

Where solar innovations come to light!™



www.solarpathusa.com





# SolarPath Sun Solutions

The LightMark system will have tremendous impact on road safety in the 21<sup>st</sup> century. Increasing traffic safety and the flow of resources on our roads has never been more imperative than today.





"We have built our units to withstand all weathering, and road conditions, making the LightMark series units the single most innovative SRM technology in the world..."

"... Today, The LightMark series extends the effectiveness of active demarcation to every possible area of the road. Each unit is independently powered by the sun, and designed to require no external wiring for implementation..."

- Tom Hanley, Engineering

# The LightMark Series

Solar Road Markers (SRM) are exceptionally effective in road safety enhancement, far surpassing passive markings, such as painted lines and reflectors. Roadways with distressed traffic environments, over-illuminated lighting, dark areas, undefined borders, and hazardous conditions of any kind can be enhanced and remedied at success levels previously unattainable.

## **Uses & Applications**

- Lane Delineation
- Shoulder Marking
- Crosswalks
- Side Rails
- Curves and Turns
- Speed Bumps
- General Traffic Calming
- Traffic Circles
- Lane Dividers
- Traffic Circles
- Security Barricades
- Fire Hydrant Marking
- Marking Underground Pipes and Power Lines



# The Next Generation of Safety

The human eye simply reacts most sensitively to light. This is evidence by the use traffic lights at intersections and general warning applications. In past, if we could have used lighting everywhere, we would have.

The benefits over passive line and reflector demarcation is overwhelming. LightMark will not only replace passive marking in areas that call for driver attention, but they will save many lives, and serve to increase the movement of traffic and resources in all areas where motor vehicle operation occurs.

# Specialization

Every unit in the LightMark Series has specific benefits. Both structurally and dynamically, we have engineered the LightMark to be versatile in order to provide safety enhancements in all landscapes.



Multiple environments means multiple options.

As a partner, SolarPath engages in a consultative approach to each project.



# **Setting the Standard**

SolarPath is committed to providing municipal teams with a superior technology that stands as an example of advancing solutions. We place a technology in your hands, only if we are impressed by it in our own.

The LightMark Series is engineered with focus on exceptional durability, long-term performance reliability, and superior functionality. The combination of these factors make the LightMark series is the brightest, and highest quality SRM in the world.

## **How It Works**

During the day the device collects the sun's energy and converts it to electricity which is stored in the Ultra-Capacitor.

At sundown, the device automatically turns on and uses the stored energy to power the ultra-bright LED lamps (low voltage diodes, with life spans of up to 150,000 hours).

Charging time for the solar device varies from 2-3 hours under direct sunlight up to 8 hours under ambient light. A fully charged unit operates up to 24 hours.

# Lifespan

Ultra Capacitor energy storage technology greatly extends our product's lifetime. Up to five times longer than conventional battery based devices in the market.



- Jonathan Robins. Sales and Partner Relations

design while minimizing

risk..."

"Investment in

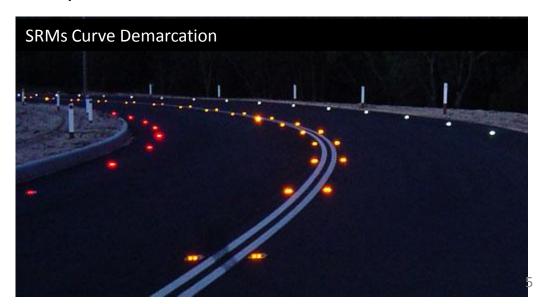
infrastructural enhancement











# Innovation

"Out of the box" thinking and constant pursuit for engineering superiority leads us to better design, longer product life, higher performance, and new application possibilities, even in the harshest environments.





## LightMark Series - S2X

Bi/Uni-directional Flush/Surface Level SRM





## LightMark S2X – Centerline Demarcation



S2X Uses and Applications Guide		
Lane delineation	•	
Shoulder marking		
Lane divider	_	
Safety guide rails	_	
Curves and turns	•	
Crosswalks		
Speed humps		
Traffic circles / islands (rotaries)	-	
General traffic calming		
Security barricades	_	
Marking of underground cables	•	
Fire hydrant marking	_	

Watch our Bike Lane Application Video: http://youtu.be/6-QIVao7A2s

- Safe for light vehicles, such as motorcycles, which are vulnerable to uneven road surfaces.
- More Resilient to the environment and lasts longer than on-surface devices.
- Vandal-Proof in-pavement installation.
- Implementing the proprietary SolarPath VibraProof™ technology for protection from road vibrations.

"Road vibrations are a constant and serious factor in the environment in which surface based light emitting devices are installed, we developed the VibraProof technology and implemented it in the S2X units in order to protect the delicate electronics, circuitry, photovoltaic, and integration medium and contribute to long-term operation and efficiency. The VibraProof technology ensures that our units continue to perform long after the competing units fail..."

- Tom Hanley, Engineering

# Cost-Effective

Cost in implementation will return on investment immediately.

The cost of deciding to use the LightMark Series will be significantly less than the cost of deciding not to use it. It will save lives, and it will save money.





**LightMark Series – M2**Bi/Uni-directional Multi Purpose Marker





Checkpoint Warning I	_ighting
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M2 Uses and Applications Guide		
Lane delineation	_	
Shoulder marking	_	
Lane divider		
Safety guide rails		
Curves and turns	_	
Crosswalks	_	
Speed humps	_	
Traffic circles / islands (rotaries)		
General traffic calming	-	
Security barricades		
Marking of underground cables	_	
Fire hydrant marking		

- Designed for the marking of any road structure or obstacle that requires driver attention including Lane dividers, Fences, Utilities poles, Emergency call boxes and more.
- The M2's design allows for either temporary or permanent installation.
- The LightMark M2 can be both vertically and horizontally mounted.





**LightMark Series – T1** 

Uni-directional dual-mode SRM



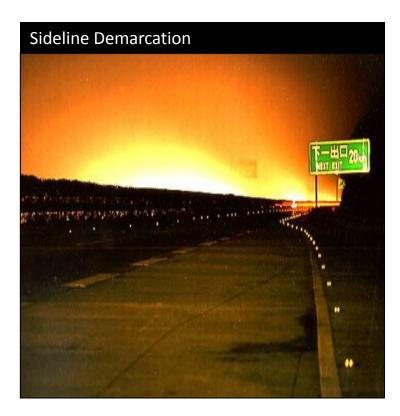


LightMark Series - T2

Uni/Bi-directional dual-mode SRM







T1 / T2 Uses and Applications Guide		
Lane delineation	_	
Shoulder marking		
Lane divider	_	
Safety guide rails	_	
Curves and turns	_	
Crosswalks	_	
Speed humps	_	
Traffic circles / islands (rotaries)		
General traffic calming	0	
Security barricades	_	
Marking of underground cables	-	
Fire hydrant marking	_	

- Electronic illumination and retroreflective marking for maximum visibility.
- It is recommended to mark shoulders with steady light (in most cases Amber color).
- For Warning purposes, flashing units should be used for marking of curves, turns, and exits.



"Since installation late last year, the units continue to operate under the rigorous conditions of exposure to the airline ramp environment, including runway deicing chemicals and mechanical snow removal processes. I would be glad to state that we believe the units could continue to serve well in this role ..."

- Safety & Security Director, Skyway Airlines, Inc.



# LightMark Series – S20 Uni/Bi-directional SRM





- Low surface profile model of the LightMark series, designed for single-direction or bi-directional lane delineation.
- Special dome shape allows it to be well integrated with the road surface resulting in minimal wear and tear and a high level of safety
- Extremely durable and rigid and is available in a variety of L.E.D. colors and lighting configurations. The brushed-metal or smooth chrome finishes enhance design possibilities for any installation environment.

S20 Uses and Applications Guide		
Lane delineation	-	
Shoulder marking		
Lane divider	_	
Safety guide rails	_	
Curves and turns	-	
Crosswalks		
Speed humps	•	
Traffic circles / islands (rotaries)	$\overline{}$	
General traffic calming	•	
Security barricades	_	
Marking of underground cables		
Fire hydrant marking	_	









# **Safety Benefits**

Advance warning extends a driver's preview and reaction time by up to ten times, alerting them to potential hazards earlier. Examples include readiness for upcoming curves and turns, which leads to improved levels of driver control and reaction-time.

Relieves eye strain caused by locating lanes edges, curves and oncoming turns, thus reducing common causes of fatigue and allowing drivers to focus on vehicle operation.

### **Advantages**

- Sun-powered, completely self sufficient
- Ultra-capacitor energy storage
- Fast charging
- LED base illumination
- Aluminum casing for maximum durability
- Dust repellant, anti-slip polycarbonate top cover

#### **Performance**

- Resistance to extreme temperatures
- Completely waterproof (IP-68 standard)
- Environmentally safe
- Visibility 3,300 feet / 1000m
- Variety of illumination colors
- Steady or flashing light patterns







## **Lane Delineation**

Our LightMark units effectively compensate for fading road paint and aids by clearly delineating between lanes and actively functioning as an illuminated "guideline" for drivers.



# Barrier, Shoulder, Fence Markings

For advance warning to drivers,
LightMark Multi-Purpose markers
are installed on cement and metal
dividers and edge-rails, helping
drivers avoid undesired contact with
lane edges and keeping them
directed in lanes.
LightMark Multi-Purpose markers
(Flashing configuration is
recommended) are ideal for use in
turns, temporary traffic pattern
changes, construction areas, security

checkpoints tollbooths and more. 15



### SIMPLE INSTALLATION

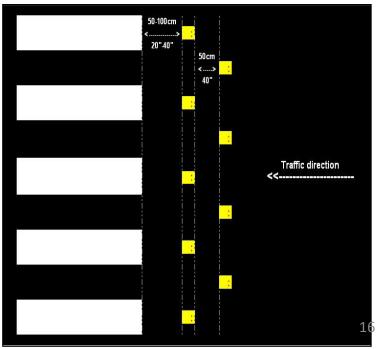
Simple and fast installation allows for overnight implementation.





## **Crosswalk and Speed Bump Marking**

- SRMs make crosswalks and speed humps highly visible from a distance. They will compensate for the fading of road paint markings and greatly increase driver stopping response time.
- It is recommended to mark crosswalks and speed humps with flashing light, singledirection (facing oncoming traffic), flushed (in-surface) SRMs.





"We listen and we learn.
Field experience, site surveys and customer feedback are among SolarPath's best resources for constant improvement. Collecting and analyzing such information allows us to learn how to improve our products technology and provide customers with the best products and the most professional and experienced service in the market..."

- Ori Aldubi Director, Business Development

#### **International Standards**

All SolarPath products carry major international quality standard certification and/or listings of CE, TUV or UL.

#### **Laboratory Tests**

SolarPath deals only in products that are proven by certified laboratory testing to comply with quality standards of:

- Durability
- Operation under weather extremes
- Electrical stability
- High visibility

## **Quality Control**

SolarPath products are manufactured under strict ISO9001 quality control standards. We invest in quality so that your collaboration with us equals longevity and successful implementation.



#### **CAUTION TIP!**

Some manufacturers are using low quality capacitors, batteries, LEDs and electric circuits (PCBs).

Cutting corners in cost, quality control, and testing will drive product performance down drastically.

Products that look similar and are cheaper will last only a short time and have high failure rates.

Cheap imitation products eventually lead to double and sometimes triple spending on products and labor.



"My team's goal is to ensure that our customer is never left alone, from design stage to solution customization, Installation and post installation support, my duty is to make sure that our customers receive the absolute best consulting, product education and support to turn their projects into a success. Their success is our success."

Kathy Gross,
 Service & Support



#### Please contact us for:

- Product Information
- Consultative Service
- Site Review and Planning
- Cost/Payback Analysis
- Technology Overviews
- Pricing Information
- Light-Metrics
- Marketing materials
- Distributor Information
- Comments and Suggestions

#### We never rest, to deliver you the best!

Trade shows, technical publications and constant market research allow us to scout new and advanced technologies for our customers and to make sure our products are up to date with the latest innovations.

### Absolute quality customer service

One of SolarPath's most highly regarded values is to consider your business our business. Any questions you have, any guidance you need, and any issues that arise, will be dealt with a calculated and timely manner.

### We will always be at your side.

SolarPath's superior product support and accountability are the keys to strong, reliable and lasting relationships. We will be present at every point of a project from inquiry to implementation in the field.

## **SolarPath Sun Solutions**

123 Town Square Pl. #333

Jersey City, NJ 07303, USA

Phone: 1.888.333.SOLAR (7652)

International +1.201.490.4499

Info@solarpathusa.com

www.SolarPathUSA.com