The Senstar LM100 is the world’s first 2-in-1 perimeter intrusion detection and intelligent lighting system. Combining high performance LED lighting with accelerometer-based sensors, the LM100 deters potential intruders by detecting and illuminating them at the fence line.

**Optimized for the perimeter**

Optimized for use with camera surveillance systems, the Senstar LM100 provides localized, uniform lighting along the fence line. Uniform coverage lets cameras operate with a higher dynamic range, ensuring objects and people are illuminated while avoiding the generation of dark silhouettes in front of bright backgrounds.

The LM100 has a Color Rendering Index (CRI) of 70+. Its full-spectrum illumination accurately renders color, bringing out critical details that enhance identification and pattern recognition (in comparison, the high pressure sodium lamps commonly used in other security lighting products have a CRI value ranging from 20 to 50, resulting in flat, washed-out colors).

**Detect and deter**

Each Senstar LM100 luminaire includes a built-in accelerometer to detect attempts to cut, climb or lift the fence fabric. When networked, the LM100 reports intrusion attempt locations to the site’s security system to enable a directed response.

Early detection at the perimeter means the LM100 can trigger warnings and alarms, cue up camera systems, and even provide an instant, visible deterrence like enabling or strobing the fence lights within the immediate area – all while the intruder remains outside the building or protected area.

**FEATURES AND BENEFITS**

- Detects and illuminates perimeter intrusions at the fence line
- Instant-on or strobe lighting at intrusion attempt location provides psychological deterrent to potential intruders
- High performance luminaire:
  - 53 lux per luminaire (163 lumens)
  - Uniform, full-spectrum lighting (CRI value greater than 70)
  - Instant-on (no warm-up time)
  - Focused illumination and warm-white color option minimizes light pollution (IDA compliant)
  - Low power consumption (2.5W per luminaire)
  - 15+ year LED life expectancy
- Wireless self-healing mesh network (2.4 GHz, 128-bit AES encrypted) eliminates need for inter-luminaire communication wiring
- Rugged metal mounting arms attach to most fence types and walls
- Designed and tested for harsh environments
- Interfaces with most alarm panels and Security Management Systems (SMS)
- Seamless integration with other Senstar perimeter intrusion detection sensors

**REDUCE COSTS WHILE ENHANCING SECURITY**

- Only 2.5W used per luminaire
- **95% reduction** in electrical consumption for perimeter illumination††
- LED lights turn on and off instantly, with no warm-up or cool-down time
- Programmable to follow schedule or remain off until an intrusion attempt is detected
- Downward-directed coverage pattern minimizes light pollution

†‡ - LED life expectancy varies based on installation environment, use conditions, and maintenace. Product life expectancy is designed to be 15+ years, however, extends with normal maintenance and installations.

†† - Electrical consumption for perimeter illumination is reduced by 95% compared to traditional security lighting products.
Minimize light pollution
Targeted illumination along the fence line and warm-light option minimizes light pollution, enabling the Senstar LM100 to be used near light-sensitive areas, including airports, residential housing, and nature preserves†.

Configurable input/output ports
The Senstar LM100 gateway provides 10 individually configured input-output (I/O) ports that enable integration with a wide range of site security devices and alarm systems.

For example, lighting behavior can be controlled by external devices, including access controls, light sensors, and other security devices. The LM100 can also activate additional deterrent devices such as sirens or additional lights, trigger on-site security cameras, as well as interface directly with most alarm panels.

In a networked system, the I/O ports may be monitored or controlled by the SMS.

The number of I/O ports can be increased by adding a relay output or input card, each of which provides four additional ports.

Easy to install and maintain
The Senstar LM100 is easy to install and requires virtually no maintenance. The luminaires use worm gear clamps to attach to existing fence posts. Built-in mounting flanges also enable installation on walls and other structures.

The Senstar LM100 works with any fence. The luminaires can be installed at different heights so as to not interfere with existing outrigging on the fence.

Using energy efficient LEDs and wireless mesh network communication, the luminaires only require a single low-voltage wire along the fence line for power. The mesh network itself is self-healing – if a luminaire goes offline, overall communication is unaffected.

The LEDs used in the luminaires have a 50,000 hour minimum life expectancy and are designed for outdoor use in all environments.

Networking and integration
Alarms can be reported locally at the Senstar LM100 gateway via its I/O ports or communicated over a network.

The LM100 gateway connects to the security network via RS-422, single- or multi-mode fiber, or Ethernet links and can use the same network as other Senstar devices, including FlexZone®, OmniTrax®, UltraLink™, and UltraWave™.

Senstar’s Network Manager software conveys alarm and status information to a Senstar or third-party SMS.

For information about integrating Senstar sensors within a security network, see the Senstar Sensor Integration datasheet.

† The Senstar LM100 is available in an International Dark-Sky Association (IDA) certified version, making it an ideal choice in regions that mandate reductions in light glare, trespassing and pollution from outdoor fixtures. The low correlated color temperature (CCT) value (i.e. “warm-white”) meets IDA guidelines for minimizing effects on health and wildlife.
Non-networked site
The Senstar LM100 gateway can use its I/O ports to notify the on-site alarm system of attempted intrusions. The lights are enabled or disabled via the alarm panel’s keypad control.

Networked site
The Senstar LM100 gateway connects to the Senstar Silver Network™. A centralized SMS can monitor the site and manage on-site cameras and third-party security devices.

SENSTAR LM100 CONFIGURATION OPTIONS
- On/off schedule
- Detection and lighting zones
- Enable or strobe lights/zones when intrusion attempt detected
- Detection sensitivity settings with real-time graphical plot
- Light intensity levels
- Dry contact input light control
Technical specifications

**LUMINAIRE**

**Main features**
- Brightness: 53 lux per luminaire (163 total lumens generated)
- Coverage pattern: 120 degrees
- 50,000+ hours LED life expectancy
- Supports any fence height
- Spaced 3 to 6 m (10 to 20 ft) apart for optimal coverage
- Locate intrusions to the nearest luminaire

**Environmental specifications**
- Temperature: –40 to 70 °C (–40 to 158 °F)
- Humidity: 100% (condensing)

**Electrical specifications**
- Input power: 12 to 48 VDC (24 VDC or higher required for multiple luminaires)
- Consumption: 2.5W per luminaire
- Wiring: 14 or 16 AWG (depending on luminaire number and distance), 2-wire
- Integrated surge protection

**Physical specifications**
- Dimensions (L/W/D): 98.4 x 14.3 x 5.1 cm (38 3/4 x 5 5/8 x 2 in)
- Weight: 740 g (1.6 lbs)
- Rugged UV-rated ASA and polycarbonate luminaire housing (NEMA Type 3S)
- Welded aluminum mounting arm with polyester powder black finish for durability

**Network specifications**
- Inter-luminaire wireless mesh network: 2.4 GHz, 128-bit AES encrypted
- Luminaire AP-Gateway connectivity: RS-485

**GATEWAY**

**Main features**
- Up to 100 luminaires per gateway
- USB configuration port
- Network connectivity: Ethernet, RS-422, or fiber (single-mode or multi-mode)
- Alarm queuing in the event of network interruption

**Programmable I/O ports**
- 10 programmable I/O ports (controlled locally or via network)
- Input mode:
  - Light control

- Programmable supervision type, resistor value(s) and filtering
- Output mode:
  - Function of each relay can be assigned based on requirements
  - Assignable functions under local control include: alarm, supervision, door tamper, power fail and fail-safe
  - Provides power for external devices (100 mA)
  - Add-on relay output and dry-contact input cards provide an additional 4 output or input points per gateway

**Environmental specifications**
- Temperature: –40 to 70 °C (–40 to 158 °F)
- Humidity: 100% (condensing)

**Electrical specifications**
- Input power: 12 to 48 VDC
- Consumption: 0.5W (base processor), 1.0W with communications card
- Lightning protection: Transient voltage protection on all inputs and outputs, including power

**Physical specifications**
- Dimensions (L/W/D): 31.6 x 19.0 x 9.0 cm (12.5 x 7.5 x 3.5 in), including cable glands and mounting brackets
- Weight: 1.2 kg (2.6 lbs)
- 5 cable entry points with compression glands

**OPTIONAL COMMUNICATION CARDS**
- 10/100BASE-TX Ethernet card with PoE (powers gateway)
- RS-422 network card
- Multi-mode fiber optic (MMFO) communications card with ST connectors (820 nm). Supports distances up to 2.2 km (1.4 mi)
- Single-mode fiber optic (SMFO) communications card with ST connectors (9/125 single-mode fiber, 1310 nm). Supports distances up to 10 km (6.2 mi)

**UNIVERSAL CONFIGURATION MODULE (UCM) SOFTWARE**
- Windows®-based, point-and-click interface
- Communication via USB or network
- View and save real-time sensor data
- Configurable parameters:
  - Illumination: Schedule, intensity, zones, duration, and strobe
  - Detection: Fence type, gain, filter, and disturbance count parameters
- Luminaire/gateway supervision and tamper alarm

**REGULATORY COMPLIANCE**
- UL, CE (including RoHS 2), FCC, REACH, IDA

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Part | Description
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EBFG0211 | Senstar LM100 Luminaire 1PK
EBFG0250 | Senstar LM100 Luminaire 5PK
EBFG0401 | Senstar LM100 Luminaire 20PK
EBFG0111 | Senstar LM100 Luminaire AP
EBEM0300 | Senstar LM100 Gateway
EBFG0301 | Senstar LM100 Gateway/Luminaire AP Set
EBFG0213 | Senstar LM100 IDA Luminaire 1PK
EBFG0253 | Senstar LM100 IDA Luminaire 5PK
EBFG0403 | Senstar LM100 IDA Luminaire 20PK
EBFG0113 | Senstar LM100 IDA Luminaire AP
EBFG0303 | Senstar LM100 Gateway/IDA Luminaire AP Set
00SW0100 | UCM software on CD
0E0444 | USB cable, 3 m (9.84 ft) length
E8DA0120 | Documentation CD-ROM
00BA1901 | MMFO comm card
00BA2000 | RS-422 comm card
00BA2101 | SMFO comm card
00BA2200 | Ethernet comm card
00BA2400 | Dry-contact input card
00BA2500 | Relay output card

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info@senstar.com • senstar.com

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15+ year LED lifespan based on 9 hour/day usage while retaining over 70% of original LED brightness

Power consumption comparisons based on similar coverage provided by conventional lights