

ENERGY EFFICIENCY STANDARDS

DOE Level VI
Effective 10 February 2016

Code of Conduct on Energy Efficiency of
External Power Supplies Version 5 Tier 2
Effective 01 February 2016

EU 2019/1782 Efficiency of External Power Supplies
Effective 01 April 2020

Energy-Efficiency Criteria for Active Mode (for external power supplies with output $\geq 6V$)

Rated Power (Pno)	Average Efficiency in Active Mode
$\leq 1W$	$\geq 0.500 * Pno + 0.160$
$>1W$ to $\leq 49W$	$\geq 0.071 * \ln(Pno) - 0.0014 * Pno + 0.670$
$>49W$ to $\leq 250W$	≥ 0.880
$>250W$	≥ 0.875

Rated Power (Pno)	Minimum Four Point Average Efficiency in Active Mode
$0.3 < W < 1$	$\geq 0.500 * Pno + 0.169$
$1 < W < 49$	$\geq 0.071 * \ln(Pno) - 0.00115 * Pno + 0.670$
$49 < W < 250$	≥ 0.890
Rated Power (Pno)	Minimum Efficiency in Active Mode at 10% Load of Full Rated Output Current
$0.3 < W < 1$	$\geq 0.500 * Pno + 0.060$
$1 < W < 49$	$\geq 0.071 * \ln(Pno) - 0.00115 * Pno + 0.570$
$49 < W < 250$	≥ 0.790

Rated Power (Pno)	Minimum Four Point Average Efficiency in Active Mode
$\leq 1W$	$\geq 0.500 * Pno + 0.160$
$1 < W \leq 49$	$\geq 0.071 * \ln(Pno) - 0.0014 * Pno + 0.670$
$>49W$ to $\leq 250W$	≥ 0.880

Energy-Efficiency Criteria for Active Mode (for external power supplies with output $< 6V$ and $\geq 550mA$)

Rated Power (Pno)	Average Efficiency in Active Mode
$\leq 1W$	$\geq 0.517 * Pno + 0.087$
$>1W$ to $\leq 49W$	$\geq 0.0834 * \ln(Pno) - 0.0014 * Pno + 0.609$
$>49W$ to $\leq 250W$	≥ 0.870
$>250W$	≥ 0.875

Rated Power (Pno)	Average Efficiency in Active Mode
$0.3 < W < 1$	$\geq 0.517 * Pno + 0.091$
$1 < W < 49$	$\geq 0.0834 * \ln(Pno) - 0.0011 * Pno + 0.609$
$49 < W < 250$	≥ 0.880
Rated Power (Pno)	Minimum Efficiency in Active Mode at 10% Load of Full Rated Output Current
$0.3 < W < 1$	$\geq 0.517 * Pno$
$1 < W < 49$	$\geq 0.0834 * \ln(Pno) - 0.00127 * Pno + 0.518$
$49 < W < 250$	≥ 0.780

Rated Power (Pno)	Average Efficiency in Active Mode
$\leq 1W$	$\geq 0.517 * Pno + 0.087$
$1 < W \leq 49$	$\geq 0.0834 * \ln(Pno) - 0.0014 * Pno + 0.609$
$>49W$ to $\leq 250W$	≥ 0.870

No Load Power Consumption

Rated Power (Pno)	Maximum Energy Consumption in No-Load Mode
$\leq 1W$	0.100W
$>1W$ to $\leq 49W$	0.100W
$>49W$ to $\leq 250W$	0.210W
$>250W$	0.500W

Rated Power (Pno)	Maximum Energy Consumption in No-Load Mode
$>0.3W$ and $<49W$	0.075W
$>49W$ and $<250W$	0.150W
Mobile handheld battery driven and $<8W$	0.075W

Rated Power (Pno)	Maximum Energy Consumption in No-Load Mode
$\leq 49W$	0.100W
$>49W$ and $\leq 250W$	0.210W