

## FEATURES

- Architectural styling in an edge-lit luminaire
- High efficiency acrylic lens featuring edge lit technology
- Ideal for offices, schools, medical, and public spaces
- Available in trendy matte black finish
- Stylish controls integration
- Wet location option available
- 2" overall depth, 2 1/4" with emergency battery pack option
- Surface mount kit available as an accessory
- Up to 140 lumens per watt



## CONTROLS TECHNOLOGY



## SPECIFICATIONS

### CONSTRUCTION

- Extruded aluminum side and center rails, cast aluminum end caps, cold-rolled steel driver enclosure
- Acrylic light guide and diffuser with custom frost for high efficacy without pixelation
- Rail and end cap surfaces are finished after fabrication with unique formula high-reflectivity matte white paint

### INSTALLATION

- An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway
- Luminaire fits recessed exposed Grid ceilings (G); four NEC compliant T-bar clips included
- Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane
- A Flange Kit (FK) accessory is available for recessed hard ceiling applications
- Surface Mount (SM) accessory allows placement below ceiling plane

### ELECTRICAL

- 60,000 hour LEDs at L80 for reduced maintenance
- 82 CRI standard or optional 90 CRI for color sensitive applications

### CONTROLS

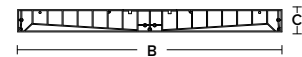
- Optional SpectraSync Tunable White solution integrates seamlessly into a variety of control systems
- NX Lighting Controls provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments
- NX Connect is a standalone wireless deployment for room based applications using wireless enabled and battery operated devices

### CERTIFICATIONS

- Emergency battery pack options are California Energy Commission (CEC) Title 20 Compliant
- IC label is standard for recessed products
- All luminaires are built to UL 1598 standards, and bear appropriate cCSAus labels
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Damp Location label standard; Wet location Listing available
- UL Sanitation certified to NSF standards



Typical Dimensions and Weights				
Sizes	(A) Length Inches (mm)	(B) Width Inches (mm)	(C) Height Inches (mm)	Weight lbs (kg)
1x2	23.75 (603)	11.75 (299)	2.00 (51)	10.0 (4.5)



### CERTIFICATIONS (CONTINUED)

- Adheres to LM79, LM80, and TM21 industry standards
- Tested in accordance with ISO 14644-1; suitable for ISO Class 5-9 positive and negative pressure clean rooms
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See wiring diagram.
- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at [www.designlights.org](http://www.designlights.org)
- Product configurations not including battery packs or controls meet federal procurement law requirements under the Trade Agreements Act (FAR 52.225-11). [See Buy America\(n\) Solutions](#)

### WARRANTY

- 5 year warranty

## ORDERING GUIDE

Example: VSY12–35MLHEG–EDU

VSY12				G		
Model	CRI	Color Temp	Nominal Lumens <sup>3</sup>	Ceiling Type	Driver	Voltage
VSY12 Verify 1'x2' Architectural Edge-Lit	Blank >80 9 >90	30 3000K 35 3500K 40 4000K 50 5000K 2765T 2700K–6500K SpectraSync™ Tunable White <sup>1,2</sup>	VWHE 1440 MWHE 1950 LWHE 2560 MLHE 3290 HLHE 3635 VLHE 4410	G Grid <sup>4</sup>	ED 0-10V Dimming ED1 0-10V 1% Dimming EDD 0-10V Dim-to-Off LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology <sup>5,6</sup> DALIP Powered by DALI <sup>5</sup>	U 120– 277V 347 347V

Options	Control Options <sup>12</sup>
ELL14 10W Emergency Battery Pack (CEC Title 20 compliant) Installed <sup>2,5,7,8</sup>	<b><u>NX Lighting Controls</u></b>
ELL14ST Emergency Battery Pack, 1400 Lumens, Self Test <sup>2,5,7,8</sup>	<b><u>Networked Wireless</u></b>
ELL14H2 Emergency Battery Pack, 2-Hour Run Time <sup>2,5,7,8,9</sup>	NXW NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor <sup>2,13,14,15</sup>
DTS Dimming Bypass Module <sup>2,5,8,10</sup>	NXWSM NX Networked Wireless Enabled Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming <sup>2,13,15</sup>
C388 3-Wire Flex	<b><u>Networked Wired</u></b>
C488 4-Wire Flex	NXE NX Wired Dual RJ45 SmartPORTS, without Sensor <sup>2,13,14,15</sup>
C588 5-Wire Flex	NXESM NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming <sup>2,13,14,15</sup>
C688 6-Wire Flex	<b><u>Independent Control</u></b>
GLR Fast Blow Fuse	NXCS NX Connect NXC-WIZ20 Wireless Indoor Occupancy and Photocell Sensor <sup>2,5,16,17,18,20</sup>
CP Chicago Plenum	<b><u>Other Lighting Controls</u></b>
WL Wet Location <sup>11</sup>	<b><u>Networked Wireless</u></b>
MB Matte Black Finish	LVR Lutron Vive Wireless DFCSJ-OEM-RF In-Fixture Control (RF only) <sup>5,18,19,20</sup>
	LVS Lutron Vive Wireless DFCSJ-OEM-OCC In-Fixture Control with Daylight and Occupancy Sensing <sup>5,18,19,20</sup>
	AWNRLutron Athena Integral Fixture Control A-WN-DO1-RF-WH (RF only) <sup>5,15,18</sup>
	<b><u>Independent Control</u></b>
	ODPG Occupancy and Daylight Sensors w/ Grouping, Philips EasySense SNS200 <sup>5,18,20</sup>

## ACCESSORY ORDERING GUIDE

Accessories
<input type="checkbox"/> FK12 1' x 2' Single Flange Kit (Shipped separately)
<input type="checkbox"/> KIT-VSY12 SM VSY Surface Mount Kit (1'x2')

## Notes:

- Available with ED driver and 80 CRI only. Not available with MLHE, HLHE or VLHE lumen package
- Combination of SpectraSync, NX and emergency battery pack in not available
- Refer to performance tables for exact values and available lumen outputs for fixture size
- For drywall, order G with flange kit accessory
- Not available with 347V
- Not available with VWHE lumen package
- To determine lumen output in emergency mode, multiply the battery pack wattage by the fixture lumens per watt (LPW)
- For compatibility with Dual-Lite Litegear inverters, contact lighting representative
- Not available for use in Canada
- For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See wiring diagram page 8.
- Not available with Surface Mount Kit, Controls or Emergency Battery Pack

## All Controls

<sup>12</sup> Minimum ambient temperature: 0°C (32°F)

## NX Lighting Controls Options

- NX combined with SpectraSync is not available in 347V
- Not compatible with Surface Mount Kit
- Not available with LUTH or DALIP driver options
- NX Connect devices can be configured using the NX Connect Mobile App, available in the Apple App Store
- NX Connect devices are not compatible with NX Networked Wireless or Wired Options

## Other Lighting Controls Options

- Not available with SpectraSync
- Vive is a trademark of Lutron Electronics Co., Inc.
- Only available with DALIP driver option

## DELIVERED LUMENS

PRODUCT AVAILABILITY 80 CRI			
Lumen Package	Lumens	Input Watts	LPW
VSY12-30VWHE	1407	11	126
VSY12-35VWHE	1442	11	129
VSY12-40VWHE	1466	11	131
VSY12-50VWHE	1428	11	128
VSY12-30MWHE	1905	15	125
VSY12-35MWHE	1952	15	128
VSY12-40MWHE	1985	15	130
VSY12-50MWHE	1985	15	130
VSY12-30LWHE	2501	19	130
VSY12-35LWHE	2563	19	133
VSY12-40LWHE	2607	19	135
VSY12-50LWHE	2607	19	135
VSY12-30MLHE	3209	24	131
VSY12-35MLHE	3288	24	135
VSY12-40MLHE	3344	24	137
VSY12-50MLHE	3344	24	137
VSY12-30HLHE	3551	27	134
VSY12-35HLHE	3636	27	137
VSY12-40HLHE	3699	27	140
VSY12-50HLHE	3699	27	140
VSY12-30VLHE	4306	33	132
VSY12-35VLHE	4413	33	135
VSY12-40VLHE	4487	33	137
VSY12-50VLHE	4275	32	133






## PROJECTED LUMEN MAINTENANCE

Calculation Method	Ambient Temp	25,000 hrs	50,000 hrs	60,000 hrs *
TM-21-11	25C/77F	0.94	0.89	0.87
TM-21-21	25C/77F	0.94	0.88	0.86

\* Lumen maintenance values calculated per TM-21 using six times the LM-80 test time for the LED and in-situ thermal testing of the luminaire.

## NX LIGHTING CONTROLS



Control Option Ordering Logic & Description			Control Option Functionality								Control Option Components	
			Networkable	Grouping	Scheduling	Occupancy/Motion	Daylight Harvesting	0-10V Dimming	On/Off Control	Bluetooth App Programming		
NX Wireless	NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor	✓	✓	✓	-	-	✓	✓	✓		NXRM2-H
	NXWSM	NX Networked Wireless Enabled Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth® Programming	✓	✓	✓	✓	✓	✓	✓	✓		NXSMP2-SMI
NX Wired	NXE	NX Wired Dual RJ45 SmartPORTS , without Sensor	✓	✓	✓	-	-	✓	✓	✓ <sup>1</sup>		NXDSP
	NXESM	NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth® Programming	✓	✓	✓	✓	✓	✓	✓	✓		NXDSP NXSMP2-SMI
NX Independent	NXCS	NX Connect NXC-WIZ20 Wireless Indoor Occupancy and Photocell Sensor	-	✓	-	✓	✓	✓	✓	✓ <sup>2</sup>		NXC-WIZ20

1 Requires NXBTC, order separately.

2 Requires use of NX Connect App available for download from Apple app store.

## DEFAULT SETTINGS

NX Wireless & Wired	Occupancy Sensor	Enabled
	Occupancy Sensor Sensitivity	7 Minutes
	Occupancy Sensor Timeout	15 Minutes
	Occupied Dim Level	100%
	Unoccupied Dim Level	0% (OFF)
	Daylight Sensor	Disabled
	Bluetooth	Enabled
	2.4GHz Wireless Mesh	Off
	Passcode Factory Passcode: HubbN3T!	Enabled

NX Independent - NX Connect	Settling/Dwell Time	5 sec
	Hold Time	10 min
	Group Hold Time	10 min
	Grace Time	-
	Strategy	Auto ON/OFF
	Occupancy Sensitivity	5 (highest)
	Occupancy Indicator	ON
	Partial Off/Standby	0%
	Background Level	50%
	Task Level	100%
	Daylight Harvesting	-
	Low Ambient Output	250%
	High Ambient Output	OFF

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

## CONTROLS TECHNICAL SUPPORT

1-800-888-8006 (7:00 am–7:00 pm est)

## APP INFORMATION

### NX Lighting Controls App



The NX Lighting Controls App is a free to use mobile application for programming both an NX Lighting Controls System or Standalone Bluetooth Sensors. The mobile app allows you to configure devices, discover and setup wireless enabled luminaires and program your NX system settings.



Android



Apple iOS

### NX Connect App



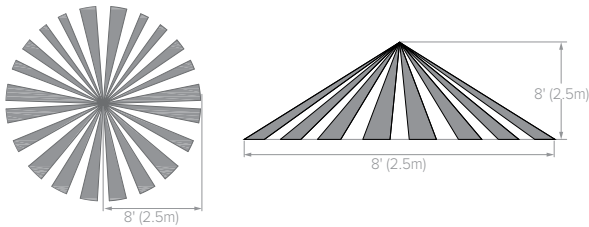
The NX Connect mobile App is a free to use mobile application for programming a NX Connect System. The mobile App allows you to discover, configure and share your NX Connect system.



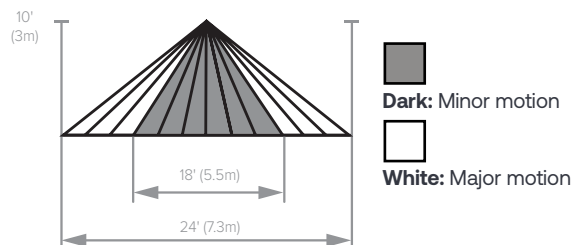
Apple iOS

## COVERAGE PATTERNS





### NXWSM/NXESM (NXSMP2-SMI SENSOR)



### NXCS (NXC-WIZ20 SENSOR)



## OTHER LIGHTING CONTROLS

Control Option Ordering Logic & Description			Control Option Functionality								Control Option Components	
			Networkable	Grouping	Scheduling	Occupancy/Motion	Daylight Harvesting	0-10V Dimming	On/Off Control	Bluetooth App Programming		
Other	ODPG	Occupancy sensing, daylight harvesting and task tuning in one device. <sup>1</sup>	-	✓	-	✓	✓	✓	✓	✓ <sup>3</sup>		SNS200
	LVR	The Vive integral fixture control is a radio frequency (RF) device that controls either Lutron EcoSystem or DALI drivers based on RF input from Pico remote controls, Radio Powr Savr wireless sensors, or Vive hubs. <sup>2</sup>	✓	✓	✓	-	-	-	✓	-		DFCSJ-OEM-RF
	LVS		✓	✓	✓	✓	✓	-	✓	-		DFCSJ-OEM-OCC
	AWNDR	The Athena wireless node is a radio frequency (RF) device that enables simple, digital control of individual light fixtures in an Athena control system. <sup>3</sup>	✓	✓	-	-	-	✓	✓	-		A-WN-D01-RF-WH

1 Philips MasterConnect App required for field configuration.

2 Lutron Vive Hub required to enable Networking, Grouping and Scheduling.

3 Lutron Athena Hub required to enable Networking, Grouping and Scheduling.

### Philips EasySense Controls (ODPG option) & Accessories:



- Occupancy sensing, daylight harvesting, task tuning and grouping in one device
- Standalone control or grouping to wireless switches<sup>1</sup>
- Uses Philips field apps for on site commissioning<sup>2</sup>
- Ability to create scenes for various room configurations
- Cost-effective solution for energy-savings and code-compliance strategies
- DLC® Qualified: Listed on the QPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at [www.designlights.org](http://www.designlights.org)

1 Wireless switches only compatible with ODPG Philips EasySense

2 Requires android device or IR dongle.

#### Wireless Switch Accessories<sup>1</sup>

☐ **PESR-WH** EasySense compatible wireless single rocker switch, white

☐ **PEDR-WH** EasySense compatible wireless dual rocker switch, white



## SPECTRASync™ COLOR TUNING TECHNOLOGY

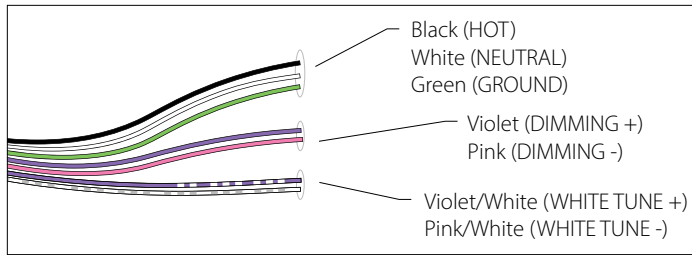
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASync COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K–6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

### SpectraSync Tunable White

Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

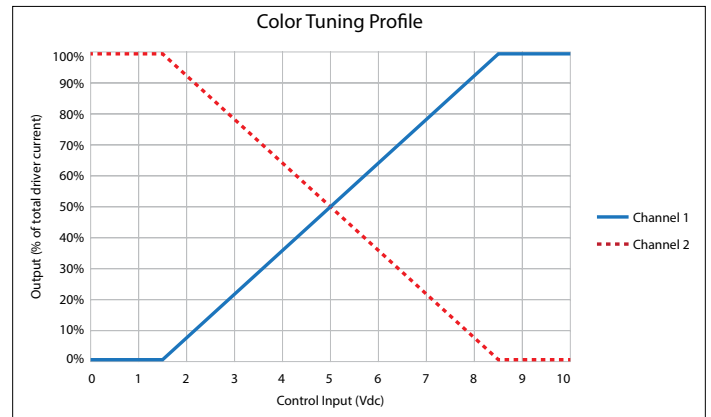


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

### Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- NX Lighting Controls Room Controller (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to NX SpectraSync technical sheet.

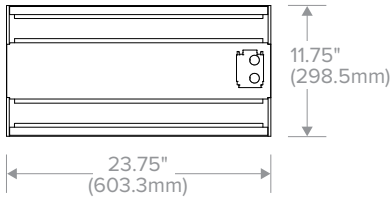
### Delivered Lumens, SpectraSync™

Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
		Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
VWHE	11	1347	121	1407	126	1442	129	1466	131	1428	128	1426	128
MWHE	15	1823	120	1905	125	1952	128	1985	130	1985	130	1930	127
LWHE	19	2394	124	2501	130	2563	133	2607	135	2607	135	2535	131

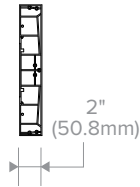
## DIMENSIONS

## GRID

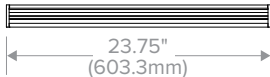
## Top view



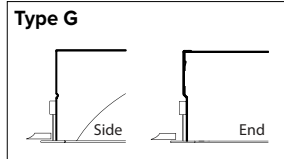
## Front view



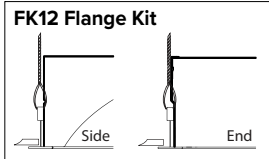
## Side view



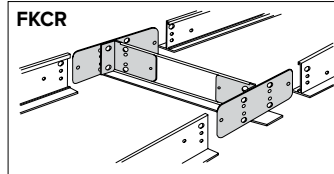
## CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



For hard ceiling applications, order FK12 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.



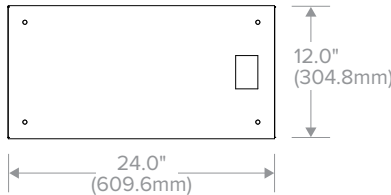
For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK12 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK12 & (1) FKCR)

Row cut out dimensions using FK12s & FKCR adapters:  
Width 12 3/8", Length [24" × (# in row)] + 3/8".  
Example: (24" × 2) + 3/8" = 48 3/8"

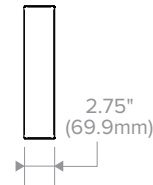
**Flange kit cut out dimension for single unit only: 12 3/8" × 24 3/8"**

## SURFACE MOUNT

## Top view



## Front view



## Side view



## PHOTOMETRY

## VSY12-35MLHE-EDU

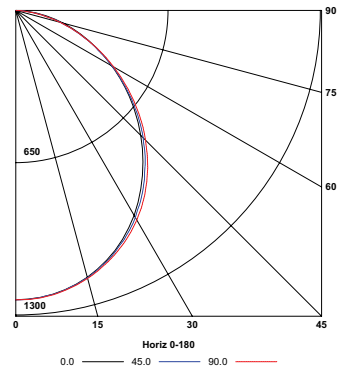
## LUMINAIRE DATA

Test No.	19.00994
Description	Recessed Architectural Edge-Lit 1' x 2' LED with Acrylic Diffuser
Delivered Lumens	3288
Watts	24.43
Efficacy	135
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.24

## ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	950	28.9
0-40	1540	46.8
0-60	2646	80.5
0-90	3288	100
0-180	3288	100

## POLAR GRAPH



## DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)

