



pureWHITE™
LED pool light

Sample PureWhite LED Pool Light Savings Analysis

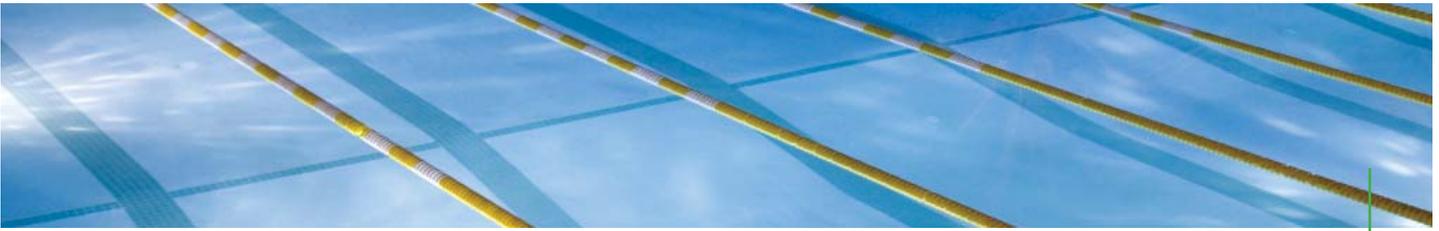
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Prepared By: Pool Supply Unlimited
13610 S. Archibald Ave.
Ontario, CA 91761

**PureWhite is
Manufactured by:**



J&J ELECTRONICS, INC.



Introducing PureWhite

About J&J Electronics' revolutionary new white LED pool light: PureWhite

PureWhite is a white LED replacement in-ground pool lamp that integrates leading edge technologies to provide the best commercial LED pool lighting available.

Why is PureWhite a superior lighting solution to incandescent pool lights?

1. Immediately reduces pool lighting energy expense

Uses 90% less energy than incandescent pool lights

Average energy cost per light is less than \$22 annually
The average annual energy cost per 300 watt incandescent is \$320

Replacing just one 300 watt incandescent bulb saves nearly \$300 per year in energy

2. Environmentally responsible Mercury-free and toxin-free production is Earth & people friendly

Using only 45 watts, PureWhite's energy efficiency reduces carbon emissions

Extremely long lamp life eliminates unnecessary landfill waste

3. Significantly enhances pool water's blue appearance and clarity

PureWhite brightens the "color temperature" of the water, creating vibrant blue shades instead of dull and dingy green tints

The water looks cleaner and brighter with ultra-bright white LED light

Decorative details are more visible and accentuated

4. Provides peace of mind with no-hassle installation and extremely low maintenance

Easy to install and easy to replace
Edison base allows for instant replacement- no retrofit of pool light housing or niche needed!

Light lasts 20 times longer than incandescents

Average life span per PureWhite light is over 11 years
Average life span per incandescent is less than 7 months

No annual maintenance required

Backed by a 3 year warranty

5. The Future of Pool lighting

LED technology dates back to the 1960s

J&J Electronics has been established as a leader in LED technology to the pool and spa industry for nearly ten years

Recent technology advancements by J&J Electronics provide a platform for producing cutting edge, high output, white LED lighting products



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Annual Re-Lamping Cost Analysis

Lamp Life - Variable Daily Usage **PureWhite LED Pool Light** **Incandescent Pool Light**

Lamp Lifetime Hours	PureWhite LED Pool Light	Incandescent Pool Light
Lamp Lifetime Hours	50,000	2,500
<u>Lamp Life Years</u>		
10 Hours, daily operation	13.70	0.68
12 Hours, daily operation	11.42	0.57
24 Hours, daily operation	5.71	0.29

Annual Re-Lamping Schedule Per Lamp **PureWhite LED Pool Light** **Incandescent Pool Light**

Annual Re-Lamping Schedule Per Lamp	PureWhite LED Pool Light	Incandescent Pool Light
10 Hours, daily operation	0 lamps	1.46 lamps
12 Hours, daily operation	0 lamps	1.75 lamps
24 Hours, daily operation	0 lamps	3.45 lamps

Incandescent Re-Lamping Cost Per Lamp **Incandescent Pool Light**

Incandescent Re-Lamping Cost Per Lamp	Incandescent Pool Light
<u>Labor</u>	
Labor Cost, per hour	\$50.00
Labor Hours, per re-lamp	0.50
Total Re-Lamping Labor Cost	\$25.00
<u>Materials</u>	
Incandescent Lamp Cost	\$25.00
Light Fixture Lens Gasket Cost	\$25.00
Total Re-Lamping Materials Cost	\$50.00
Total Incandescent Re-Lamping Cost	\$75.00

Annual Incandescent Re-Lamping Expense Per Lamp **Incandescent Pool Light**

Annual Incandescent Re-Lamping Expense Per Lamp	Incandescent Pool Light
10 Hours, daily operation	\$109.50
12 Hours, daily operation	\$131.25
24 Hours, daily operation	\$258.75



Sample PureWhite LED Pool Light Savings Analysis



Life Cycle Cost Estimate

COST ESTIMATE CALCULATION DATA

		PureWhite LED Pool Light	Incandescent Pool Light
Number of pool lights	5		
Electricity Rate (\$/kWh)	CA - \$0.129		
Hours used per day	12		
Months per year	12		
Initial cost per unit		\$269.68	\$25.00
Wattage (watts)		45	500
Lifetime (hours)		50,000	2,500

ANNUAL AND LIFE CYCLE COSTS & SAVINGS FOR 5 PUREWHITE LED POOL LIGHTS

	5 PureWhite LED Pool Lights	5 Incandescent Pool Lights	Savings with PureWhites
Annual Operating Costs*			
Energy consumption (kWh)	986	10,950	9,965
Energy cost	\$127	\$1,413	\$1,285
Maintenance cost	\$0	\$657	\$657
Total	\$127	\$2,070	\$1,942
Life Cycle Costs*			
Energy consumption (kWh)	16,875	187,500	170,625
Energy cost (lifetime)	\$1,554	\$17,272	\$15,718
Maintenance cost (lifetime)	\$0	\$8,034	\$8,034
Operating cost (energy & maintenance)	\$1,554	\$25,306	\$23,751
PureWhite installation cost	\$0	N/A	\$0
Initial purchase price	\$1,348	\$125	-\$1,223
Total	\$2,903	\$25,431	\$22,528
		Simple payback (years)†	0.63

* Annual costs exclude the initial purchase price. All costs, except initial cost, are discounted over the products' lifetime using a real discount rate of 4%.

† A simple payback period of zero years means that the payback is immediate.

SUMMARY OF BENEFITS FOR 5 PUREWHITE LED POOL LIGHTS

Initial cost difference	\$1,223	Life cycle air pollution reduction (lbs of CO ₂)	261,909
Life cycle savings	\$23,751	Air pollution reduction equivalence (number of cars removed from the road for a year)	22.83
Net life cycle savings (life cycle savings - additional cost)	\$22,528	Air pollution reduction equivalence (acres of forest)	32.47
Simple payback (years)	0.63	Savings as a percent of price	1671%
Life cycle energy saved (kWh)	170,625		

This energy savings calculator was developed by J&J Electronics, Inc. for estimating purposes only. Actual energy savings may vary based on use and other factors.

Sample PureWhite LED Pool Light Savings Analysis



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Life Cycle Cost Estimate - Single Light

COST ESTIMATE CALCULATION DATA

		PureWhite LED Pool Light	Incandescent Pool Light
Number of pool lights	1		
Electricity Rate (\$/kWh)	CA - \$0.129		
Hours used per day	12		
Months per year	12		
Initial cost per unit		\$269.68	\$25.00
Wattage (watts)		45	500
Lifetime (hours)		50,000	2,500

ANNUAL AND LIFE CYCLE COSTS & SAVINGS FOR 1 PUREWHITE LED POOL LIGHT

	1 PureWhite LED Pool Light	1 Incandescent Pool Light	Savings with PureWhite
Annual Operating Costs*			
Energy consumption (kWh)	197	2,190	1,993
Energy cost	\$25	\$283	\$257
Maintenance cost	\$0	\$131	\$131
Total	\$25	\$414	\$388

* Annual costs exclude the initial purchase price. All costs, except initial cost, are discounted over the products' lifetime using a real discount rate of 4%.

	1 PureWhite LED Pool Light	1 Incandescent Pool Light	Savings with PureWhite
Life Cycle Costs*			
Energy consumption (kWh)	3,375	37,500	34,125
Energy cost (lifetime)	\$311	\$3,454	\$3,144
Maintenance cost (lifetime)	\$0	\$1,607	\$1,607
Operating cost (energy & maintenance)	\$311	\$5,061	\$4,750
PureWhite installation cost	\$0	N/A	\$0
Initial purchase price	\$270	\$25	-\$245
Total	\$581	\$5,086	\$4,506
		Simple payback (years)†	0.63

† A simple payback period of zero years means that the payback is immediate.

SUMMARY OF BENEFITS FOR 1 PUREWHITE LED POOL LIGHT

Initial cost difference	\$245	Life cycle air pollution reduction (lbs of CO ₂)	52,382
Life cycle savings	\$4,750	Air pollution reduction equivalence (number of cars removed from the road for a year)	4.57
Net life cycle savings (life cycle savings - additional cost)	\$4,506	Air pollution reduction equivalence (acres of forest)	6.49
Simple payback (years)	0.63	Savings as a percent of price	1671%
Life cycle energy saved (kWh)	34,125		

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About J&J Electronics

J&J Electronics' experience in creating cutting edge products for the Pool & Spa industry stretches back to 1982. Since that time J&J's forward thinking team has created an innovative culture to anticipate the industry's changing needs. Our insight has allowed J&J to embrace new technologies and develop exciting, new pool products.

In 2001, J&J Electronics acknowledged the global trend toward solid state lighting and committed our resources to exclusively deliver LED technology solutions. J&J is now the leading provider of solid state LED lighting technology to the pool and spa industry. Our valued reputation has been built upon the performance of our core LED brands: ColorGlo, ColorCHOICE, Color Splash and PureWhite.

J&J emphasizes using its internal research and design resources to develop innovative, patentable LED technology solutions. The foundation of J&J's LED product engineering rests upon competencies in power and thermal management. This allows J&J to consistently utilize LED technology advances to produce the most energy efficient, lowest maintenance and most dynamic LED lighting products available in the industry.

