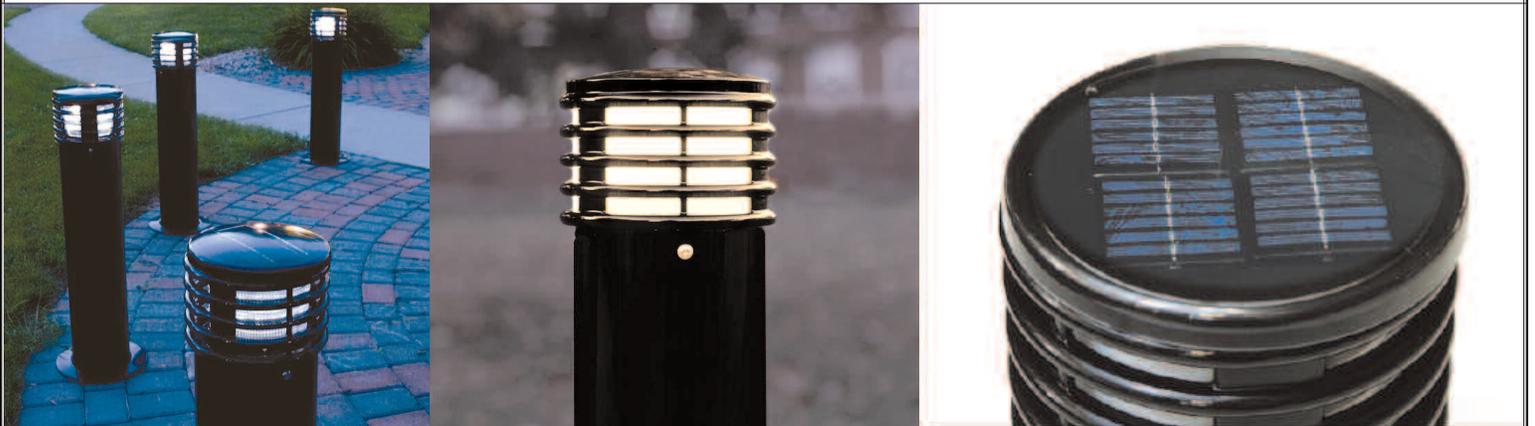


ANNAPOLIS SMART BOLLARD

Annapolis™ Smart Bollard is the first bollard using solar technology to power LED lighting. Smart Bollard integrates a completely self-contained solar-powered LED light into the standard 6" diameter Annapolis bollard. This bollard is not just the smartest in its class. It's in a class all its own.

Smart Bollard was developed in response to customer requests for a lighted bollard designed for use in areas where wiring is unfeasible or inconvenient, or where security concerns demand lighting that is off the grid. It is a reliable, economical, energy-saving solution for marking pathways, dividing pedestrian and vehicular traffic, and providing security in settings ranging from corporate and university campuses to urban streetscapes.

Smart Bollard casts diffused light above the ground. Its high output white LEDs provide 360° visibility. Because it requires no wiring, Smart Bollard breaks new ground as the first removable bollard with integrated lighting.



The Benefits of Being Smart:

- **Smart Bollard is solar powered.** It is environmentally responsible in its reliance on sustainable energy. And the absence of wiring saves on installation, maintenance and energy costs.
- **Smart Bollard is off the grid.** In case of power emergencies due to natural or man-made causes, it just glows on.
- **Smart Bollard is intelligent.** Digital technology automatically turns lights on at dusk and off at dawn. An "intelligent energy management system" calibrates light output to the amount of energy in storage to ensure uninterrupted function.
- **Smart Bollard is efficient.** LED light is generated by tiny silicon chips which require a much smaller electrical current than incandescent bulbs and waste almost no energy through heat dissipation. And high-intensity LEDs typically enjoy over 100,000 hours of life, and last about 20 times longer than incandescent bulbs.
- **Smart Bollard is state of the art.** The completely unitized LED light, which has no internal moving parts, is environmentally sealed in a clear tempered glass dome that traps sunlight and protects the solar panel from damage and dirt.

How the Annapolis Smart Bollard Works:

The solar panel in the light collects energy from the sun and converts it to electrical current. Energy is stored in a sealed lead-acid rechargeable battery that provides a large energy capacity for its size and delivers extremely reliable power output over a long period of time. *(battery can be replaced after expected life of three years)* The solar panel begins charging at dawn and stops at dusk when the light automatically goes on.

Location Selection

Smart Bollard requires adequate sunlight and suitable ambient temperature to function effectively. It is a viable solution for areas with an average of at least 4 hours or more sunlight per day year round, at latitudes within 50° North or South, and at a temperature range of -40° F to 115° F. Care must be taken in the placement of units. Even in sunny locations the light will not function if the bollard is in the shade for most of the day. Under typical conditions, Smart Bollard will run for up to 14 hours per day and require four hours of daylight to recharge.

Warranty

Smart Bollard is a Landscape Forms product that meets the company's stringent standards of quality, durability and performance. It is covered by the Landscape Forms three-year warranty.

Specifications:

Sizes	6" diameter x 33" high
Bollard Tube	structural steel pipe
Bollard Top	aluminum casting
Optional Protective Sleeve	polyethylene
Metal Finish	Pangard II® Powdercoat. Standard, optional and customs colors available.
Mounting	surface mount, embedded or removable with embedded socket.

Solar Light Specifications:

Lamp	3 Osram white LED's
Color Temp	3,500° K
LED Luminous Flux	30 lumens
LED Energy Consumption	.38 watt @ 40mA
TM21 LED Lifespan	Up to 60,000 hours
Solar Top	tempered Borosilicate glass top with Mono-Crystalline PV cells
Diffused Lens	translucent acrylic
Protection Rating	IP66 for solar light assembly
Horizontal Output	360°
Average Direct Sunlight Exposure to Maintain Function	4 hours
Latitude Range	50° S to 50° N
Battery	valve regulated lead-acid
Nominal Battery Voltage	6 volts
Capacity	7.2 amp-hr at 20-hr discharge rate
Temperature Range	-40°F to 115°F
Maximum Operation	14 hours