

Appendix: Comparison of T12, T8, TLED vs Alec Smart LED Conversion Kit

Application: Stairwell/Emergency Route 24/7 = 8760 hrs / year

Currently Installed Fixture Type: 2-Tube Fluorescent Lamps

Local Electricity Rate - Please enter your local rate (include all taxes and fees) **\$0.20** /kWh

1. Technology Comparison (Assume Ballast Factor = 1.0. T8-LED (rated 17W) power adjusted to ballast factor 1.0 = 22W)

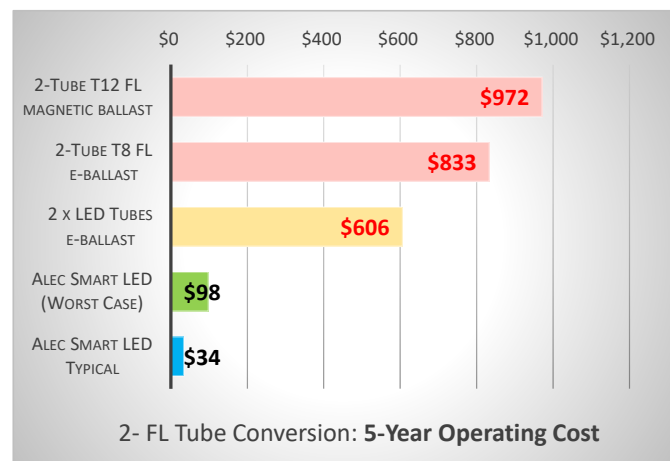
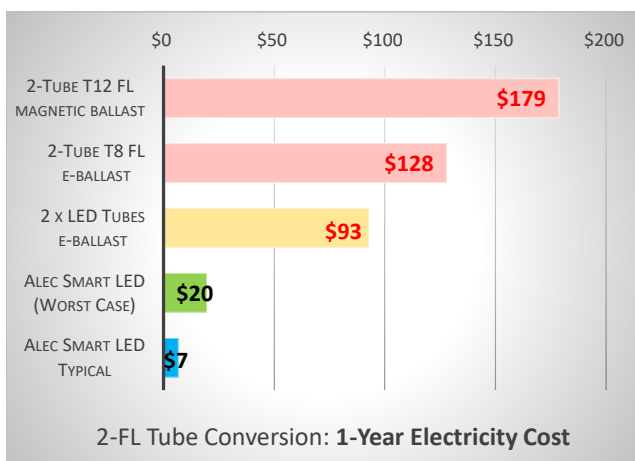
	T12 FL-40W magnetic ballast	T8 FL-32W e-ballast	T8-LED Tube-17W e-ballast factored	Alec Smart LED Conversion (SLC) Model SLC-24F40WDXK
Lamp Power : 2-Tube FL	40Wx2 = 80W	32Wx2 = 64W	22W x 2 = 44W	1 to 40W ¹
Automatic Dimming	No	No	No	YES (0-100%)
Tube life	15000 hrs	25000 hrs	50000 hrs (L70)	> 50000 hrs
Ballast life	50000 hrs	20000 hrs	20000 hrs	n/a

¹ The maximum power limit can be set by the software app

2. Energy Evaluation:

	2-Tube T12 FL magnetic ballast	2-Tube T8 FL e-ballast	2 x LED Tubes e-ballast	Alec Smart LED (Worst Case)	Alec Smart LED Typical
Operating Conditions					
Annual Operating Hours	8760	8760	8760	8760	8760
Ballast Factor	1.00	1.00	1.00	-	-
Ballast power lost ²	22W	9W	9W	-	-
Maximum power (occupied)	80W	64W	44W	40W	20W
Minimum power (vacant or with daylight)	80W	64W	44W	8W	3W
% of time the light @ Full Brightness	100%	100%	100%	10%	5%
Average power	102W	73W	53W	11.2W	3.9W
1-year Operating cost					
Total Energy (kWh)	894 kWh	639 kWh	464 kWh	98 kWh	34 kWh
Electricity Cost @rate: \$0.20/kWh	\$179	\$128	\$93	\$20	\$7
5-year Operating cost					
Electricity Cost	\$894	\$639	\$464	\$98	\$34
No. of ballast replaced	0	2	2	0	0
No. of tubes replaced	6	4	0	0	0
Near end of life after 5 years	Yes	Yes	Yes	No	No
Ballast replacement (parts+labour)	\$0	\$140	\$140	\$0	\$0
Tube replacement (parts+labour)	\$72	\$48	\$0	0	0
Total 5-year Operating Costs	\$972	\$833	\$606	\$98	\$34

² https://www.ehow.com/info_12210865_much-wattage-ballast-lose.html



Appendix: Comparison of T12, T8, TLED vs Alec Smart LED Conversion Kit



Application: **Stairwell/Emergency Route** 24/7 = 8760 hrs / year

Currently Installed Fixture Type: **1-Tube** Fluorescent Lamps

Local Electricity Rate - Please enter your local rate **\$0.20** /kWh
(include all taxes and fees)

1. Technology Comparison (Assume Ballast Factor = 1.0. T8-LED (rated 17W) power adjusted to ballast factor 1.0 = 22W)

	T12 FL-40W magnetic ballast	T8 FL-32W e-ballast	T8-LED Tube-17W e-ballast factored	Alec Smart LED Conversion (SLC) Model SLC-24F40WDXXK
Lamp Power : 1-Tube FL	40Wx1 = 40W	32Wx1 = 32W	22W = 44W	1 to 20W ¹
Automatic Dimming	No	No	No	YES (0-100%)
Tube life	15000 hrs	25000 hrs	50000 hrs (L70)	> 50000 hrs
Ballast life	50000 hrs	20000 hrs	20000 hrs	n/a

¹ The maximum power limit can be set by the software app

2. Energy Evaluation:

	1-Tube T12 FL magnetic ballast	1-Tube T8 FL e-ballast	1 x LED Tubes e-ballast	Alec Smart LED (Worst Case)	Alec Smart LED Typical
Operating Conditions					
Annual Operating Hours	8760	8760	8760	8760	8760
Ballast Factor	1.00	1.00	1.00	-	-
Ballast power lost ²	14W	5W	5W	-	-
Maximum power (occupied)	40W	32W	22W	20W	20W
Minimum power (vacant or with daylight)	40W	32W	22W	4W	3W
% of time the light @ Full Brightness	100%	100%	100%	20%	5%
Average power	54W	37W	27W	7.2W	3.9W
1-year Operating cost					
Total Energy (kWh)	473 kWh	324 kWh	237 kWh	63 kWh	34 kWh
Electricity Cost @rate: \$0.20/kWh	\$95	\$65	\$47	\$13	\$7
5-year Operating cost					
Electricity Cost	\$473	\$324	\$237	\$63	\$34
No. of ballast replaced	0	2	2	0	0
No. of tubes replaced	6	4	0	0	0
Near end of life after 5 years	Yes	Yes	Yes	No	No
Ballast replacement (parts+labour)	\$0	\$140	\$140	\$0	\$0
Tube replacement (parts+labour)	\$72	\$48	\$0	0	0
Total 5-year Operating Costs	\$551	\$518	\$379	\$63	\$34

² https://www.ehow.com/info_12210865_much-wattage-ballast-lose.html

