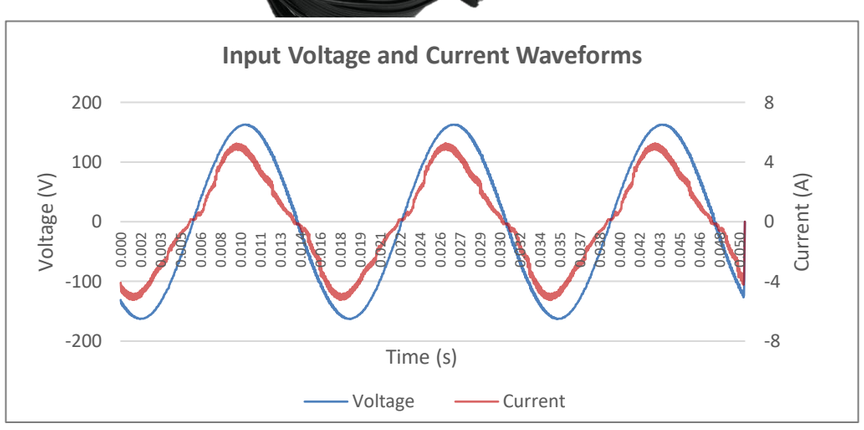
80 PLUS Verification and Testing Report

TYPICAL EFFICIENCY (50% Load):	**90.63%**
AVERAGE EFFICIENCY :	**83.25%**
AVERAGE STANDBY EFFICIENCY :	**76.74%**
80 PLUS COMPLIANT:	**Gold**

ID Number	7709
Manufacturer	Gamer Storm
Model Number	PN650D (PN650D-FC)
Sample 1 S/N:	N/A
Sample 2 S/N:	N/A
Type	ATX 3.1
Test Date	1/16/25

Rated	**Value**	**Units**
Input Voltage	100-240	**Volts**
Input Current	10-5	**Amps**
Input Frequency	50-60	**Hz**
Rated Output Power	650	**Watts**

Note: All measurements were taken with input voltage at 115 V nominal at 60 Hz.



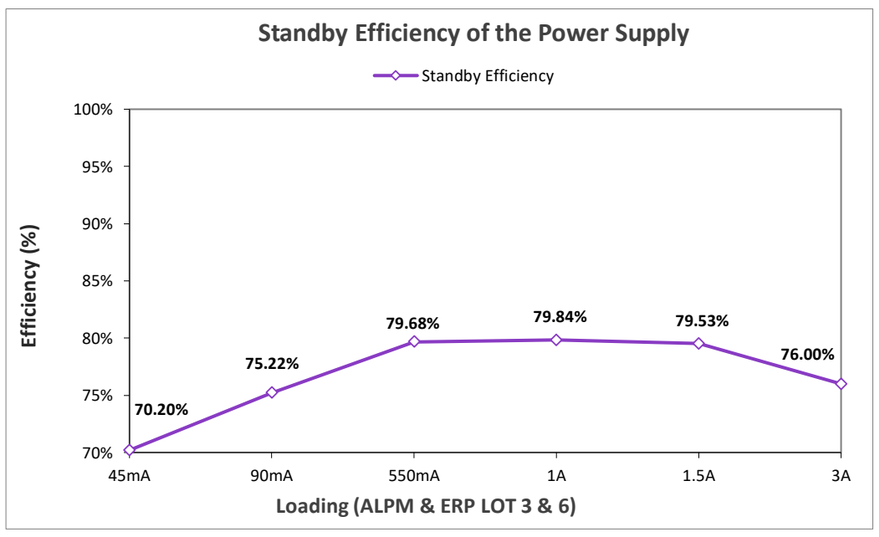
Input AC Current Waveform (ITHD = 15.11%, 50% Load)

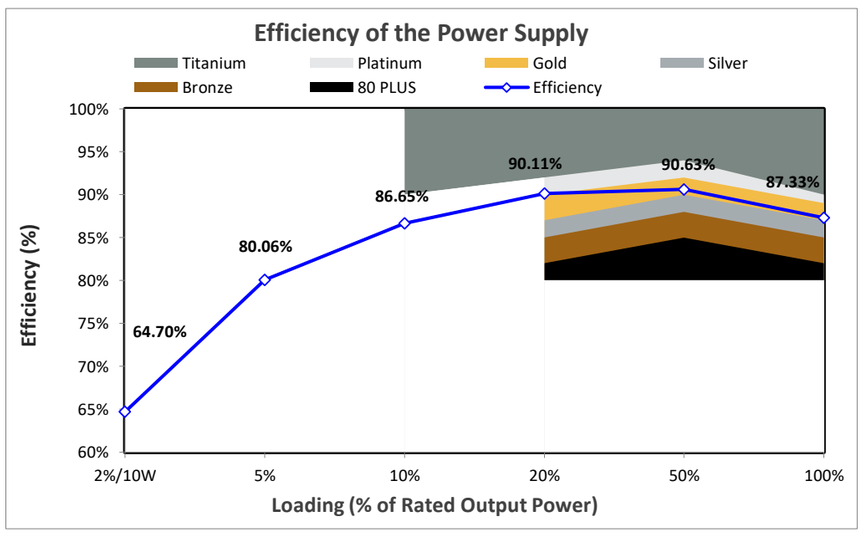
$I_{RMS\ (A)}$	PF	$I_{THD\ (\%)}$	Load	Input Watts	DC Terminal Voltage (V)/ DC Load Current (A)					Output Watts	Efficiency
					12V (cumulative of 12V1, 12V2, etc.)	-12V	3.3V	5V	5VSB		
0.143	0.5091	20.35	0%	**8.38**	**No-Load**						
0.225	**0.7812**	19.18	2%/10W	**20.21**	12.052/0.918	11.812/0.005	3.343/0.204	5.063/0.204	5.104/0.051	**13.08**	**64.70%**
0.391	**0.9085**	17.71	5%	**40.82**	12.050/2.292	11.715/0.013	3.342/0.511	5.061/0.511	5.096/0.127	**32.68**	**80.06%**
0.690	**0.9498**	18.35	10%	**75.41**	12.047/4.582	11.569/0.025	3.343/1.022	5.062/1.022	5.083/0.255	**65.35**	**86.65%**
1.298	**0.9711**	16.28	20%	**144.92**	12.040/9.160	11.467/0.051	3.343/2.043	5.063/2.043	5.058/0.509	**130.59**	**90.11%**
3.186	**0.9817**	15.11	50%	**359.59**	12.020/22.897	11.469/0.127	3.343/5.108	5.065/5.108	4.977/1.272	**325.90**	**90.63%**
6.559	**0.9860**	12.62	100%	**743.88**	11.980/45.790	11.641/0.254	3.344/10.216	5.072/10.216	4.841/2.543	**649.60**	**87.33%**

Note: Efficiency data was obtained from Sample 1 (Serial Number: N/A)

$I_{RMS\ (A)}$	PF	$I_{THD\ (\%)}$	Load	Input Watts	DC Terminal Voltage (V)/ DC Load Current (A)	Output Watts	Standby Efficiency
					5VSB		
0.086	0.0053	1.57	0mA	**0.05**	**Vampire Load**		
0.087	**0.0329**	9.85	45mA	**0.33**	5.105/0.045	**0.23**	**70.20%**
0.088	**0.0601**	16.43	90mA	**0.61**	5.104/0.090	**0.46**	**75.22%**
0.115	**0.2662**	58.89	550mA	**3.51**	5.089/0.550	**2.80**	**79.68%**
0.153	**0.3605**	73.04	1A	**6.36**	5.074/1.000	**5.07**	**79.84%**
0.199	**0.4139**	78.92	1.5A	**9.54**	5.057/1.500	**7.59**	**79.53%**
0.351	**0.4824**	83.82	3A	**19.77**	5.004/3.003	**15.03**	**76.00%**

Note: Standby efficiency data was obtained from Sample 2 (Serial Number: N/A)





These tests were conducted by a third party independent testing firm on behalf of the 80 PLUS Program. 80 PLUS is a certification program to promote highly-efficient power supplies (greater than 80% efficiency in the active mode) in technology applications.
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