RTLED

Application & Design Guide

lighting controls & lumen management

nLIGHT

LITHONIA LIGHTING®

DIGITAL LIGHTING

An embedded nLight device (called a "nIO LED") uses two RJ45 connectors to provide simple plug-and-play connectivity to luminaires and controls.

Digital Facts About Digital Lighting

Embedded controls offer best in class flexibility and energy savings. It's a digital world. Think about how simple connectivity has become: personal computers, MP3 players, cellular phones-and add digital lighting to that growing list. Linking manual and automatic controls is as simple as connecting a Cat-5 cable.

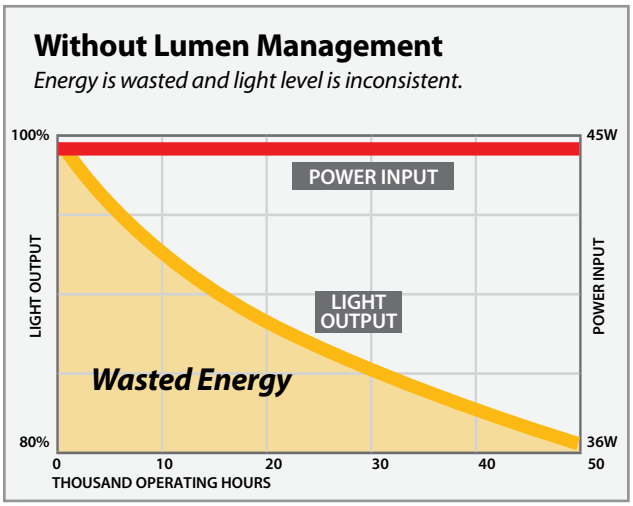
Contrary to fluorescent lighting, LEDs are not negatively impacted by on/off switching and LEDs become more efficient as they are dimmed.

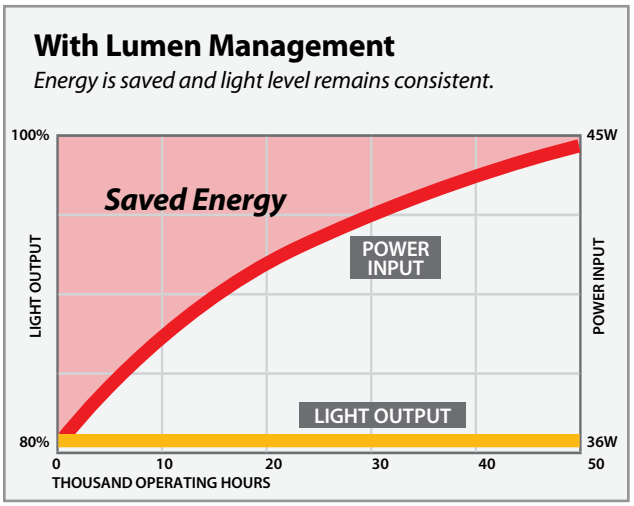
Out-of-the-box energy savings with digital lumen management. Energy savings of about 10% over system life and 20% savings on day one (see below). Included on all RTLED luminaires.

Digital Lumen Management

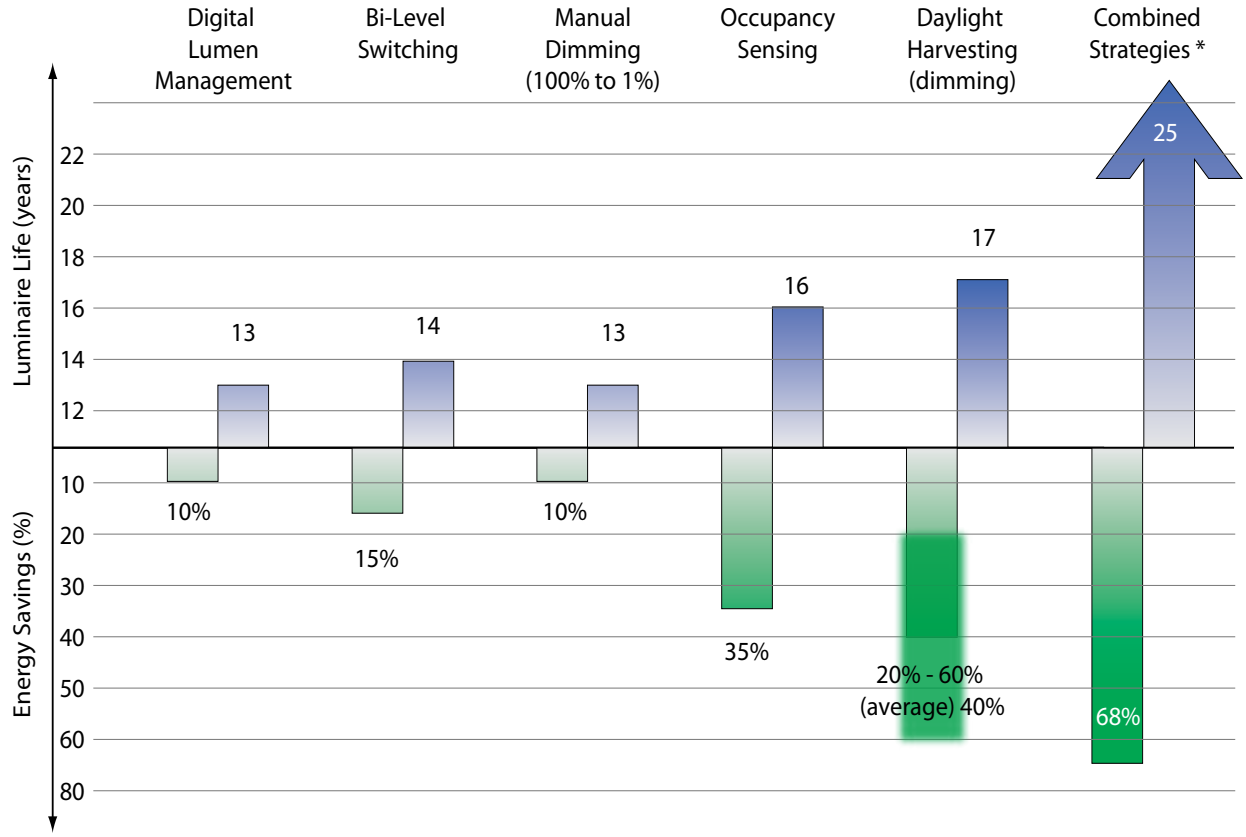
Embedded nLight™ logic underdrives the luminaire (digital lumen management) to deliver constant lumen output over system life while maximizing energy savings.

Design your next application to "maintained footcandle" levels from day one — no need to over-light the space; the embedded nIO LED driver eliminates waste.





IMPROVE ENERGY SAVINGS AND SYSTEM LIFE



Connect nLight™ controls to RTLED luminaires using only a Cat-5 cable. It's that easy!

Digital Lumen Management

Enjoy 20% savings on day one and 10% average over the life of the fixture.

Manual Dimming

RTLED offers full-range dimming. Recommended as "best practice" due to occupant satisfaction.

Bi-Level Switching

The RTLED can be programmed to simulate bi-level switching. While limiting occupant control, energy savings is generally greater than dimming.

Occupancy Sensors

Full range of PIR and dual-technology sensors to meet any space or control requirements.

Photosensors (daylight harvesting)

Simplify installation and reap the benefits of daylight harvesting.

*** Combined Strategies**

Create an energy savings multiplier effect. Control strategies are easily combined with a Cat-5 cable. For example: manual dimming, occupancy sensing and daylight harvesting.

PRODUCT OVERVIEW

WallPod® Manual Control

Standard WallPods

Single-gang, decorator-style wall stations that provide manual control

- On/off
- On/off/dim
- Scene control
- Button-less touch controls

Graphic WallPod

- 3.5" full-color touch screen
- Up to 16 on/off/dim controls and eight lighting presets
- Mounts to single-gang box

Sensors

Occupancy Sensors

- Full line of occupancy sensors and photosensors
- PIR or passive dual technology (PIR/microphonics)
- Remotely controllable and upgradeable
- Integrated RJ45 ports

Photosensors

- Automatic set-point configuration simplifies calibration
- Tools and/or multiple commissioning visits not required

Network Devices (Multi-Room Systems)

Bridge

- Routes information between lighting zones and system gateway
- Four or eight RJ45 ports to link rooms to nLight™ backbone
- Optional ZigBee® wireless capability

Gateway

- Stores profiles and contains system time clock
- Provides local control point and Ethernet network access point
- Required to implement personal controls

PRODUCT OVERVIEW

Software for Your Hardware

SensorView™ Software

- Provides global control of lighting system
- Provides remote access and control from any network computer
- Shows detailed screens with real-time lighting and occupancy status
- Creates scheduled lighting control profiles
- Compiles event logs, device inventory and lighting run-time reports
- Enables remote programming for every individual sensor

Personal Controls (Virtual WallPods®)

- Manually raise or lower overhead lighting from your desktop
- Convenient taskbar applet
- Simple to use and requires no additional hardware

OTHER LIGHT SOURCES?

We understand that your next projects probably will not be lit entirely with digital lighting. nLight™ enabled devices are available that can control non-digital lighting loads as well, including:

- ***Fluorescent***
- ***Incandescent***
- ***Cathode***
- ***HID***
- ***And more***

For a complete listing of additional nLight devices, refer to the nLight Design Guide & Catalog or www.sensorswitch.com/nlight.

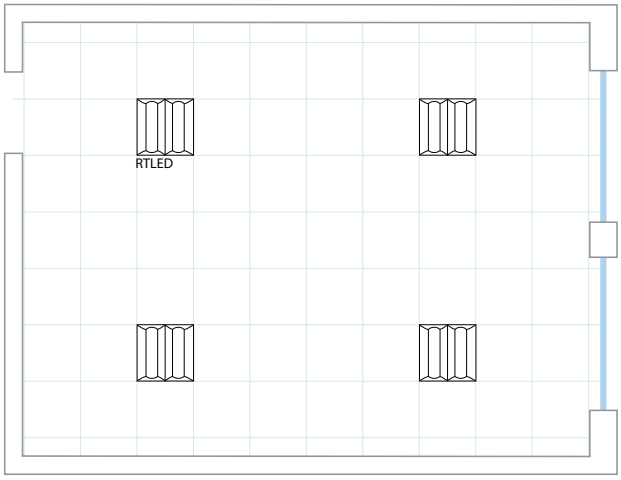
Power Pack

Wall Switch Sensor

CM 9 Ceiling Mount Sensor

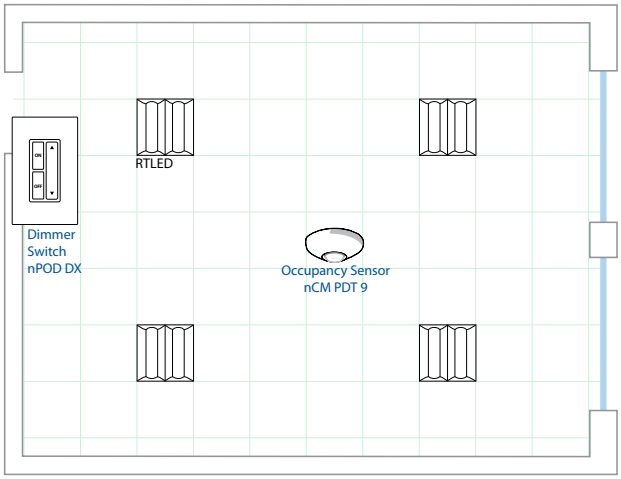
CMRB 9 Fixture Mount Sensor

SINGLE-ROOM DESIGN



LED Digital Lighting

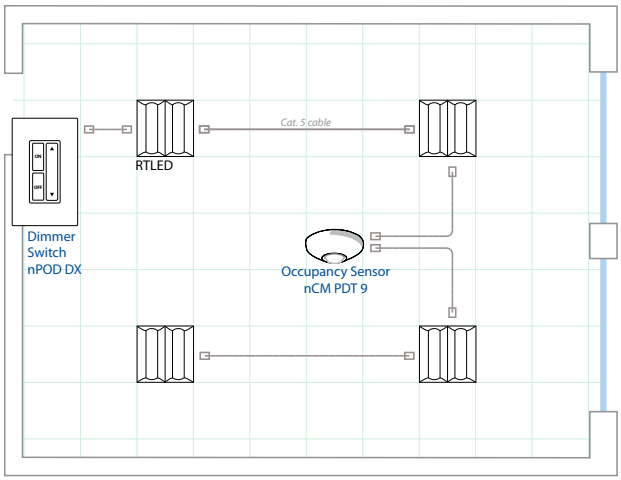
Add the RTLED or other nLight™ enabled digital luminaires and a line voltage power feed.



Sensors and Wall Controls

Add manual controls: nLight WallPod® dimmers, Graphic WallPods®, etc.

Add nLight occupancy sensors to maximize energy savings and comply with local energy codes.



Connect

Interconnect luminaires and nLight devices with Cat-5 cable using RJ45 connectors.

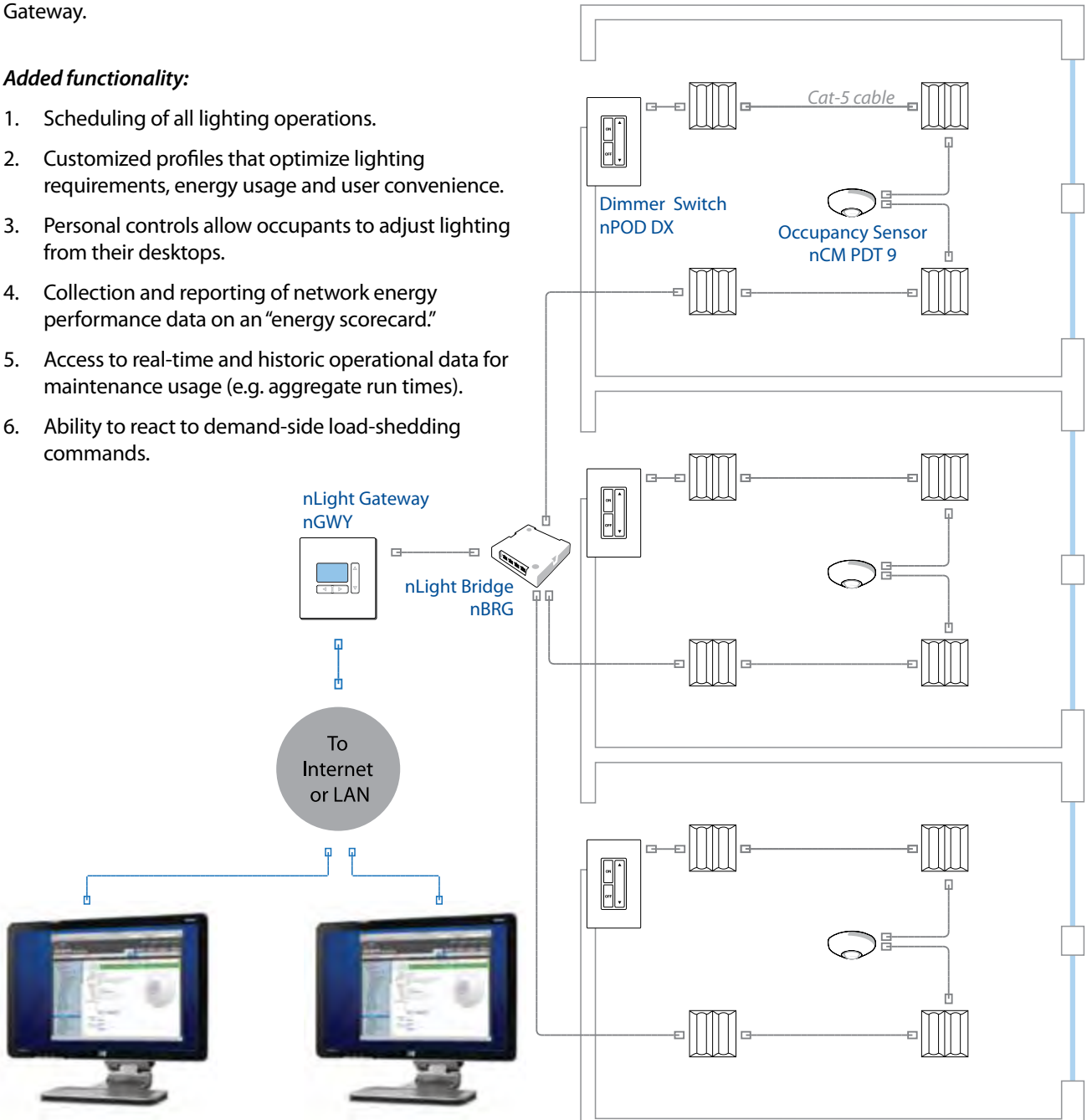
Digital Lighting: Lighting and controls designed as a system to optimize each other.

MULTI-ROOM DESIGN

Networking rooms together is done by creating a topology-free backbone using nLight Bridges and a Gateway.

Added functionality:

1. Scheduling of all lighting operations.
2. Customized profiles that optimize lighting requirements, energy usage and user convenience.
3. Personal controls allow occupants to adjust lighting from their desktops.
4. Collection and reporting of network energy performance data on an "energy scorecard."
5. Access to real-time and historic operational data for maintenance usage (e.g. aggregate run times).
6. Ability to react to demand-side load-shedding commands.



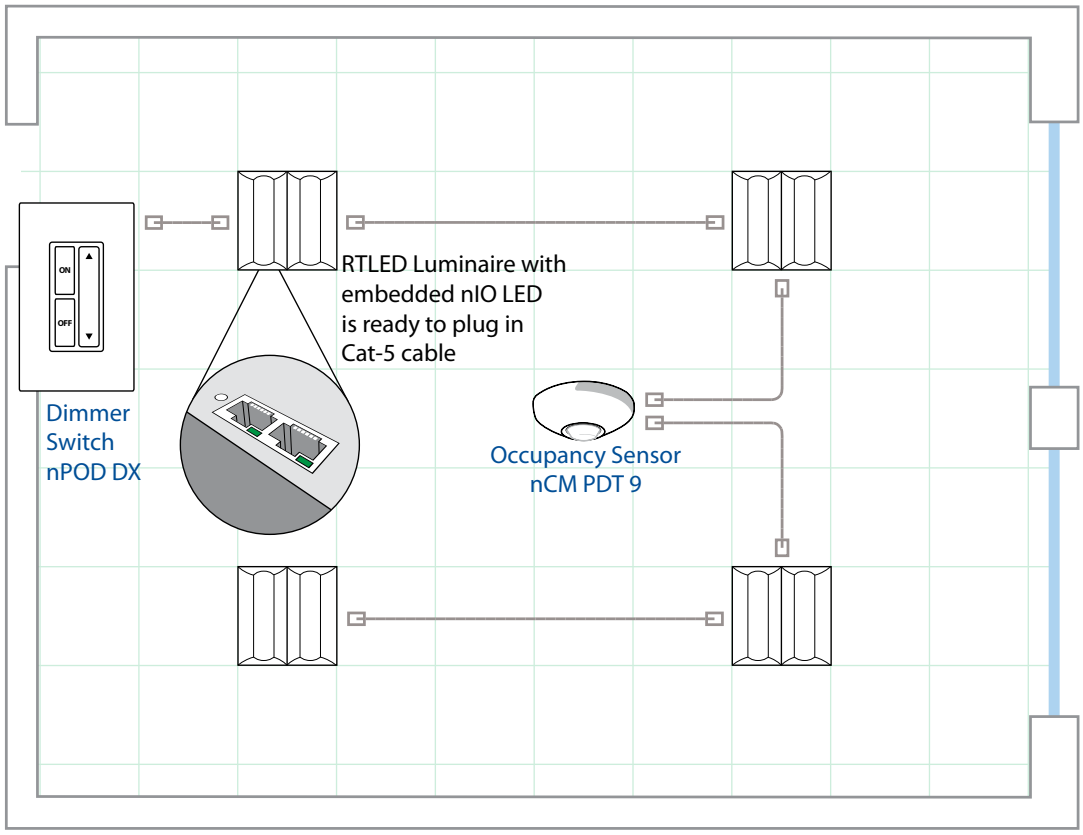
Personal Controls

Control local lighting from your desktop

SensorView™

Optimize and adjust entire system

PRIVATE OFFICE & SINGLE-ZONE SPACES



Operations

1. All lights (or lighting zones) turn off once sensor time delay expires.
2. Auto On or Manual On - easily adjustable.
3. Occupant can manually adjust lighting levels with full-range dimming.

Benefits

- All devices self-commission once power is applied. Sensor time delays are adjustable without the need for tools or removal from ceiling.
- Passive dual-technology sensors are 100% passive; no potential for interference.

Upgrade occupancy sensors to include an embedded photocell for daylight harvesting.

Ideal for small offices.

Photocells feature automatic set-point configuration and simplifying calibration. Tools and/or multiple commissioning visits are not required.

The WallPod provides on/off and dimming control.

Ceiling-mount, passive dual technology occupancy sensor with an embedded photocell (automatic dimming control)

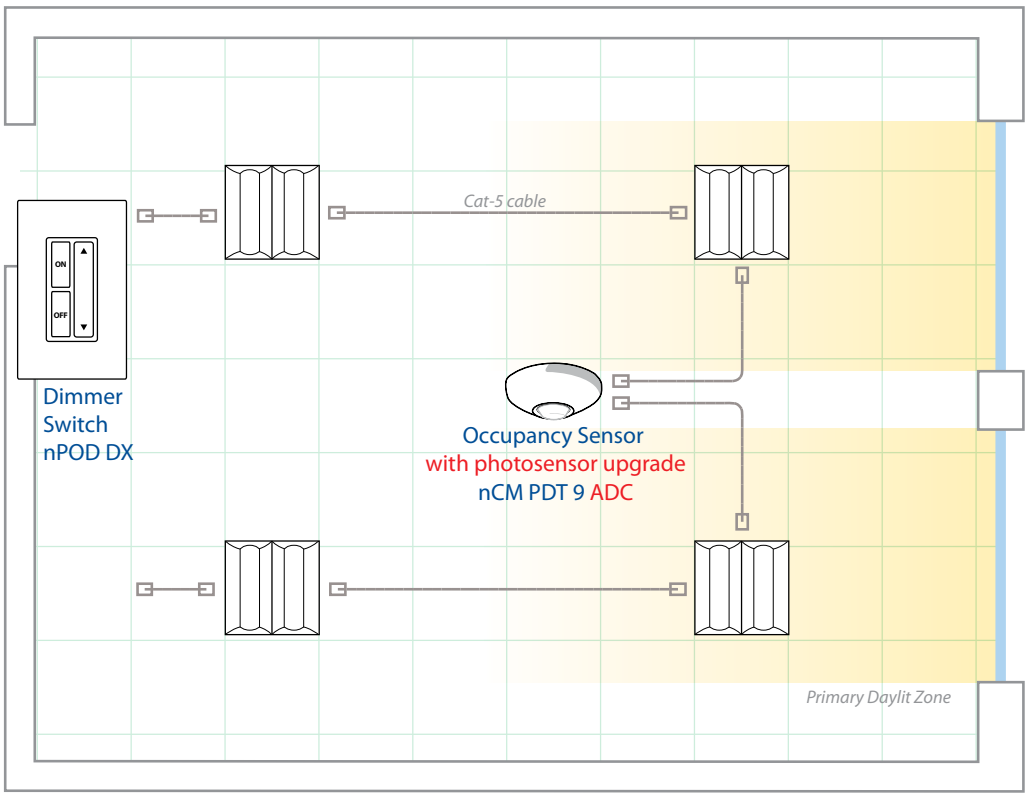
nCM PDT 9 ADC

The nCM PDT 9 provides excellent detection utilizing patented PIR/ microphonics dual technology to detect both occupant motion and occupant sounds.

PRIVATE OFFICE & SINGLE-ZONE SPACES

Upgrade to Daylight Harvesting (Small Offices)

with our Combined Occupancy Sensor and Photosensor



Open Office Plan - 9 Luminaires - Annualized Cost of Ownership

Control Strategy	Estimated Energy Reduction**	Annualized Cost of Ownership		
		RT5™ with Controls (discrete)	RT5™ no controls	RTLED w/nLight™ (discrete)
Digital Lumen Management	10%	$137.00	$158.00	$120.00
Manual On/Automatic Off	45%			
Manual Dimming	10%			
aggregated	*59%*	$120.00	$158.00	$111.00
Adder: ADC (daylight harvesting)	35%**			
aggregated	*73%*			

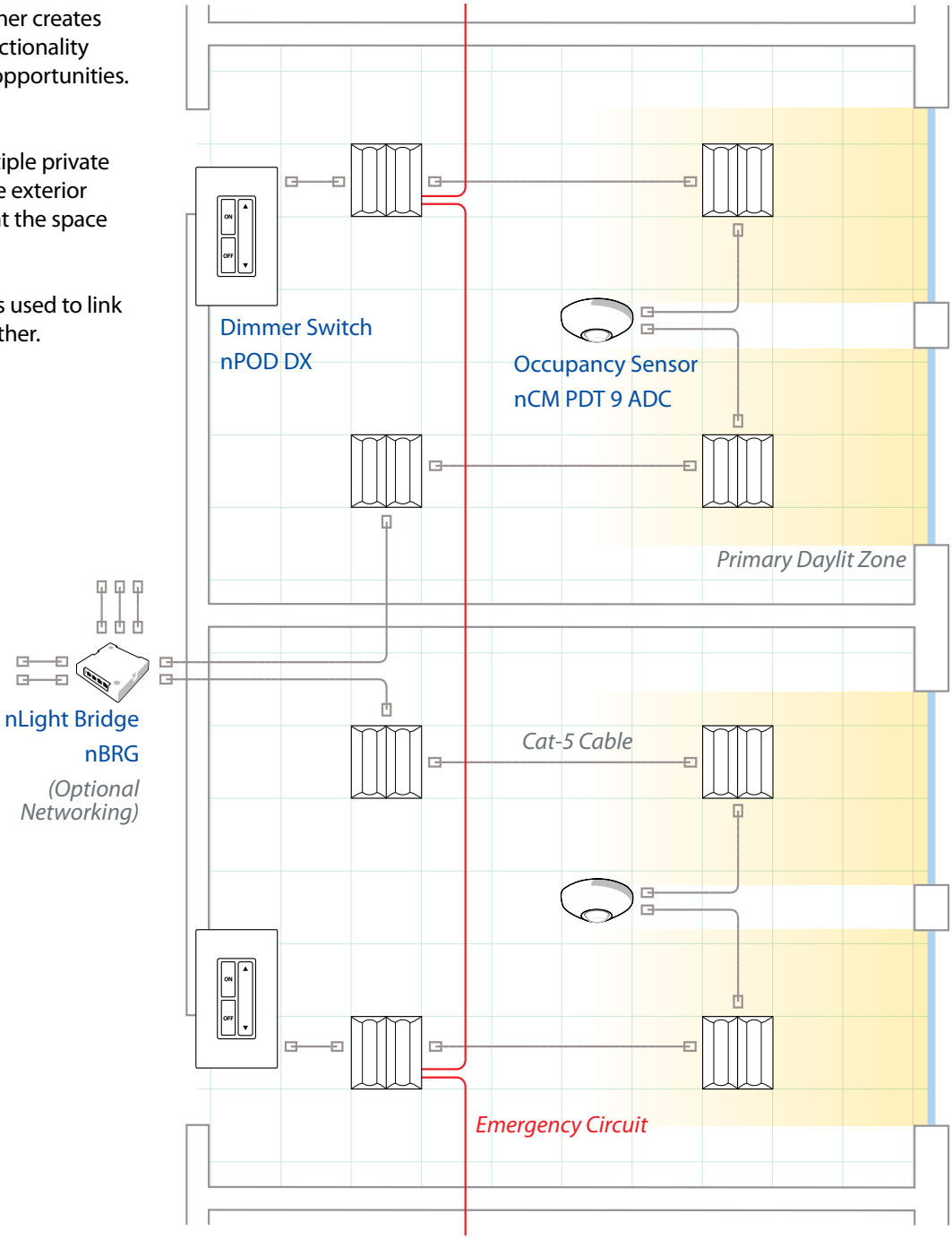
Assumptions:
20 year installation
4160 operating hours per year
$0.10/kwh energy rate
RT5 assumes an average service life of 18,000 hours (assumes a small penalty for frequent switching) - 1 lamp change per fixture over 20 year life
LED systems start with a base life of 50,000 hours, and is extended based on digital control options selected
**Source of energy reduction estimates: Advanced Lighting Guidelines, published by NBI, New Building Institute

MULTI-OFFICE SYSTEM (DETAIL)

Linking rooms together creates added value and functionality and energy savings opportunities.

In this example, multiple private offices with two large exterior windows help to light the space with daylight.

The nLight™ Bridge is used to link multiple rooms together.



MULTI-OFFICE SYSTEM (DETAIL)

Operations:

1. Auto On or Manual On - easily adjustable.

   Best Practice: Create two profiles-one for daytime operation and one for evening operation.

   Daylight Profile: Daylight harvesting limits the need for electric lighting during the day.

   Evening Profile: Lights are automatically raised to 50% upon entry, rather than full brightness (human eye response).

2. Occupant can manually adjust lighting levels from full brightness to 1% from dimming WallPod® or personal controls (via virtual WallPod on desktop).

3. All lights (or lighting zones) turn off once sensor time delay expires.

Benefits

- All devices self-commission once power is applied. Sensor time delays are adjustable without the need for tools or removal from ceiling.
- Dual-technology sensors are 100% passive; no potential for interference.
- Network-based functionality allows monitoring of lighting and controls, and infinite adjustment to meeting changing occupant requirements.

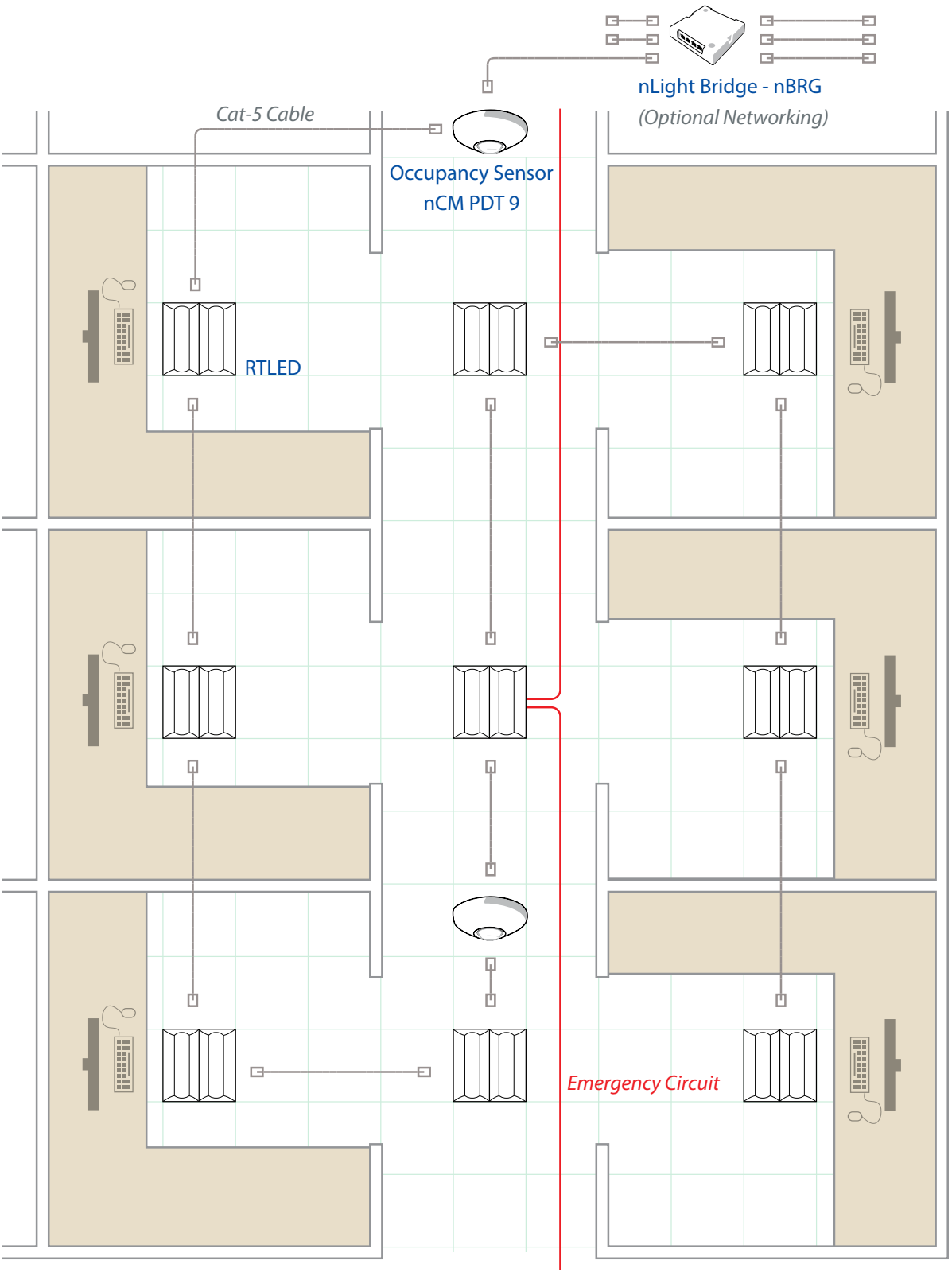
The nCM PDT 9 provides excellent detection utilizing patented PIR/ microphonics dual technology to detect both occupant motion and occupant sounds.

The WallPod provides on/off and dimming control to a user.

The Graphic Wallpod offers scene controls and manual raise/lower of multiple dimming channels. Ideal for small meeting rooms and private offices.

Virtual WallPods on occupant's desktop taskbar provide personal control of local lights.

OPEN OFFICE/MULTI-ROOM SYSTEM



OPEN OFFICE/MULTI-ROOM SYSTEM

Operations

1. The first person entering the space in the morning is detected by the occupancy sensors, which switch on pathway lighting and cubicle lighting to 50%.
2. A weekday "daytime profile" is automatically run at 8:00 a.m. Profile disables occupancy sensors and/or overrides the lights in order to ensure constant lighting on pathway.
3. Cubicle lighting may be manually adjusted (up or down) using personal controls from an occupant's computer.
4. An "off-hours profile" runs at 6:00 p.m. and on weekends. Profile causes occupancy sensors to switch on pathway lighting only. Time delay is set to 10 minutes or less.
5. A "late-night profile" runs from 11 p.m. to 4 a.m. to accommodate cleaning and security. Occupancy sensors switch all (close-by) lighting to 50%. Time delays are shortened to five minutes.

Use profiles (multi-room system with Bridges and a Gateway) to create adaptive controls that mimic changing usage patterns of occupants throughout the day!

Open Office Plan - 9 Luminaires - Annualized Cost of Ownership

		Annualized Cost of Ownership		
Control Strategy	Estimated Energy Reduction	RT5™ with controls (2 zone)	RT5™ no controls	RTLED w/nLight™ (discrete)
Digital Lumen Management	10%	$338	$350	$273
Automatic On / Automatic Off	25%**			
Manual Dimming	10%			
aggregated	*39%*			

Assumptions:
20 year installation
4160 operating hours per year
$0.10/kwh energy rate
RT5 assumes an average service life of 18,000 hours (assumes a small penalty for frequent switching) - 1 lamp change per fixture over 20 year life
LED systems start with a base life of 50,000 hours, and is extended based on digital control options selected
**Source of energy reduction estimates: Advanced Lighting Guidelines, published by NBI, New Building Institute

The nCM PDT 9 provides excellent detection utilizing patented PIR/micro-phonics dual technology to detect both occupant motion and occupant sounds.

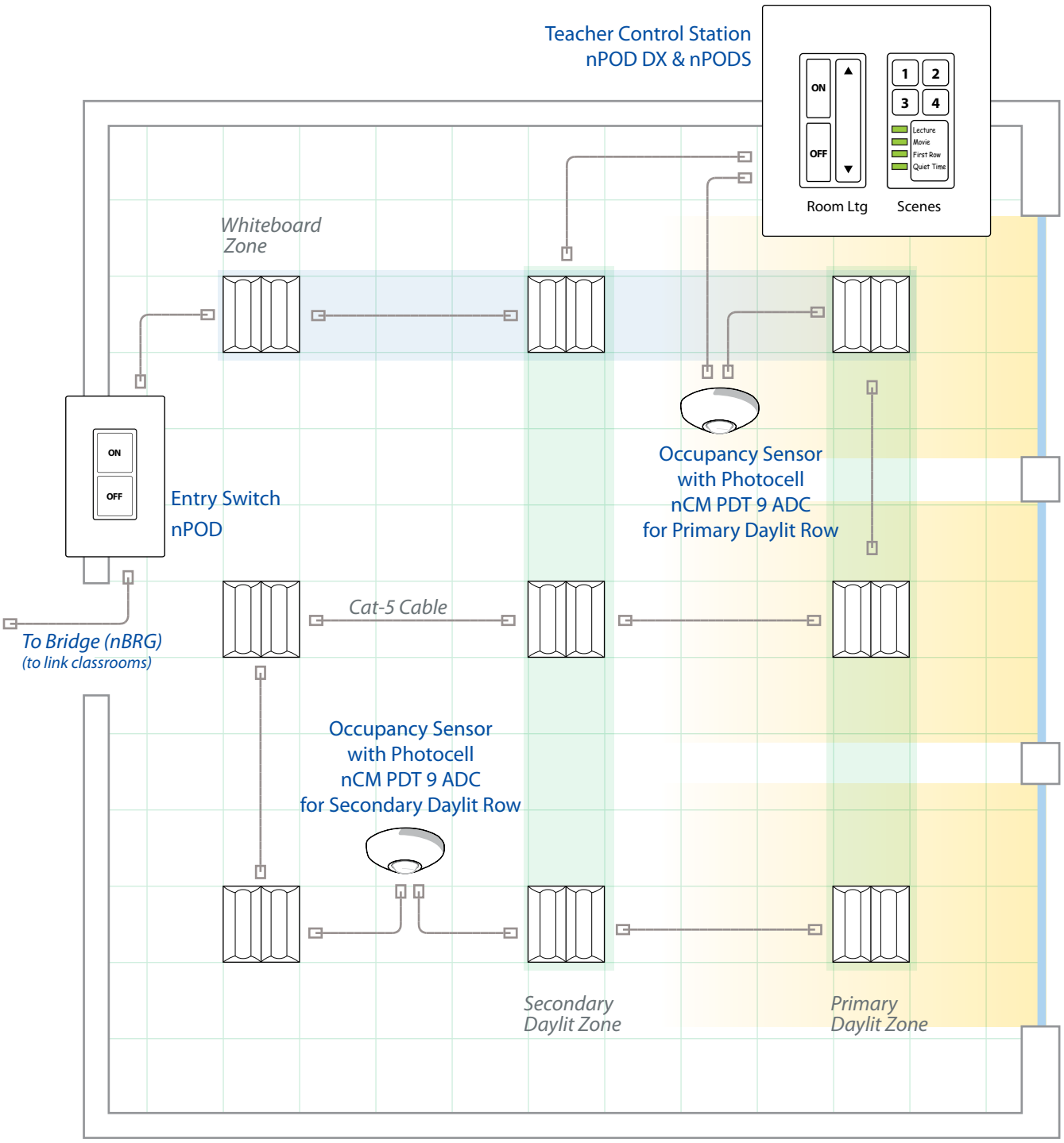
Upgrade Option

Controlling Other Loads:
Control local loads, including under-cabinet or task lighting, or even power strips, using slave packs.

A single Graphic WallPod® offers manual control for each cubicle and can be located where convenient for room occupants.

Virtual WallPods on occupant's desktop taskbar provide personal control of local lights.

CLASSROOM



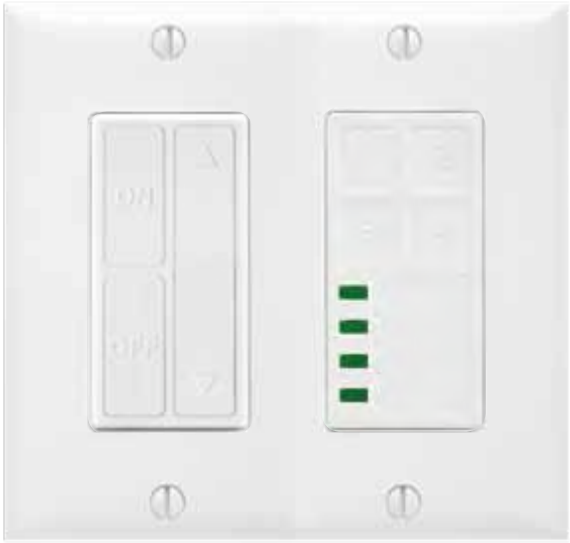
Benefits

1. Flexible enough to meet the requirement of the modern classroom — complements the AV system and the visual connection to the outdoors (and resulting daylight).
2. Teacher controls are simple to understand yet sophisticated to meet teacher requirements.
3. Maximizes energy savings without impacting room occupants.

CLASSROOM

Operations:

1. ***Auto On or Manual On*** - easily adjustable.
2. ***Daylight Profile:*** Photocell automatically dims rows one and two from window at relative levels according to amount of daylight present.
3. ***Evening Profile:*** Lights are automatically raised to 50% upon entry, rather than full brightness (human eye response).
4. ***Teacher Control Station:*** Room Lighting: Manual raise/lower control of entire classroom.
5. ***Scene 1*** - Lecture Mode: Dims all lights down except front row.
6. ***Scene 2*** - Movie Mode: Turns off the row of lights nearest white board; remaining lights are dimmed
7. ***Scene 3*** - Quiet Time Mode: Dims all lights down and disables any sensors and photocells that might normally raise lighting automatically.
8. ***Scene 4*** - White Board: On/off control.



Classroom - 9 Luminaires - Annualized Cost of Ownership

		Annualized Cost of Ownership		
Control Strategy	Estimated Energy Reduction	RT5™ with controls (discrete)	RT5™ no controls	RTLED w/nLight™ (discrete)
Digital Lumen Management	10%	$372	$350	$291
Manual On / Automatic Off	25%**			
Manual Dimming	15%			
aggregated	*43%*			
Adder: ADC (daylight harvesting)	40%	$281	$350	$243
aggregated	*66%*			

Assumptions:
20 year installation
4160 operating hours per year
$0.10/kwh energy rate
RT5 assumes an average service life of 18,000 hours (assumes a small penalty for frequent switching) - 1 lamp change per fixture over 20 year life
LED systems start with a base life of 50,000 hours, and is extended based on digital control options selected
**Source of energy reduction estimates: Advanced Lighting Guidelines, published by NBI, New Building Institute

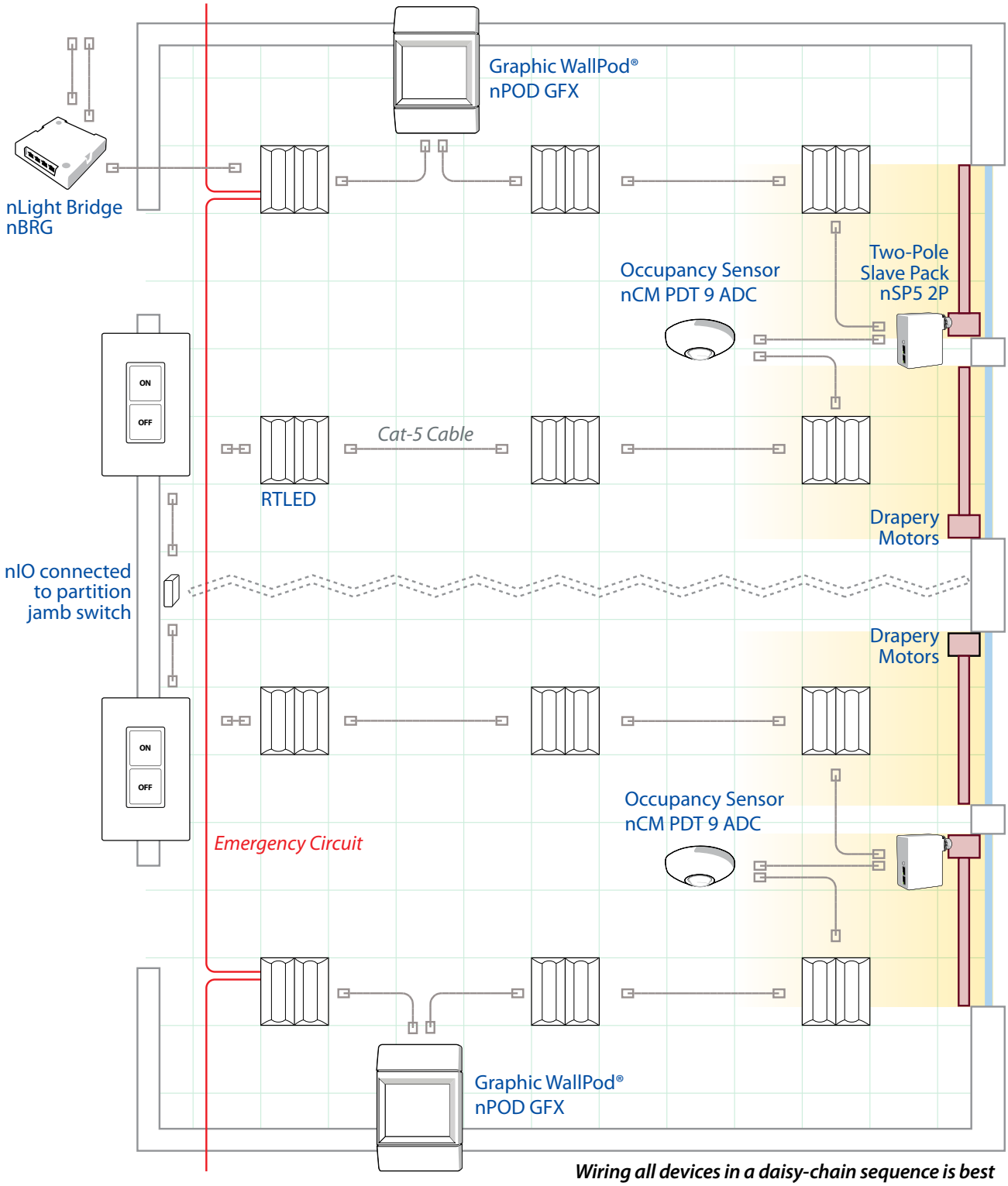
The nCM PDT 9 provides excellent detection. The ADC option provides integrated daylight harvesting.

The on/off WallPod® provides manual override control of lighting.

The WallPod Dimmer provides both on/off override control as well as enables dimming adjustments.

The WallPod Scene Controller provides selection of up to four customized room lighting and control scenes.

MULTI-PURPOSE ROOM



Wiring all devices in a daisy-chain sequence is best practice, although use of splitters is acceptable.

Your imagination is NOT the limit!

MULTI-PURPOSE ROOM

The Next Level:

The nLight™ system coupled with RTLED luminaires, allows a level of freedom previously associated with only the most expensive and complex control systems.

We make it easy with the Graphic WallPod®, we provide a control package suitable for anyone. Dynamically customize, add or subtract features to meet the needs of those using the room.

Operations:

Manual on/off control of room lights from WallPod® at room entrance.

If drapes are closed, lights are switched to a pre-set level.

If drapes are open, light levels are determined by the photocell.

If partition is closed, WallPod® controls one room.

If partition is opened, WallPod® controls both rooms together.

The Graphic WallPod® acts as a moderator station and provides:

Manual raise/lower of lighting

Manual raise/lower of drapes

Manual creation and selection of lighting presets

If partition is closed, Graphic WallPod® controls lighting in a single room

If partition is opened, Graphic WallPod® controls lighting on both rooms together

1. ***Suggested Scenes:***

Scene 1 - Lecture Mode: Dims all lights down except front row.

Scene 2 - AV Mode: Turns off luminaires nearest projection screen. Remaining lights are dimmed. Drapes are closed.

Scene 3 - Meeting Mode: All luminaires are dimmed to 66% and drapes are opened.

Scenes 4 - 8: Available for additional scene control or on/off control.

The nCM PDT 9 provides excellent detection utilizing patented PIR/ microphonics dual technology to detect both occupant motion and occupant sounds.

Drapery Controls

Controlling Other Loads
The two-pole Slave pack provides control of two-way motors (limit switches required) for drapery.

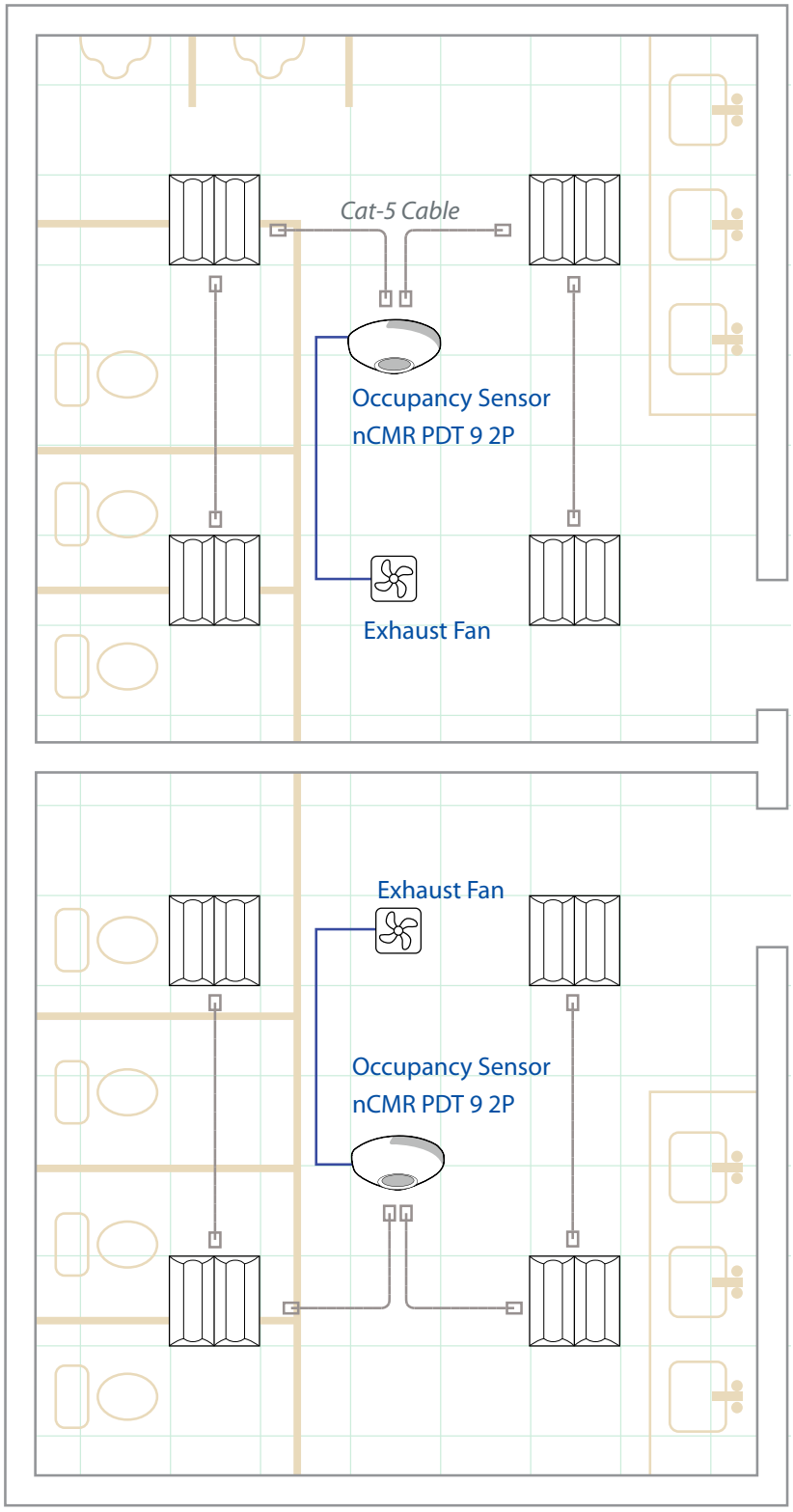
A single Graphic WallPod® offers highly configurable:

- Control
- Manual control of lighting and drapery

Partition Switch

A partition jamb switch is connected to an nIO. When closed, each room is separately controlled. When opened, the nIO loads a new profile into the controls to control lighting and drapes in both rooms together.

RESTROOMS & NON-DIGITAL LIGHTING LOADS



Wiring all devices in a daisy-chain sequence is best practice, although use of splitters is acceptable.

Line-voltage sensor directly switches the fan while simultaneously controlling RTLED luminaires digitally.

RESTROOMS & NON-DIGITAL LIGHTING LOADS

Operations:

Automatic-on for lights and exhaust fans. The CMR PDT 9 2P offers two separate time delays for restrooms.

Lights and fans are switched off once sensor time delay expires.

Recommended Time Delay: Fans have a 20-minute delay. Lighting has a 10-minute time delay.

The dual technology keeps the lights on, even when the occupant is inside a stall.

Additional notes:

If a common fan is being used for multiple restrooms, installing a two-pole sensor in each room with the second poles wired in parallel will cause the fan to operate if either room is occupied.

Restrooms With Vestibules (Not Shown):

Sensors with different detection technologies can work together to cover a space. The sensor located in the vestibule uses PIR to detect and turn the lights on when the occupant first enters. The dual-technology sensor located in the main stall area then keeps the lights on, even when the occupant is inside a stall.

The Digital Lighting Advantage

LED lighting placed in a restroom benefits from the short operational run times associated with occupancy sensors. System life is extended considerably.

Restroom - 4 Luminaires, Non-Lighting Loads
Annualized Cost of Ownership

		Annualized Cost of Ownership		
Control Strategy	Estimated Energy Reduction	RT5™ with controls (discrete)	RT5™ no controls	RTLED w/nLight™ (discrete)
Digital Lumen Management	10%	$152	$158	$128
Automatic On / Automatic Off	45%			
aggregated	*50%*			

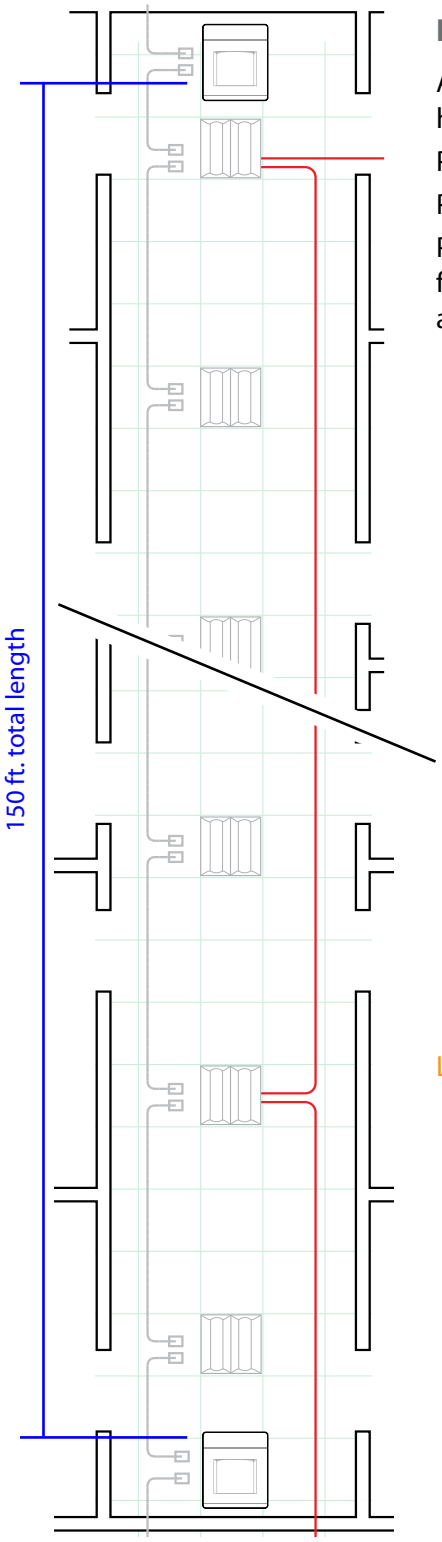
Assumptions:
20-year installation
4160 operating hours per year
$0.10/kwh energy rate
Maintenance costs based on lamp replacements, no ballast or driver replacements considered
RT5 assumes an average service life of 18,000 hours (assumes a small penalty for frequent switching)
LED systems start with a base life of 50,000 hours, and is extended based on digital control options selected
**Source of energy reduction estimates: Advanced Lighting Guidelines, published by NBI, New Building Institute

Ceiling Mount
Occupancy Sensor
nCMR PDT 9 2P

The nCMR PDT 9 2P provides excellent detection, utilizing patented PIR/microphonics dual technology to detect both occupant motion and occupant sounds.

The line-voltage relay embedded in this sensor is used to control the exhaust fan.

HALLWAYS - CORRIDORS



Left:

Application: Long, straight hallways

Product: Hallway sensors

Part#: HW 13

Placement: Sensors mounted facing each other, up to 150 ft. apart

Right:

Application: Hallways with alcove entryways

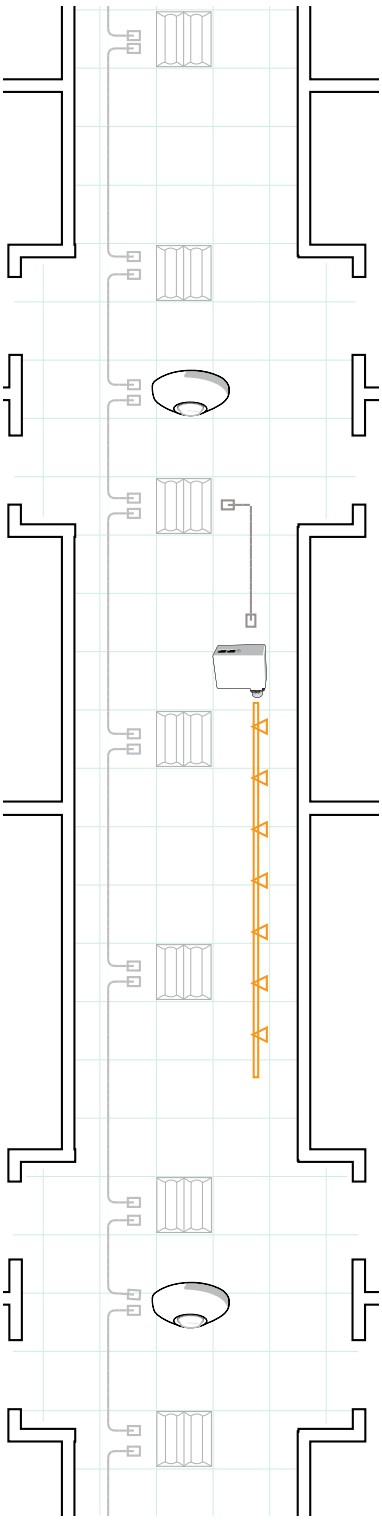
Product: Extended-range ceiling-mount sensors
Part#: nCM 10

Placement: Sensors placed on 50 ft. centers

Additional Products:

Lighting: Lithonia Lighting track fluorescent lighting

nLight™ Control: nSP16 switches track lighting on and off



HALLWAYS - CORRIDORS

Operations:

1. Daytime Profile (6:00 a.m. to 6:00 p.m.)
2. First person in the morning to enter hallway is detected and lights are switched on automatically.
3. Throughout the remainder of the day, lighting levels are reduced to 50% when hallway is vacant (five-minute delay), and returned to 100% after occupancy is detected.
4. Track lights are operated on a time schedule from the nLight™ Gateway to highlight artwork and are left on throughout the day to accommodate customer requirements.

Evening Profile (6:00 p.m. to 11:00 p.m.)

1. Lights are reduced to 20% when hallway is vacant, and returned to 50% brightness when occupancy is detected.
2. Track lights are switched off with a time schedule and remain off throughout the evening hours.

Late-night Profile:

1. RTLED luminaires (only) are switched off completely when unoccupied.
2. RTLED luminaires (only) are switched to full brightness during occupancy with a very short (two -minute) time delay to allow for security inspections and cleaning crews.

Hallway Sensors:
Designed for 7-10 ft. mounting at end of hallways. Sensors should always be applied in pairs facing each other.

Ceiling-mount Sensors:
The nCM 10 passive infrared sensor is the best choice for detecting walking motions in hallways. Provides 28 ft. radial coverage when mounted to a standard 9 ft. ceiling height. 360 degree coverage pattern detects occupants immediately upon entrance to hallway.

Track Light Controls

Controlling Other Loads
The nSP16 Slave Pack provides a 16-amp relay for switching on/off other loads such as track lighting.

COVERAGE PATTERNS

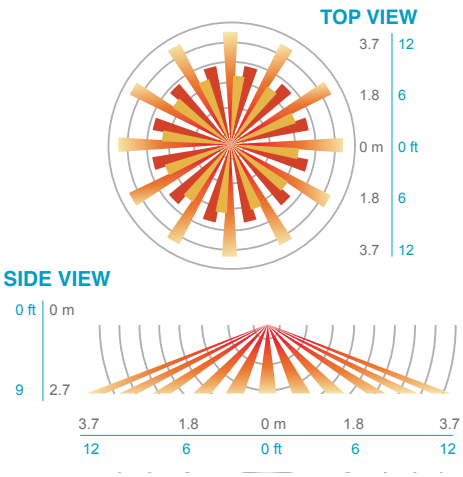
Ceiling-Mount Standard / Extended 360° Sensors

Ceiling Mount

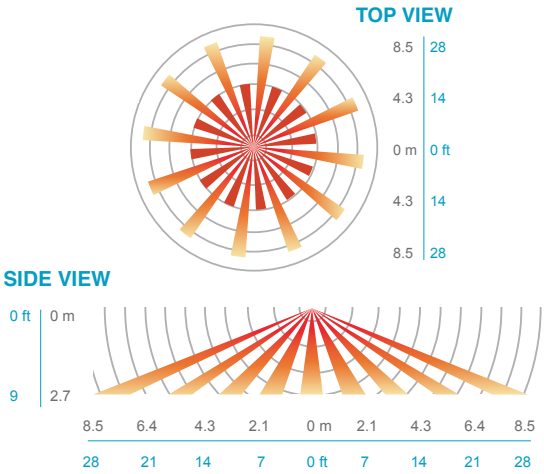
Fixture Mount

Recessed Mount

Standard Range 360° Lens



Extended Range 360° Lens



Standard Range Application

- Best choice for small motion (e.g. hand movements) detection from ceiling
- Private offices
- Open office areas

Extended Range Application

- Best choice for large motion (e.g. walking) detection from ceiling
- Corridors
- Rooms with low-ceiling heights

Features & Options

- Ceiling mount, recessed mount and fixture mount
- Available with up to two line-voltage relays
- PIR or dual-technology (PIR/microphonics) detection
- Dimming and/or photocell (single or dual zone)
- Low-temperature/high-humidity resistance

COVERAGE PATTERNS

Decorator Wall Switch Sensors

White **Almond** **Ivory** **Gray**

Wall Switch Decorator Lens

Application

- Easiest solution for retrofitting existing rooms
- Replaces existing toggle switch
- Ideal for private offices

Options

- Available with or without relay, PIR or dual technology (PDT) detection, optional photocell and low-temperature/high-humidity resistance

Features

- Small motion detection up to 20 ft. (6.10 m)
- Multiple operating modes
- No minimum load
- Adjustable time delay
- Push-button programmable
- Reversible wiring on versions with relays

Daylighting Control Sensors

Ceiling Mount **Fixture Mount** **Recessed Mount**

Application

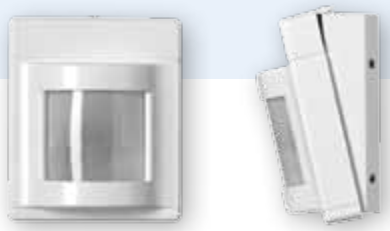
- Automatic on/off switching
- Automatic dimming control
- Combination on/off and dimming control

Features & Options

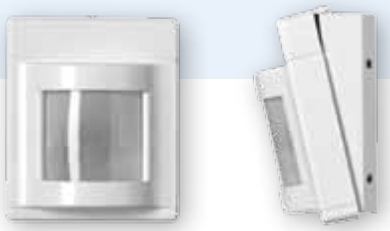
- Functions stand-alone or with occupancy sensors
- Push-button programmable
- Available with or without line-voltage relay
- 0-10V DC dimming with adjustable max./min. levels
- Auto set-point calibration
- Fully digital control
- Single zone or dual zone

COVERAGE PATTERNS

Wide View / Hallway Sensors

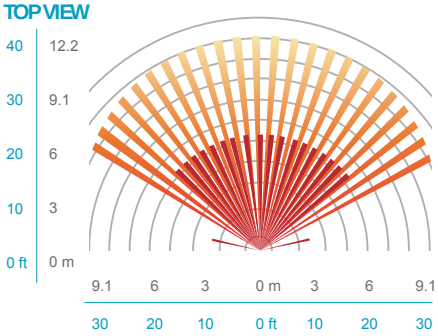


Wide View Lens

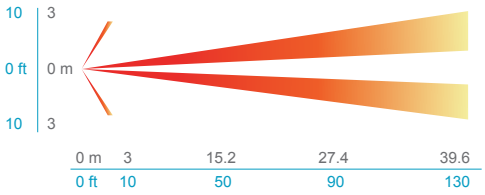


Hallway Lens

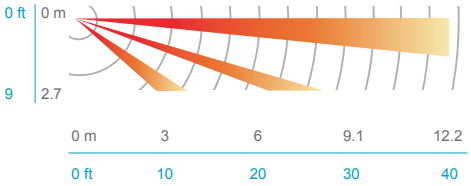
TOP VIEW



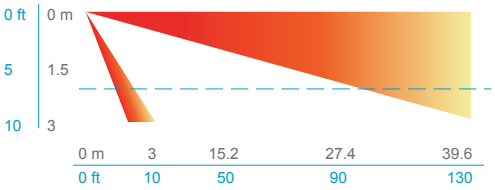
TOP VIEW



SIDE VIEW



SIDE VIEW



Wide View Application

- Small motion detection up to 40 ft. (12.19 m)
- Large motion detection up to 70 ft. (21.34 m)
- Ideal for classrooms

Hallway Application

- Large motion detection up to 130 ft. (39.62 m)
- Enclosure enables mounting between 8 to 10 ft. (2.44 to 3.05 m)
- Applied in pairs

Features & Options

- Corner and wall mount or ceiling mountable with bracket (WV BR)
- PIR or dual-technology (PIR/microphonics) detection (wide view only)
- Optional photocell; low-temperature/high-humidity resistance

COVERAGE PATTERNS

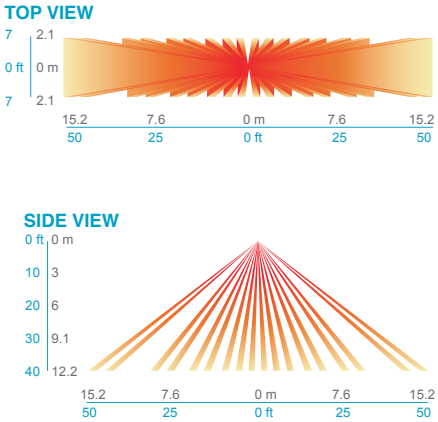
High Bay Sensors

Aisleway

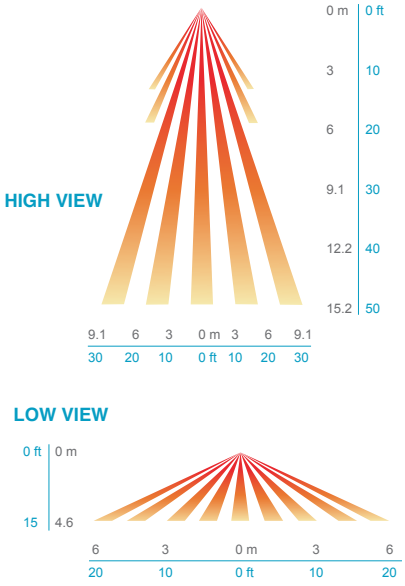
Ceiling Mount - 360°

End-of-Aisle

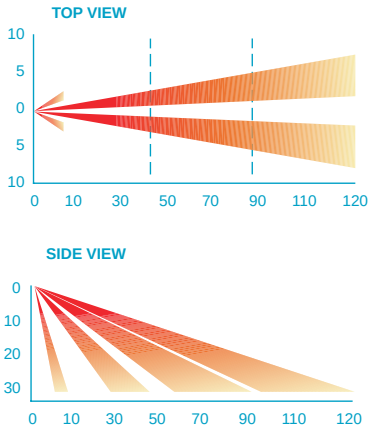
Aisleway Lens



360° Lens



End-of-Aisle Lens



Application

- Several coverage patterns (360º, aisleway, end-of-aisle)
- On/off control of T5/T8 fluorescent lighting
- HID bi-level fixture control with start-to-high option
- Ideal for factories, warehouses and gymnasiums

Features & Options

- Ceiling mount, recessed mount and fixture mount
- Available with up to two line-voltage relays
- 120/277V AC, 347 VAC, 208/240/480V AC
- Occupancy-controlled high/low dimming
- On/off photocell
- Low-temperature/high-humidity resistance

POWER PACKS

nLight™ Power Packs and Slave Packs

nPP16

Switching Lighting Loads
The nLight nPP16 Series power pack is the workhorse of an nLight system. Each unit has two important responsibilities: providing system power and switching lighting loads. To provide system power, the power pack transforms Class 1 line voltage (120/277V AC or 347V AC) to Class 2 15V DC. For switching a lighting load, an internal 16A latching relay is used.

nSP16

Switching Lighting Loads
The nLight nSP16series slave relay pack switches lighting loads up to 16A. For simplifying installation, slave packs have an elongated chase nipple that allows them to be attached either directly through a 1/2" knockout into a junction box, or inside an adjacent box for meeting specific local code requirements in ceiling plenums.

nSP5 D

Individual Fixture Dimming
The nLight nSP5 D device provides both a relay and a 0-10V DC dimming output, enabling on/off operation as well as continuous dimming control of an attached dimmable fixture. This combination of features makes it ideal for rooms where multi-zone or individual control of luminaires is required. Manual switching and adjustment of the dimming level is possible via WallPods® or through the SensorView™ software.

nSP5 2P

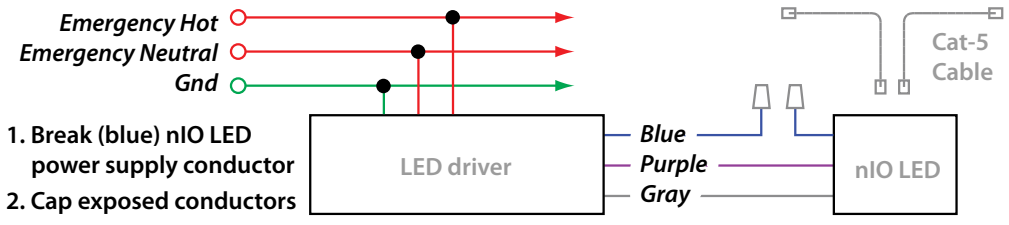
Dual Relay
Ideal for a/b lighting, two-way motor loads (limit switches required), or a light and fan in a restroom with two different time delays.

nSP5 480

Controlling 208/480V AC Ballast
The nLight nSP5 480 Series slave relay pack is designed to switch up to a 5A lighting load that uses two-line voltage feeds.

Options for Emergency Lighting

Acuity offers the RTLED with several "em" options. A standard fixture can easily be modified for emergency operation from a generator (downstream of a UL1008 transfer switch).



For complete wiring diagrams, specification sheets and single line drawings, please visit:

RTLED luminaire: lithonia.com/rtled nIO LED: sensorswitch.com/nlight

LITHONIA LIGHTING®

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