

JOLIET LED STREET LIGHTING

**Power consumption comparison
between a JOL6 LED (168W) streetlight and a 400W HP Sodium Streetlight**

Working 12 hours a day

Item	Lamp source	HPS Streetlight	JOL6 Streetlight	Remark
Lamp power consumption		400W	168W	
Electrical distribution		Rectifier 120W	Switching Power 30W	
Comprehensive Cable Loss (6%)		24W	10W	
Transformer loss (3%)		12W	5W	
Reactive power compensation		0.85	0.99	
Total Lamp's Power consumption		654W	215W	
Daily consumption		7.85 kWh	2.58 kWh	Calculated by 12 hours a day
Consumption per month		238.64 kWh	78.43 kWh	Calculated on a 30.4 days basis
Consumption per year		2,867.21 kWh	942.35 kWh	Calculated on a 365.25 days basis
10 year's consumption estimation		28,672.12 Kwh	9423.50 Kwh	

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**Power consumption comparison
between a JOL4 LED (112W) streetlight and a 250W HP Sodium Streetlight**

Working 12 hours a day

Item	Lamp source	HPS Streetlight	JOL4 Streetlight	Remark
Lamp power consumption		250W	112W	
Electrical distribution		Rectifier 75W	Switching Power 20W	
Comprehensive Cable Loss (6%)		15W	7W	
Transformer loss (3%)		8W	3W	
Reactive power compensation		0.85	0.99	
Total Lamp's Power consumption		409W	144W	
Daily consumption		4.91 kWh	1.73 kWh	Calculated by 12 hours a day
Consumption per month		149.26 kWh	52.59 kWh	Calculated on a 30.4 days basis
Consumption per year		1793.38 kWh	631.88 kWh	Calculated on a 365.25 days basis
10 year's consumption estimation		17,933.77 Kwh	6318.82 Kwh	

**Power consumption comparison
between a JOL2 LED (56W) streetlight and a 150W HP Sodium Streetlight**

Working 12 hours a day

Item	Lamp source	HPS Streetlight	JOL2 Streetlight	Remark
Lamp power consumption		150W	56W	
Electrical distribution		Rectifier 45W	Switching Power 10W	
Comprehensive Cable Loss (6%)		9W	3W	
Transformer loss (3%)		5W	2W	
Reactive power compensation		Power factor : 0.85	Power factor : 0.99	
Total Lamp's Power consumption		245W	72 W	
Daily consumption		2.94 kWh	0.86 kWh	Calculated by 12 hours a day
Consumption per month		89.38 kWh	26.14 kWh	Calculated on a 30.4 days basis
Consumption per year		1073.84 kWh	314.11 kWh	Calculated on a 365.25 days basis
10 year's consumption estimation		10738.35 Kwh	3141.1 Kwh	

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**Power consumption comparison
between a JOL28 LED Bulb (28W) streetlight and a 75W HP Sodium Streetlight**

Working 12 hours a day

Item	Lamp source	HPS Streetlight	JOL28 Streetlight	Remark
Lamp power consumption		75 W	28W	
Electrical distribution		Rectifier 23W	Switching Power 6W	
Comprehensive Cable Loss (6%)		5W	2W	
Transformer loss (3%)		2W	1W	
Reactive power compensation		Power factor : 0.85	Power factor : 0.99	
Total Lamp's Power consumption		123W	37 W	
Daily consumption		1.48kWh	0.44 kWh	Calculated by 12 hours a day
Consumption per month		44.99kWh	13.38 kWh	Calculated on a 30.4 days basis
Consumption per year		540.57kWh	160.71 kWh	Calculated on a 365.25 days basis
10 year's consumption estimation		5,405.7Kwh	1607.1 Kwh	