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Test report for no-load condition electric power consumption and average active efficiency of external power supplies

for Ecodesign requirement of the COMMISSION REGULATION (EU) 2019/1782

Effective from 1 **April 2020**

■ Sample product information

(Notice)

Product Category:	Commercial equipment
Product name:	External power supply
Product number:	PGLV1022
Serial number:	*
Nameplate output power,(Pno)	54Vdc 2.78A Pno:150.1W
Type of external power supply	☐ AC-AC external power supply ■ AC-DC external power supply ☐ Low voltage external power supply

(Low voltage external power supply: Nameplate output voltage＜6V and output current≧550mA)

■ Measurement report

No-load condition power consumption

Type	Pno	Measurement Data	Requirement
AC-AC external power supply	Pno≦49.0W	N/A	≦0.21 W
	49.0W＜Pno	N/A	
AC-DC external power supply	Pno≦49.0W	N/A	≦0.10 W
	49.0W＜Pno	0.14	≦0.21 W
Low Voltage external power supply	Pno≦49.0W	N/A	≦0.10 W
	49.0W＜Pno	N/A	≦0.21 W

– N/A if Pno and Type not in category.

The average active efficiency

Type	Pno	Measurement data	Requirement
AC-AC external power supply AC-DC external power supply	Pno≦1.0W	N/A	≧ 0.50・Pno/1W+0.160
	1.0W＜Pno≦51.0W	N/A	≧ 0.85 =0.071・ln(Pno)-0.0014・Pno+0.67
	51.0W＜Pno≦250W	0.9305	≧ 0.880
Low Voltage external power supply	Pno≦1.0W	N/A	≧ 0.517・Pno+0.087
	1.0W＜Pno≦51.0W	N/A	≧ 0.0834・ln(Pno)-0.0014・Pno+0.609
	51.0W＜Pno≦250W	N/A	≧0.870

– N/A if Pno and Type not in category

■ **Information provided by manufacturer**

	Percentage of nameplate output current					
	Condition 1	Condition 2	Condition 3	Condition 4	Condition 5	Condition 6
	100%±2%	75%±2%	50%±2%	25%±2%	10%±2%	0%
RMS output current(mA)	2790	2090	1390	700	280	
RMS output Voltage(V)	53.26	53.37	53.47	53.58	53.64	
Active output power(W) :(Po)	148.37	111.57	74.57	37.41	15.06	
RMS input voltage(V)	229.97	230.03	230.07	230.12	230.15	230.13
RMS input power(W):(Pi)	158.01	118.84	79.91	41.06	17.60	0.14
Total Harmonic distortion (THD)	0.03	0.03	0.03	0.04	0.04	0.05
True power factor	0.968	0.975	0.965	0.939	0.695	0.030
Power Consumed by UUT(W) :(Pi－Po)	Calculated at load condition					Actual
	9.64	7.27	5.34	3.65	2.54	0.14
Efficiency :(Po/Pi)	Calculated at load condition					
	93.90%	93.88%	93.31%	91.10%	85.57%	
Average efficiency	Arithmetic average of efficiency at load conditions 1-4					
	93.05%					

■ **Measuring Condition**

Items	Value	Measuring Instrument	Accuracy
Power supply voltage and frequency	230 (Volts)		
	50 (Hertz)		
Power Supply THD	<2(%)		
Ambient Temperature	23±5(Centigrade)		

■ **Measuring equipment for power consumption**

Instrument Name	Model number	Manufactured by	Accuracy
AC Source	6430	CHROMA	
Electronic Load	63640-80-80	CHROMA	
Power Meter	66202	CHROMA	

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