



Street Lighting Control and Dimming System (SLCDS)

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Unique Technology: a world-leading developer and producer of **Smart Metering** systems based on sophisticated technology of Power Line Communication (PLC)

- 20 years of experience in AMR/AMM and SLCDS
- Approximately 400,000 units installed worldwide
- Tenders awarded for additional 1,000,000 units



Automated control and dimming of street lighting enables:

- Energy savings of up to 30%
- Detection of faulty lamps and ballasts
- Monitoring of maintenance and detection of faulty equipment
- Cable theft prevention
- Line extension for electromagnetic ballasts



Unique's control system operates with all forms of street lights:

- Electromagnetic ballast
- Electronic ballast
- LED lamps
- Induction lamps



How does the System Work?

- SLCD units are attached to each lamp
- Units communicate to concentrator situated on transformer, using low voltage lines for Power Line Communication (PLC).
- Concentrator controls up to 250 lamps
- Concentrator communicates to control center using cellular or other wireless communication.
- Control center integrates with other utility systems



Benefits and Functions of Smart Lighting System

- Two-way communication enables remote connection, disconnection and dimming
- SLCD units send detailed information including:
 - Lamp status
 - kVr
 - Voltage
 - Optional power factor measurement
 - kWh consumption

Dimming levels:

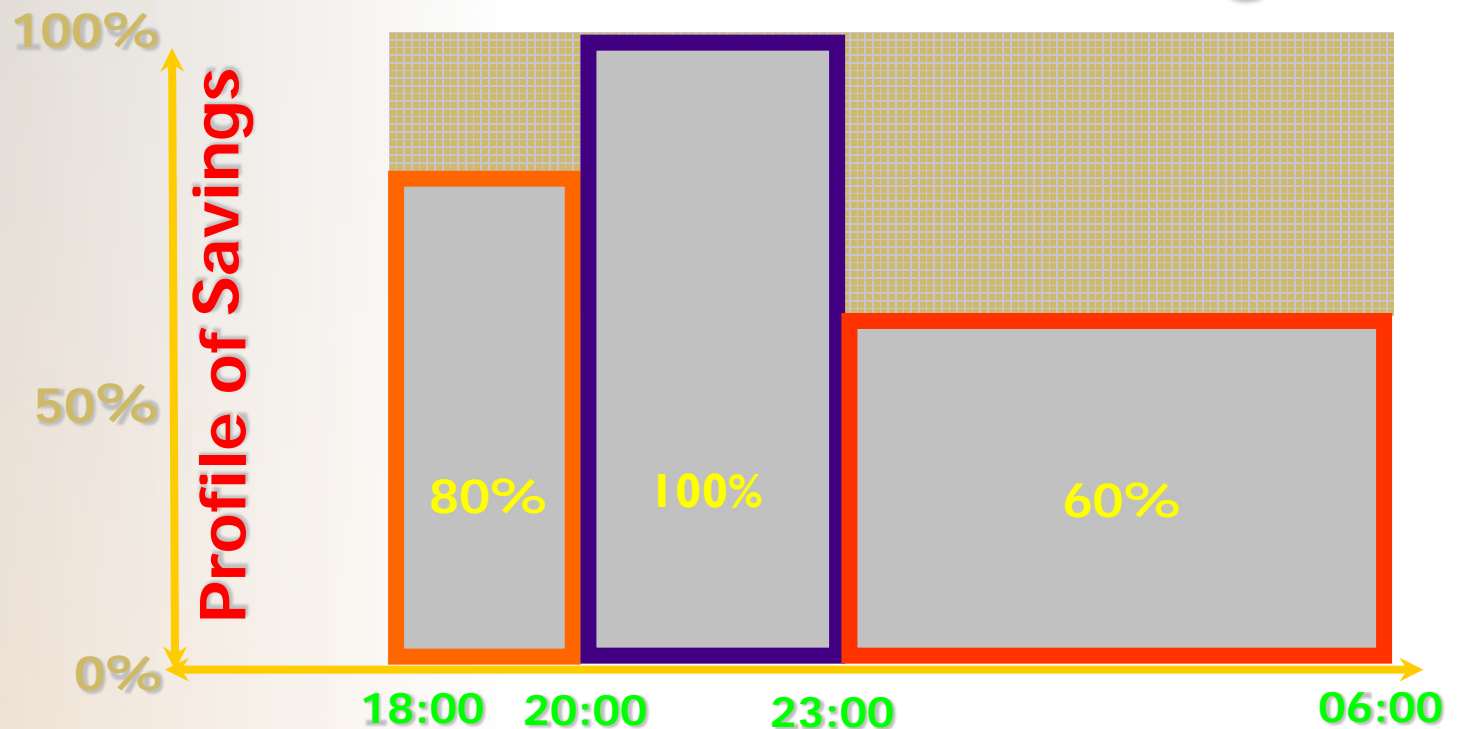
- Electromagnetic ballasts
 - Can be set to 3 levels (100%,80%,60%)
- Electronic ballasts
 - Fully flexible from minimum to 100%
- LED lamps
 - Dims according to lamp specification



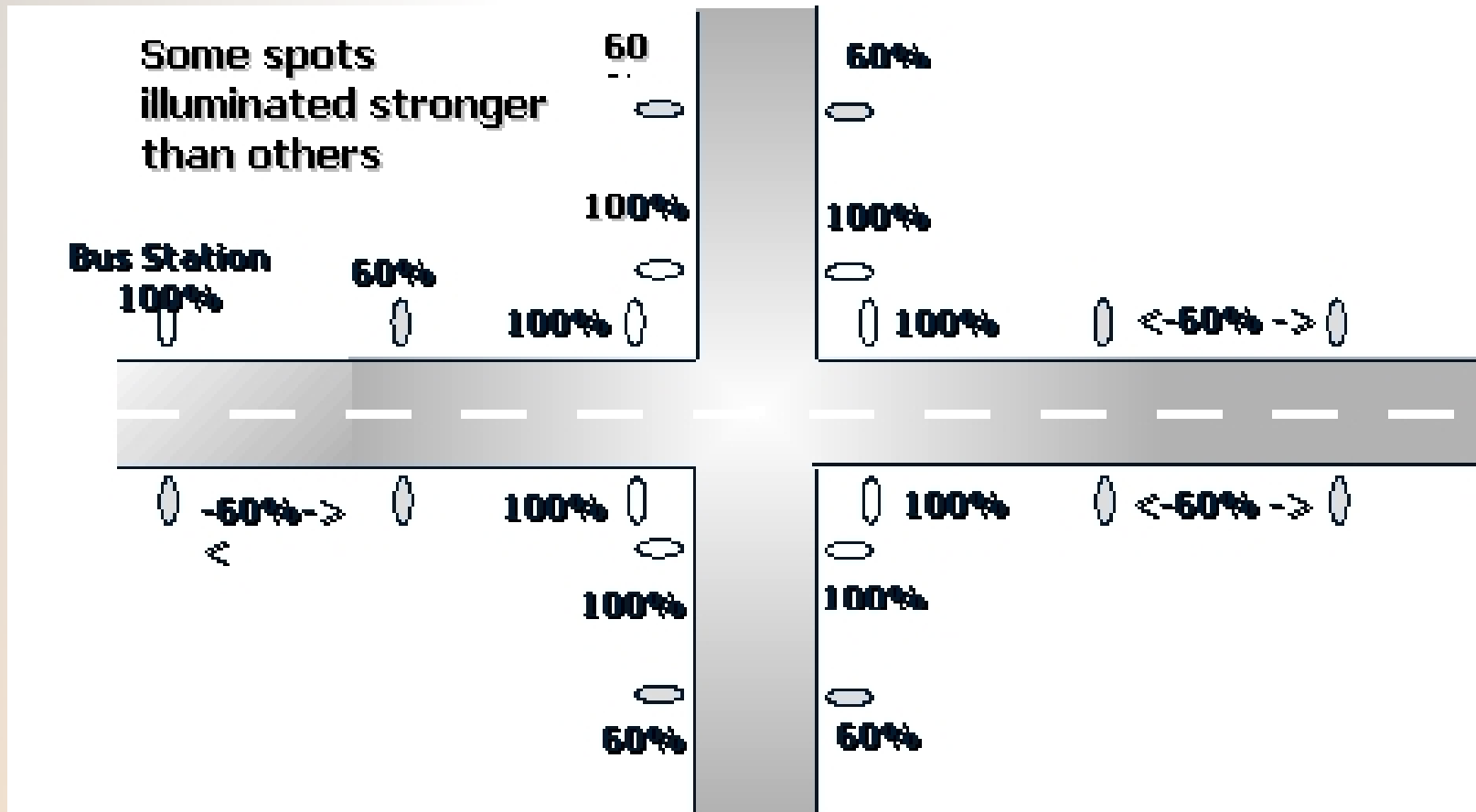
How are Savings Achieved?

- Adjustable dimming according to hour of night
- Dimming of individual lamps according to location
- Dimming according to weather conditions (snow, rain, fog)
- Not having to dim during replacement, the system notifies the status of each lamp and ballast (faulty or not)

Easily adjustable dimming schedule allows for maximum savings



Brightness adjusted by location for maximum safety and efficiency





World Wide Deployment of Unique's SLCDS System

- South Africa: NMBM Municipality (Port Elizabeth), Ethekewini Municipality (Durban)
- Israel: Kibbutz Shefaim, Holon, Petach Tikva, Ashdod, Netanya municipality
- Sweden: Sundsvall
- Chile: Two ongoing projects
- Vietnam: Four ongoing projects
- India: Pilot project
- Italy: Two ongoing projects



Electromagnetic Ballasts - Ease of Installation

