

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

**Application:** Parking Garage/Corridors 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)

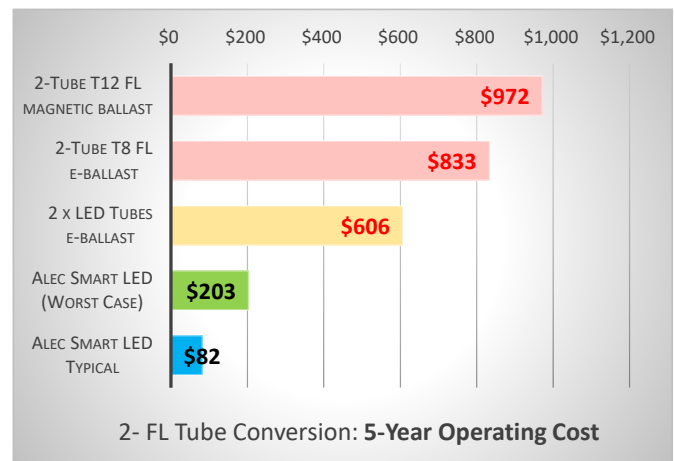
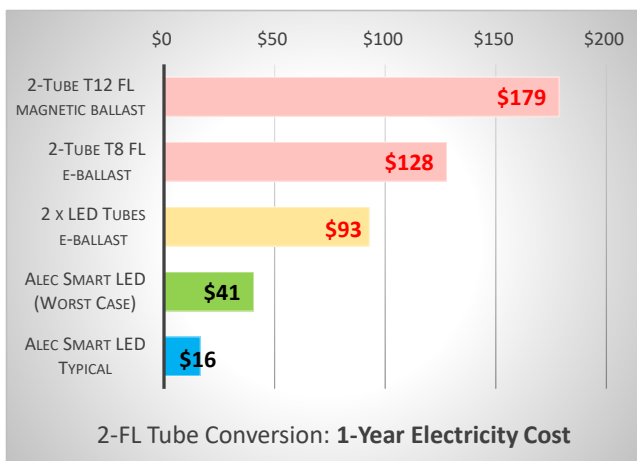
	T12 FL-40W magnetic ballast	T8 FL-32W e-ballast	T8-LED Tube-17W e-ballast factored	Alec Smart LED Conversion (SLC) Model SLC-24F40WDXXK
Lamp Power : <b>2-Tube FL</b>	40Wx2 = 80W	32Wx2 = 64W	22W x 2 = 44W	1 to 40W <sup>1</sup>
Automatic Dimming	No	No	No	YES (0-100%)
Tube life	15000 hrs	25000 hrs	50000 hrs (L70)	> 50000 hrs
Ballast life	50000 hrs	20000 hrs	20000 hrs	n/a

<sup>1</sup> 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
<b>Operating Conditions</b>					
Annual Operating Hours	8760	8760	8760	8760	8760
Ballast Factor	1.00	1.00	1.00	-	-
Ballast power lost <sup>2</sup>	22W	9W	9W	-	-
Maximum power (occupied)	80W	64W	44W	40W	40W
Minimum power (vacant or with daylight)	80W	64W	44W	16W	6W
% of time the light @ Full Brightness	100%	100%	100%	30%	10%
<b>Average power</b>	<b>102W</b>	<b>73W</b>	<b>53W</b>	<b>23.2W</b>	<b>9.4W</b>
<b>1-year Operating cost</b>					
Total Energy (kWh)	894 kWh	639 kWh	464 kWh	203 kWh	82 kWh
Electricity Cost @rate: \$0.20/kWh	<b>\$179</b>	<b>\$128</b>	<b>\$93</b>	<b>\$41</b>	<b>\$16</b>
<b>5-year Operating cost</b>					
Electricity Cost	<b>\$894</b>	<b>\$639</b>	<b>\$464</b>	<b>\$203</b>	<b>\$82</b>
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
<b>Total 5-year Operating Costs</b>	<b>\$972</b>	<b>\$833</b>	<b>\$606</b>	<b>\$203</b>	<b>\$82</b>

<sup>2</sup> [https://www.ehow.com/info\\_12210865\\_much-wattage-ballast-lose.html](https://www.ehow.com/info_12210865_much-wattage-ballast-lose.html)



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



**Application:** Parking Garage/Corridors 24/7 = 8760 hrs / year

**Currently Installed Fixture Type:** 1-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-24F40WDXXK
Lamp Power : <b>1-Tube FL</b>	40Wx1 = 40W	32Wx1 = 32W	22W = 44W	1 to 20W <sup>1</sup>
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

<sup>1</sup> 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
<b>Operating Conditions</b>					
Annual Operating Hours	8760	8760	8760	8760	8760
Ballast Factor	1.00	1.00	1.00	-	-
Ballast power lost <sup>2</sup>	14W	5W	5W	-	-
Maximum power (occupied)	40W	32W	22W	20W	20W
Minimum power (vacant or with daylight)	40W	32W	22W	8W	3W
% of time the light @ Full Brightness	100%	100%	100%	30%	10%
<b>Average power</b>	<b>54W</b>	<b>37W</b>	<b>27W</b>	<b>11.6W</b>	<b>4.7W</b>
<b>1-year Operating cost</b>					
Total Energy (kWh)	473 kWh	324 kWh	237 kWh	102 kWh	41 kWh
Electricity Cost @rate: \$0.20/kWh	<b>\$95</b>	<b>\$65</b>	<b>\$47</b>	<b>\$20</b>	<b>\$8</b>
<b>5-year Operating cost</b>					
Electricity Cost	<b>\$473</b>	<b>\$324</b>	<b>\$237</b>	<b>\$102</b>	<b>\$41</b>
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	<b>No</b>	<b>No</b>
Ballast replacement (parts+labour)	\$0	\$140	\$140	\$0	\$0
Tube replacement (parts+labour)	\$72	\$48	\$0	0	0
<b>Total 5-year Operating Costs</b>	<b>\$551</b>	<b>\$518</b>	<b>\$379</b>	<b>\$102</b>	<b>\$41</b>

<sup>2</sup> [https://www.ehow.com/info\\_12210865\\_much-wattage-ballast-lose.html](https://www.ehow.com/info_12210865_much-wattage-ballast-lose.html)

