

LED Driver Load Calculator

Estimates LED-driver watts, VA, adjusted continuous load, and circuit current from driver rating, quantity, power factor, multiplier, voltage, and phase.

Generated October 10, 2026

<https://www.elecatrix.com/lighting/led-driver-load-calculator/>

Inputs

Input	Value	Unit
Driver watts	96	W
Driver quantity	18	count
Power factor	0.9	PF
Continuous multiplier	125	%
System voltage	120	V
Phase	Single-phase	

Results

Result	Value	Unit
Total driver watts	1728	W
Total driver load	1920	VA
Adjusted driver load	2400	VA
Circuit current	20	A
Phase multiplier	1	x

Calculation details

Detail	Value	Unit
Calculation basis	Total driver watts equals driver watts times quantity. VA is adjusted by entered power factor and continuous multiplier before current conversion.	
Selection boundary	LED driver load estimate only; no circuit count, breaker, conductor, dimming, inrush, temperature, listing, or code-compliance result is made.	

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Formulas

Total driver watts = driver watts x driver quantity

Total driver VA = (total driver watts/power factor)

Adjusted driver VA = total driver VA x (continuous multiplier (%)/100)

Phase multiplier = 1 for single-phase, sqrt(3) for balanced three-phase

Circuit current = (adjusted driver VA/phase multiplier x voltage)

Warnings and limitations

This LED driver load estimate is an arithmetic comparison. It does not select circuits, breakers, conductors, dimming equipment, inrush allowances, or code compliance.