

CHAPTER 2 - CONSERVATION AND EFFICIENCY: BUILDING SYSTEMS

500

502.05 LIGHTING POWER DENSITY – EXTERIOR



INTENT

To promote efficient light fittings to optimise exterior lighting energy consumption.

REQUIREMENT

For all new buildings, the average Lighting Power Density for the exterior connected lighting load for specific building types must not exceed the values given in Table 502.05 (1).

Table 502.05(1): Building Exterior Lighting Power Density

Building Area	Maximum W/m ² or linear metre
Uncovered parking lots and drives	1.6 W/m ²
Walkways less than 3m wide	3.3 W/linear metre
Walkways 3m wide or greater	2.2 W/m ²
Outdoor stairways	10.8 W/m ²
Main entries	98 W/linear metre of door width
Other doors	66 W/linear meter of door width
Open sales areas (including vehicle sales lots)	5.4 W/m ²
Building facades	2.2 W/m ² for each illuminated wall or surface or 16.4 W/linear metre for each illuminated wall or surface length
Entrances and gatehouse inspection stations at guarded facilities	13.5 W/m ²
Drive-up windows at fast food restaurants	400 W / drive-through

Lighting Power Density values for exterior areas for building types not listed in Table 502.05 (1) shall not exceed the values indicated in the latest edition of ASHRAE standard 90.1 or equivalent as approved by DEWA.

If the light power density values for external lighting exceeds the values specified in Table 502.05 (1), the additional lighting load must be powered entirely, through renewable energy sources such as photovoltaic systems or similar.