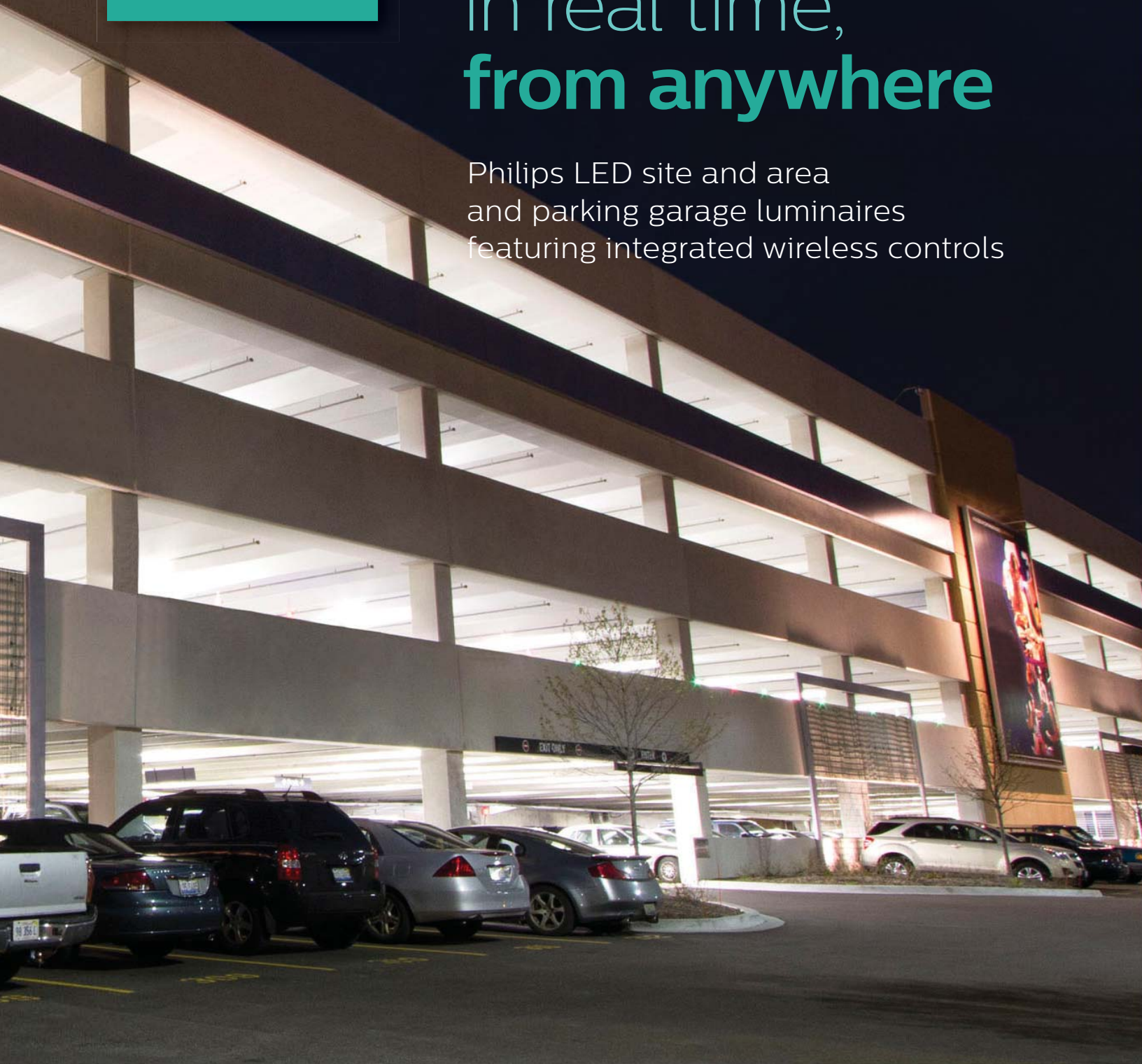**PHILIPS**

Outdoor Controls

Site Solutions

Site Solutions

Manage your site lighting in real time, **from anywhere**

Philips LED site and area and parking garage luminaires featuring integrated wireless controls

LED

Connected lighting designed to
maximize energy savings

Philips has combined our industry leading LED parking garage and site and area luminaires with LimeLight wireless technology to create a two-way network of communication. Our site solution allows you to control your luminaires from any remote location to help provide significant energy savings and streamline facility management to reduce your total cost of ownership. The Philips wireless site solution is available in the LED parking garage and site and area luminaires shown below, giving you the flexibility to create an intelligent outdoor site lighting package.

Parking garage luminaires

Philips Gardco G3 Luminaire

Philips Gardco VizorLED

Philips Stonco QLP Luminaire

Site and area luminaires

Philips Gardco PureForm P21

Philips Gardco PureForm P32

Philips Gardco EcoForm

Site and Area sensor mount options

Luminaire Mounted Sensor

Pole Mounted Sensor*

Standalone Sensor*

*Available Q4, 2014

The value of **site solutions**

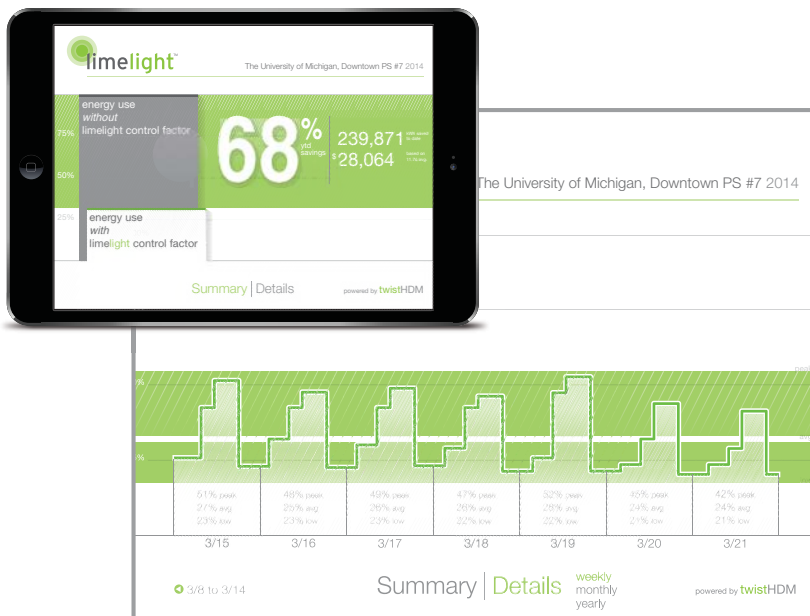| Features	Benefits
Combines the intelligence of motion and daylight sensing with wireless technology, allowing you to connect with your lighting system via the web	This comprehensive lighting controls system will significantly reduce energy costs, expedite your return on investment, while wireless capability and continuous communication give you peace of mind
Web-based login and customized Graphical User Interface (GUI) allows you to program, manage, monitor, and update your lighting solution at any time, from any remote web based computer	Eliminates the need to manually adjust luminaires in the field, allowing you to review the status of your lighting installation at your convenience
The system provides detailed reports on the energy usage, occupancy rates and occupancy times of your installation	Allows you to design your own lighting schedule to ensure your site is illuminated when it is used most, and lights can be automatically dimmed when 100% output is not required
Fixtures can be grouped according to location to illuminate an entire area when motion is detected	Creates a seamless visual experience for the patron, and increases sense of security
Temporarily override your lighting schedule for special events at the click of a mouse	Conveniently updating your schedule ensures patrons are never left in the dark, without requiring onsite maintenance
24/7 monitoring service sends email alert notifications of system status, power outages, and failure conditions	Helps to ensure security for patrons and owners, eliminates the need for maintenance spot checks, helps reduce total cost of ownership
Luminaires come ready-to-install, (no front-end design or on-site controls wiring required)	Eliminates the cost and need for any low voltage control design & wiring to help reduce installation costs
Daylight harvesting capability automatically dims parking garage fixtures during the day, adapting to natural light levels	Dimming perimeter luminaires in parking garage applications can provide additional energy savings during the day, and extend fixture life
The gateway uses internet connection to obtain local temperature readings	Luminaires can be programmed to decrease drive currents and light output in the event that outdoor temperatures reach extreme levels

Leverage the intelligence of your lighting solution
via the web

The wireless controller within your Philips LED luminaires will allow you to program and communicate with your lighting system from the graphical user interface (GUI), using any computer. The GUI will be designed specifically for your site, allowing for easy and flexible management. Five levels of control ensure that the owner, building operator, or security manager can only view the information they need. For additional control, setup user alerts to have the system will notify you of a power outage, or suspicious activity in your site.
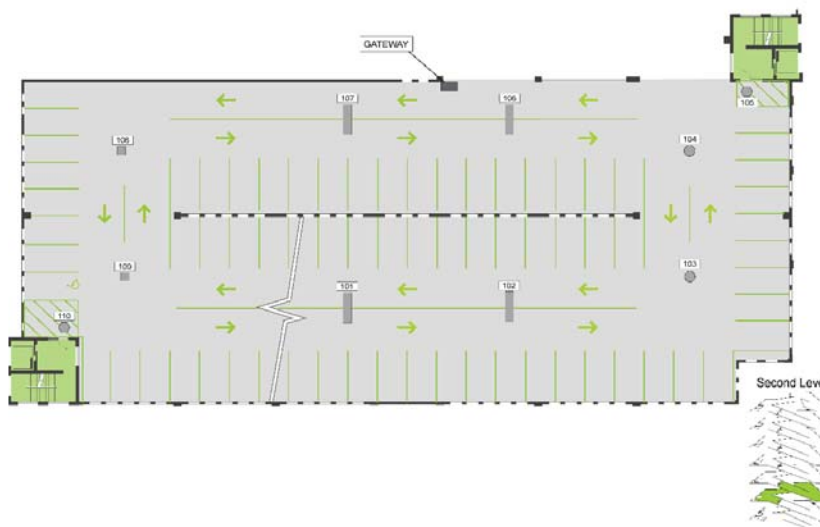
Utilize reports to maximize energy savings

Each LED luminaire will be equipped with a wireless controller that records the usage of your site, and allows you to program and communicate with your lighting system. The GUI generates reports that include useful data regarding occupancy activity, and peak hours of luminaire usage. This allows you to perfectly calibrate your lighting solution around the needs of your space, and helps to maximize energy savings.

Fixture grouping adds flexibility

Integrating your Philips lighting system with the wireless technology allows you to group luminaires for tremendous flexibility. You can assign up to 50 fixture groups per gateway. Group an entire parking garage floor, the perimeter luminaires in your parking lot, or individual luminaire rows to provide full line-of-sight views for your customer during evening hours, or group the entrance areas to keep fixtures at maximum light output regardless of the time of day.

After initial configuration, you have the ability to change and update individual fixtures and groups as needed. With added wireless communication, changes are done in real time and from the ease of your computer. No need to manually reprogram each individual luminaire in the field like other traditional standalone or wired installations.
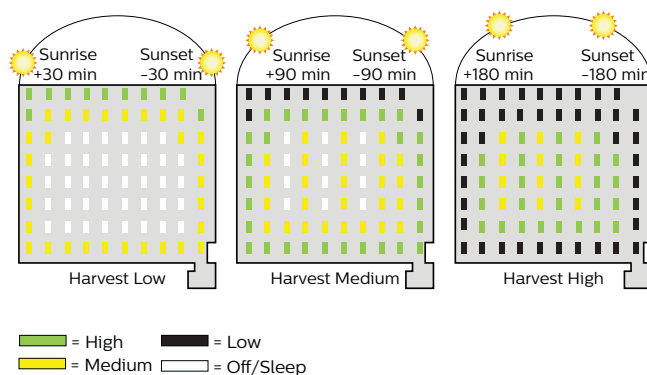

Event programming is as easy as 1, 2, 3

By using the GUI, users can program multiple events to accommodate activities that may require light output that differs from the normal schedule, all in real time at the click of a mouse. If you need to override your active schedule for holidays, sporting events, or other special occasions, simply log on to the portal and create a specific event program. The regular scheduled event will resume automatically the next day.

Daylight harvesting capability

Utilizing Philips LED luminaires with LimeLight wireless technology gives you the ability to adjust luminaire light levels according to ambient light conditions. This feature makes it easy to dim or deactivate luminaires during the day for additional energy savings. Luminaires will power on again when natural light levels decrease.

The system has four settings: Light harvest high, medium, low, and "sleep" mode. Each mode is commissioned on-site during the initial set up. If adjustments are needed, modes can be changed from the web using the on-line interface portal.

Harvest Low   Harvest Medium   Harvest High

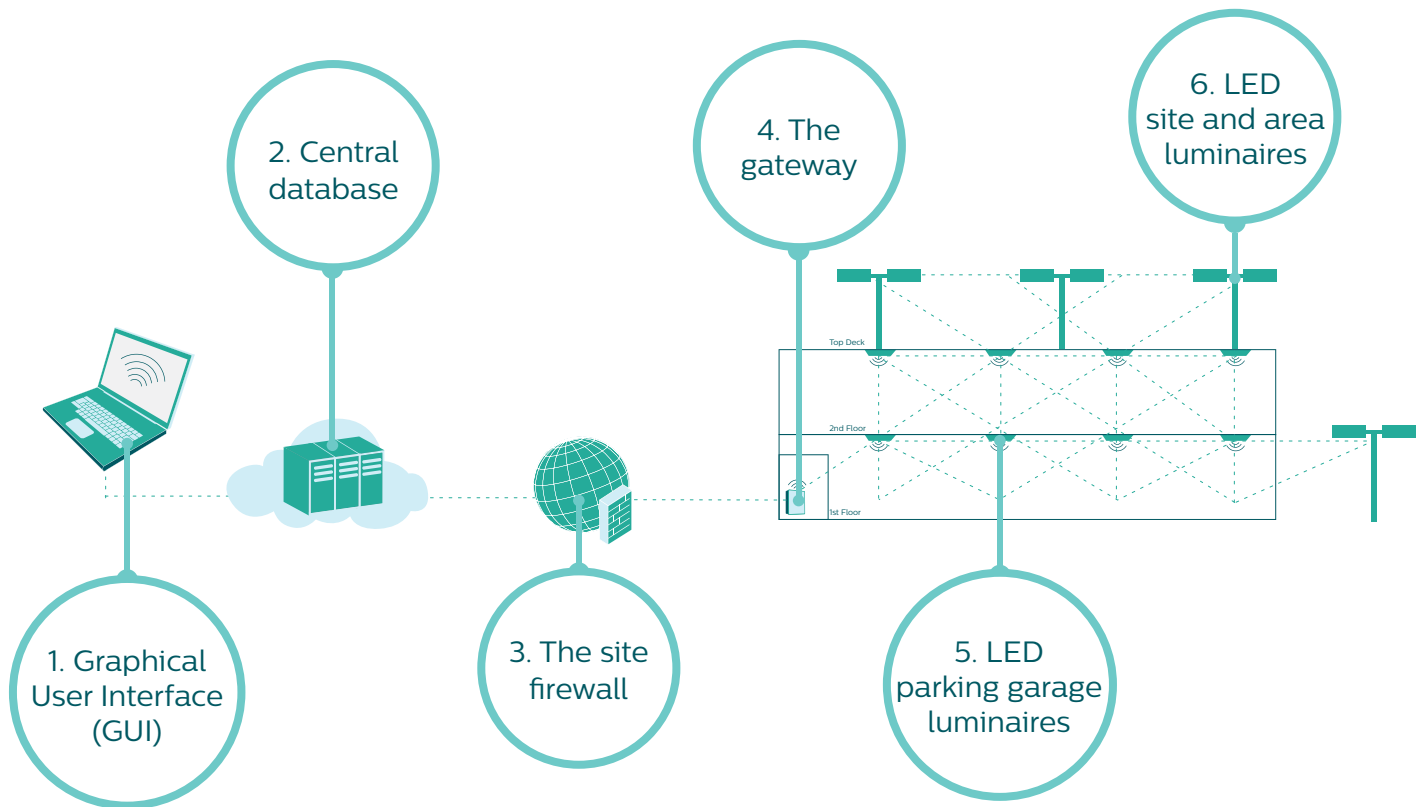= High   = Low
= Medium   = Off/Sleep

3

Understanding the wireless solution

The web-based system operates through high density mesh (HDM) wireless technology. The diagram below demonstrates how all of the components of the wireless system work together with the Philips LED luminaires in your parking garage, or the site and area luminaires in your flat lot to create a true mesh network.

The central database is based on an M2M platform - a proven, secure, and reliable store-and-forward messaging protocol. All activity within the system is captured in the database for easy retrieval and reporting — which can be directly accessed through the GUI.

The Gateway mini computer must be mounted in a secure on-site location. Connected to the internet wirelessly or through ethernet, the gateway is the High Density RF Mesh ZigBee coordinator, allowing for real-time communication between luminaires. A single gateway can reach a maximum of 800 fixtures per a typical parking garage.

2. Central database

4. The gateway

6. LED site and area luminaires

Top Deck

2nd Floor

1st Floor

1. Graphical User Interface (GUI)

3. The site firewall

5. LED parking garage luminaires

The Graphical User Interface (GUI) is a user-friendly, web-based tool that allows you to access information, and communicate with your lighting installation at any time. The GUI requires no special software on your personal computer. Each user is given a unique user login, password, and defined level of access. For enhanced security, alert notifications can be set up via e-mail or cell phone.

The internet connection to the gateway is provided by the facility owner or operator. The system pays strict observance to customer's security and firewall rules. Complete remote technical support capability is provided.

Philips LED luminaires are equipped with a pod that includes LimeLight controllers, motion response, and photocell sensors to facilitate communication and light harvesting, and are managed through the web-based graphical user interface. The radios can communicate with up to 16 neighbors to create a reliable high density mesh network.

Specifying the site solution

Philips representatives are ready to help you design a complete solution to meet the needs of your individual project, and help secure immediate energy savings. We will work together with any outside partners to ensure your installation and commissioning process runs as smoothly as possible.

Pre-work

Project Details
· Identify main points of contact*

· Fixture installation timing*

· IT infrastructure readiness and contacts*

· On-site commissioning target date

Documentation
· Acquire Fixture layout documentation for GUI development process*

· Gateway mounting location

Gateway Installation
· Gateway delivery

· Gateway Installation*

Internet Connection
· Cellular or Ethernet connection to gateway established*

· All firewall rules in place*

On-site commissioning

On-Site Activity
· Create the RF Mesh

· Product inspection

· Functional testing

· Fixture mapping

· Create preliminary Lighting Control Plan

On-Site Training
· User guide review

· Hands-on web interface

· Review of the initial lighting control plan

· System Q&A

· Next steps

Key milestones before on-site commissioning

1. A cellular or wired internet connection musts be established (or other arrangements made) at least two weeks in advance.

2. All luminaires must be installed and powered by the time internet connection is established.

3. Key customer contacts must be available for training during on-site commissioning or be willing to defer to web based training at a later date.

4. Off-site commissioning also available.
Contact your Philips representative for details

Review and evaluation

Feedback and Refinement
· Data analysis and control plan refinement

· Customer walks garage and helps refine control plan*

· Review Daytime light levels and night minimums

On-Site Activity
· Commissioning report delivered

· Standard alert notification enabled

* Indicates customer action required

Outdoor control solutions

We also offer outdoor lighting control solutions for single luminaires, multiple sites and cities. Please visit the links below to learn more.

Luminaire Solutions
For information on our luminaire connected lighting solutions, visit: philips.com/luminairesolutions

Site Solutions
For information on our single site connected lighting solutions, visit: philips.com/sitesolutions

City Solutions
For information on our multiple site and city connected lighting solutions, visit: philips.com/citysolutions

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