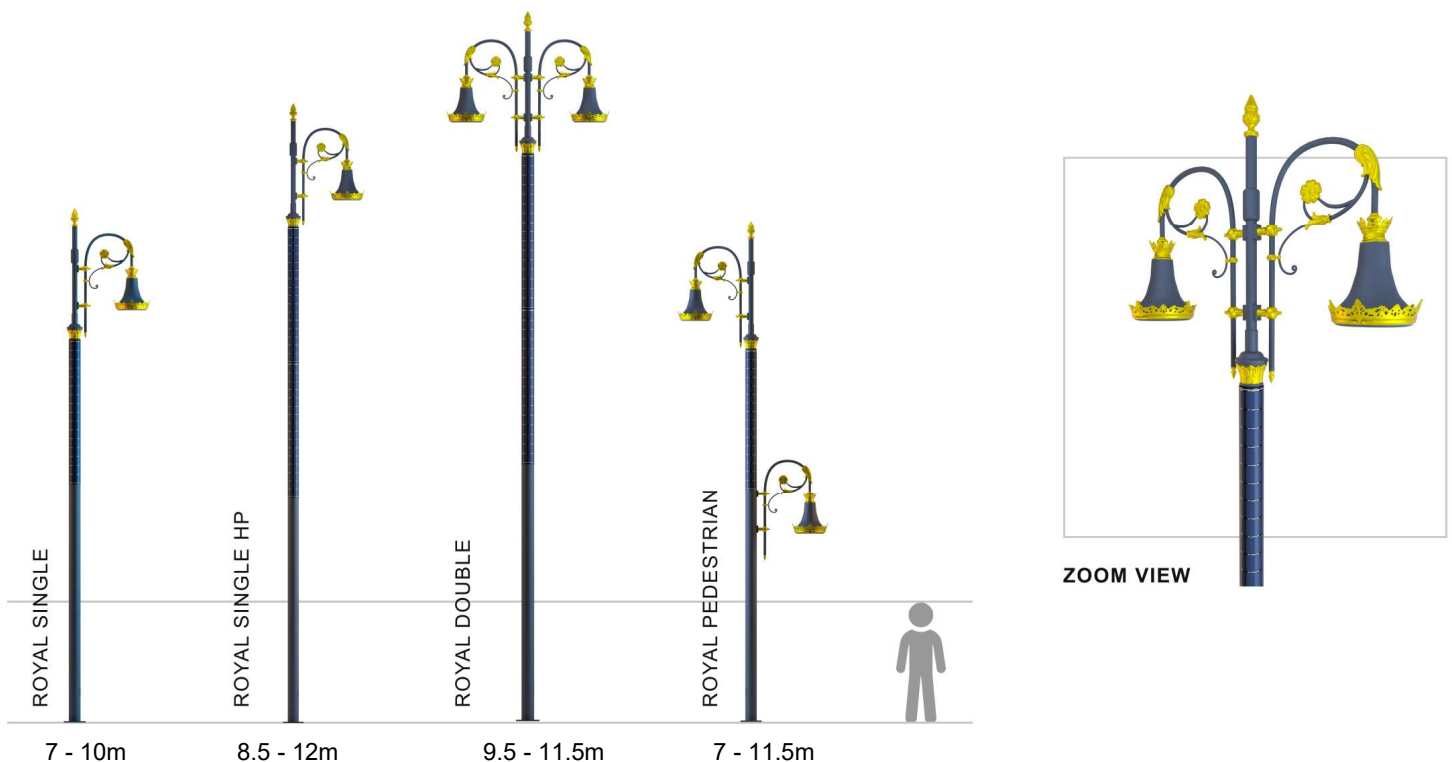


# ROYAL Family

German Engineered  
Solar Lighting

Modern technology combined with old world architecture.



## FEATURES

- High-performance street light with excellent illumination
- Fully autonomous and energy self-sufficient
- Smart, reliable and affordable
- Strong and durable construction
- Easy to install and minimum maintenance

## APPLICATIONS

- Historical sites
- Parks
- Gardens

## OPTIONS

HYBRID STREET LIGHTING - a combination of batteries and grid connectivity where the batteries serve as back-up.

SMART MONITORING - remote configuration and lighting control from anywhere via a modern web application.

## CUSTOMIZATION

Solar smart street lights can be tailored to fit your specific needs: Choose the desired height, color, luminaire, light distribution and output to fit your demands.

# TECHNICAL SPECIFICATIONS

	ROYAL Single	ROYAL Single HP	ROYAL Double	ROYAL Pedestrian
<b>General information</b>				
Pole Height	7 - 10 m	8.5 - 12 m	9.5 - 11.5 m	7 - 11.5 m
Diameter	180 mm			
Number of Days of Autonomy	> 3 days (luminous efficacy automatically reduced)			
<b>LED Lighting</b>				
Power	60 Watt	120 Watt	100 Watt	100 Watt
Lumen Output	8,400 lm	15,000 lm	12,500 lm	12,500 lm
Lumen Efficiency	~140 lm / W	~125 lm / W	~117 lm / W	~117 lm / W
Colour Temperature (CCT)	4000K (standard) / 3000K			
Operating Temperature	-20°C to +60°C (ambient temperature)			
Lifetime	L70 > 50,000 hrs			
Dimming	Continuously dimmable (0-100%)			
ON/OFF control	Programmable			
Light Profile	Programmable			
Motion Sensor	Optional			
Warranty	5 years			
<b>Solar Module</b>				
Type	vertical, cylindrical (Agamine's proprietary solar module)			
Technology	Monocrystalline silicon, efficiency > 24%			
Quantity	1 PV - 64 cells	2 PV - 128 cells	2 PV - 128 cells	1 PV/2PV – 64/128cells
<b>Pole</b>				
Material	Steel hot-dip galvanized with powder coating			
Wind load	36 m/s (130 km/h)			
Warranty	20 years anti-corrosion C5m			
<b>Battery</b>				
Type	Lithium LiFePO4, High temperature (65°C)			
Lifetime	7,000 cycles; ~ 19 years			
Warranty	3 years (5 years optional)			
Position	Batteries in the pole			
<b>Grid Connection (Optional)</b>				
Hybrid Mode	Grid charging if insufficient energy from sun			
Charge Controller Input	110 V / 220 V; 47 Hz – 63 Hz; 95% Efficiency			
<b>Options</b>				
Camera	any POE camera possible			
Communication	Remote communication 4G/GPRS or ZigBee/Lora Wan			
<b>Protection and Security</b>				
IP 66 Protection; IK09				
Glass cover for LED and PV unit to protect against sand abrasion				
Reverse polarity protection				
Low battery voltage cut-off				
Security pole door / vandal protection				