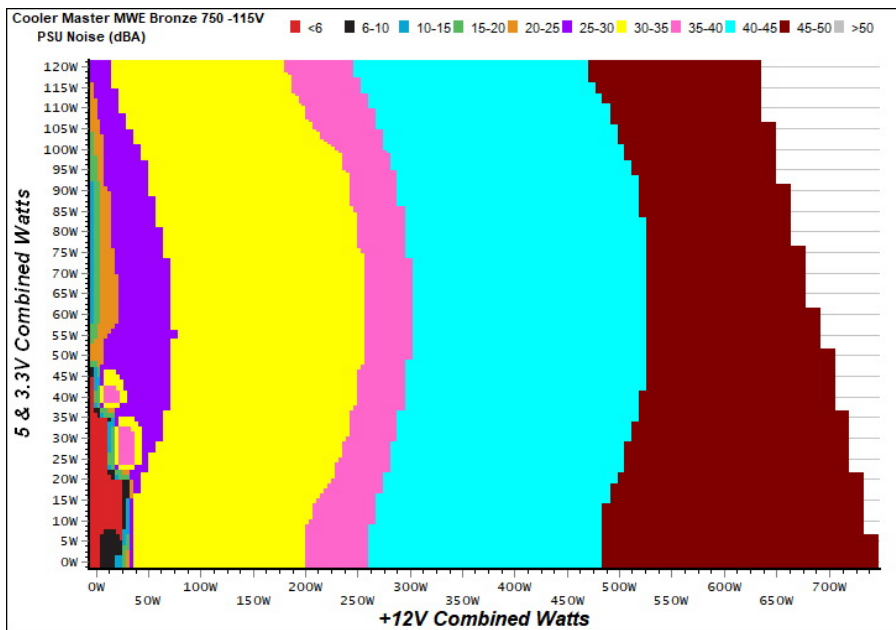
EFFICIENCY GRAPH 115V



INFO

This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

NOISE GRAPH 115V



INFO

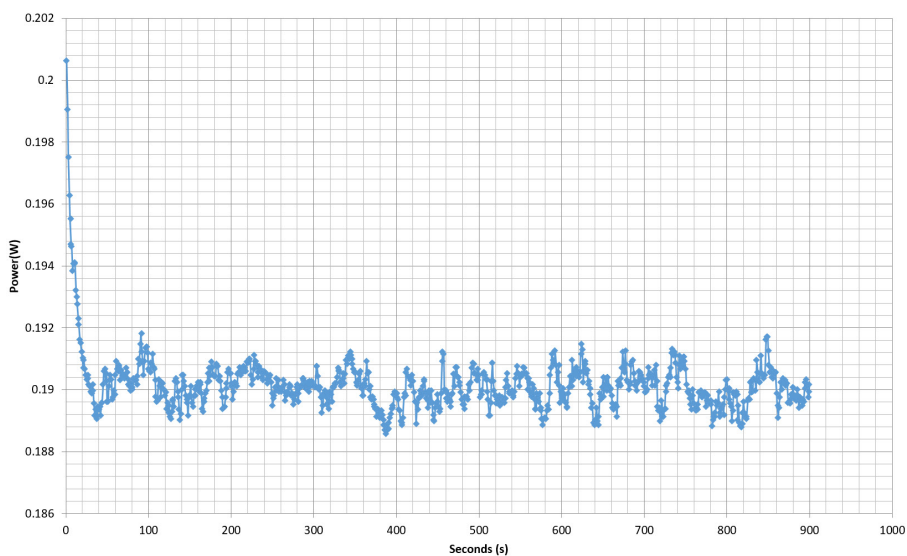
The PSU's noise in its entire operational range and under 30-32 °C (+2 °C) ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Power - MPE7501ACAAB1191400001 - 16/05/2019 - 10:53



INFO

This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing

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COMMISSION REGULATION (EU) NO 617/2013 TESTING 115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
2	9.788A	3.035A	2.978A	1.167A	149.347	85.065%	1845	38.3	35.18°C	0.949
	12.101V	4.943V	3.323V	5.144V	175.569				40.87°C	115.11V
5	26.899A	5.090A	4.995A	1.762A	374.580	88.289%	2162	42.6	36.18°C	0.977
	12.048V	4.913V	3.302V	5.108V	424.266				43.63°C	115.10V
10	55.087A	9.262A	9.101A	2.979A	749.930	83.670%	2468	46.0	39.36°C	0.990
	11.985V	4.859V	3.264V	5.036V	896.291				50.63°C	115.11V

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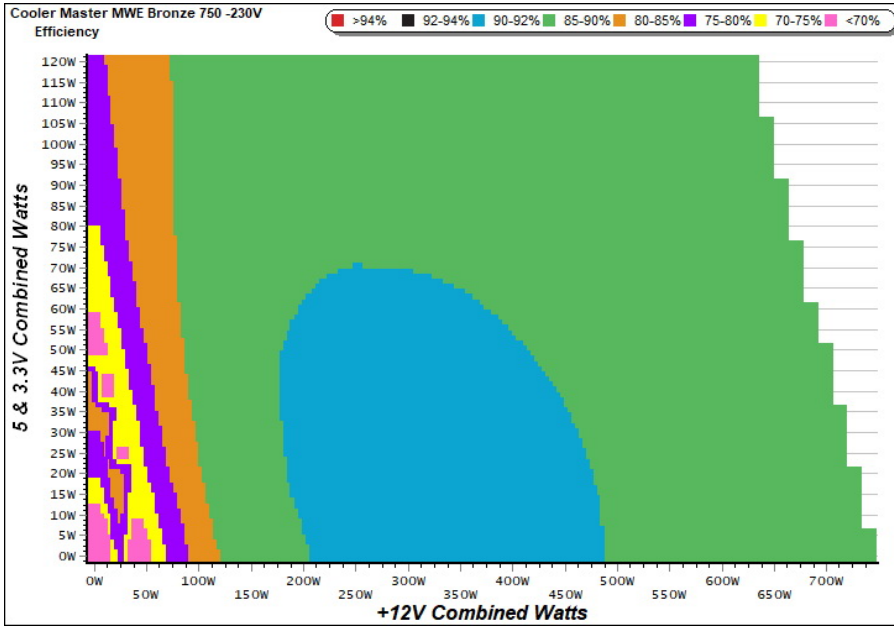
230V

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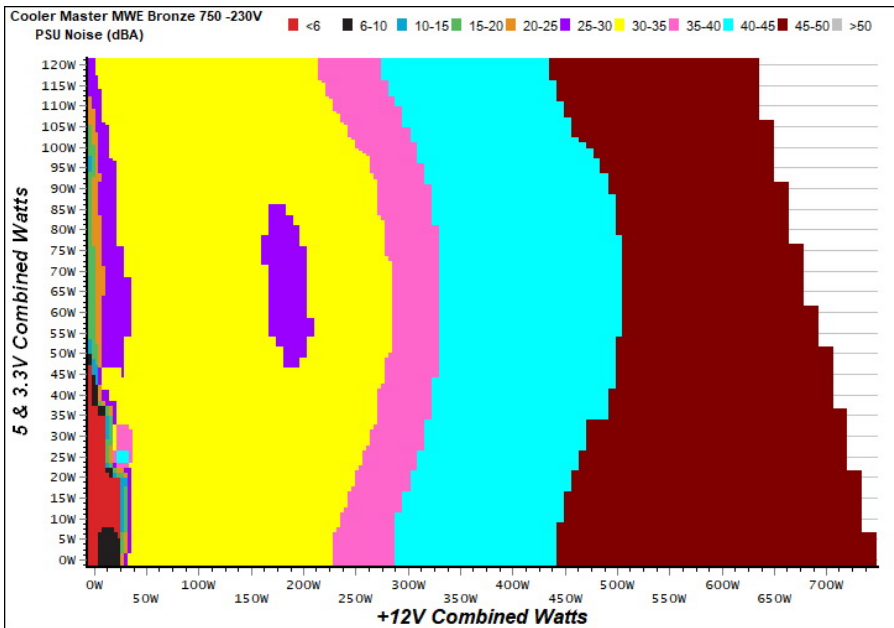
EFFICIENCY GRAPH 230V



INFO

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NOISE GRAPH 230V



INFO

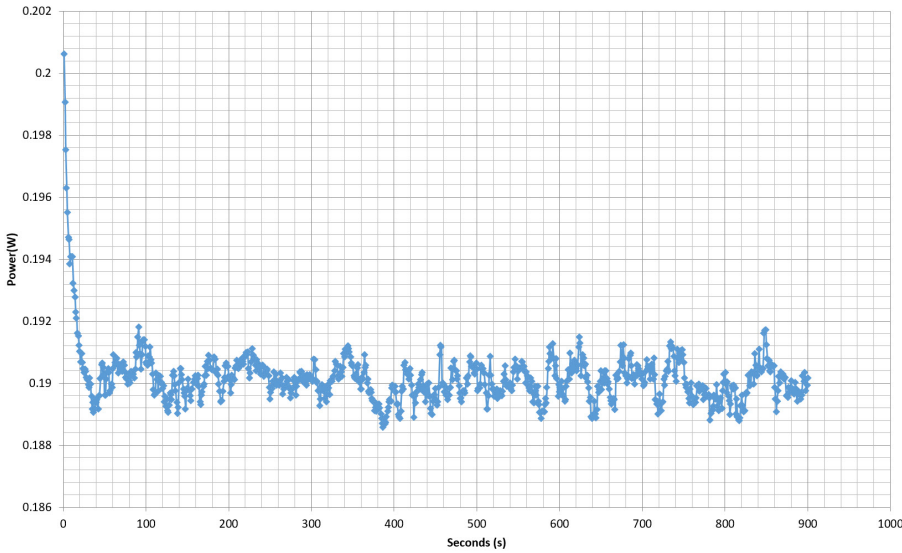
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VAMPIRE POWER -230V

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COMMISSION REGULATION (EU) NO 617/2013 TESTING 230V

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2	9.793A	3.036A	2.977A	1.167A	149.398	86.484%	1875	38.4	34.86°C	0.850
	12.100V	4.943V	3.323V	5.144V	172.746				41.33°C	230.32V
5	26.913A	5.090A	4.998A	1.762A	374.677	90.195%	2156	42.7	36.03°C	0.930
	12.045V	4.913V	3.302V	5.107V	415.410				44.55°C	230.34V
10	55.108A	9.265A	9.103A	2.979A	750.017	87.154%	2466	46.0	39.74°C	0.960
	11.982V	4.858V	3.263V	5.035V	860.564				51.26°C	230.35V













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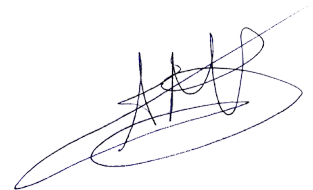
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750W		MODEL / 型			
		Switching Power S			
AC INPUT 交流輸入/交流輸入	100-240V~, 10-6A, 50-60Hz				
DC OUTPUT 直流輸出/直流輸出	+5V	+3.3V	+12V	-12V	+5VSB
	20A	20A	62.5A	0.3A	3A
TOTAL POWER 總功率/總功率	120W		750W		3.6W 15W
	750W				

Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

CERTIFICATIONS 230V



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