

57.2.2 Upgrade buildings to higher energy efficiency

Have plans to upgrade existing buildings to higher energy efficiency

Energy label Certificate for LED Light from Taiwan Bureau of Energy.



Energy Efficient Lighting fixtures



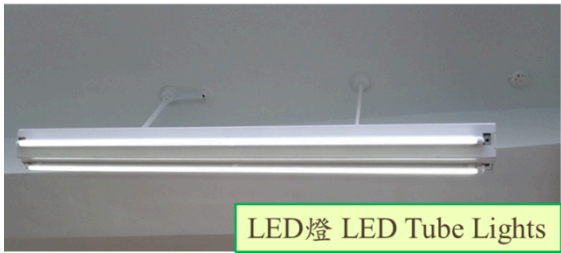
Energy Efficient Lighting fixtures



T5燈 T5 Tube Lights



免燈具式燈管
Integrated Tube Light



LED燈 LED Tube Lights



LED平板燈具 LED Panel Lights

7.5 Electricity Usage per Year (in Kilowatt hour)

	2021/8-2022/7 (110)	2022/8-2023/7 (111)	2023/8-2024/8 (112)
Total buildings area (m2)	274,978	274,978	274,978
Annual electricity consumption(kw-hr)	16,418,097	17,085,520	16,580,832
Percentage of change	-2.99%	4.07%	-2.95%
Electric Use Intensity(kw/m2)	59.7	62.13	60.29

Description:

The factors to be considered for Tzu Chi University (TCU):

- TCU’s College of Medicine has around 600 labs, and equips each one of them with numerous equipment, e.g., ultra-low temperature freezers and incubators.
- TCU has two campuses, and each campus has its library, sports center and swimming pool.

In appearance, TCU’s electricity usage is high; but it is reasonable, by taking these factors into consideration.

112th academic year electricity usage:

$(16,580,832\text{kw-hr} \times 3.6) / 1000 = \mathbf{59,691GJ}$

Renewable Energy Sources in Campus

Electricity generation from solar energy

年/月	發電量/KW	年/月	發電量/KW
2023/8	505,932	2024/2	201,228
2023/9	467,289	2024/3	243,474
2023/10	463,200	2024/4	252,818
2023/11	238,661	2024/5	328,364
2023/12	284,675	2024/6	327,226
2024/1	200,904	2024/7	384,430
		total	3,898,201

112th academic year energy used from low-carbon sources: $(3,898,201\text{kw-hr} \times 3.6) / 1000 = \mathbf{14,034GJ}$