



**LED WATTAGE CHART**

DRIVE CURRENT	16L
175 milliamps	10w (1206-1273 Lumens)
400 milliamps	21w (2478-2911 Lumens)
530 milliamps	28w (3508-3776 Lumens)
700 milliamps	36w (4385-4720 Lumens)
1050 milliamps	56w (6022-6482 Lumens)

## FORM

- Elegant Rectilinear Extruded Aluminum Housing
- Corrosion Resistant Stainless Steel External Hardware
- Sleek, Low Profile Housing
- Spec Grade Performance
- Engineered For Optimum Thermal Management
- 8 Architectural Finishes  
Standard, RAL Colors Available

## FUNCTION

- Micro Optics IES Distributions T2, T3, T4
- 0-10V Dimming Drivers THD @ Max Load < 15% Power factor @ Max Load < 0.95
- Amber, 2700K, 3000K, 3500K, 4000K, or 5000K
- 16L LED Configuration
- 10-56 Watts
- CRI 70, 80, or 90
- Extruded Aluminum Heat Sink
- 5 Mils Powder Coat

## RELIABILITY

- Silicone Micro Optics
- 5 Year Standard Warranty
- IP67 Optics
- Reduces Energy Consumption And Costs Up To 65%

## BUY AMERICAN

To ensure the latest BAA/TAA/BABA Standards are being met, please select BAA, TAA, or BABA in the options section. Please contact the factory before placing an order for any NLS products requesting BAA (Buy American Act), TAA (Trade American Act), or BABA (Build America, Buy America).



Project Name:

Type:

# TWL ORDERING GUIDE

Cat#	Light Dist.	# of LEDs	Miliamps	Kelvin
Trac Linear Wall Mount (TWL)	Type 2 (T2)	16 (16L)	175 (175)	Amber 585-600nm (AMBER) <sup>4, 6, 7</sup>
	Type 3 (T3)		400 (40)	2700K, 70 CRI (27K7)
	Type 4 (T4)		530 (53)	2700K, 80 CRI (27K8) <sup>1</sup>
			700 (7)	3000K, 70 CRI (30K7)
			1050 (1)	3000K, 80 CRI (30K8) <sup>1</sup>
				3500K, 80 CRI (35K8)
				4000K, 70 CRI (40K7)
				4000K, 80 CRI (40K8) <sup>1</sup>
				5000K, 70 CRI (50K7)
				5000K, 80 CRI (50K8) <sup>1</sup>

Volts	Mounting	Color	Controls Options	Options
120-277 (UNV)	Wall Mount (WM) <sup>2</sup>	Bronze Textured (BRZ)	FSP-211 with Motion Sensor/Photocell (UNV Voltage) *8' and Below (FSP-8) <sup>8, 10</sup>	Marine Grade Finish (MGF)
347-480 (HV)		White Textured (WHT)		Emergency Battery 8W (EM8)
		Smooth White Gloss (SWT)		Vanity Plate (VP)
		Silver Metallic (SVR)	9'-20' Heights (FSP211-20) <sup>8, 10</sup>	20KA Surge Protector (20KA)
		Black Textured (BLK)	21'-40' Heights (FSP211-40) <sup>8, 10</sup>	Buy American Act (BAA) <sup>5</sup>
		Smooth Black Gloss (SBK)	FSP-221 with Motion Sensor/Photocell 9'-20' Heights (FSP221-20) <sup>11</sup>	Trade Agreement Act (TAA) <sup>5</sup>
		Graphite Textured (GPH)	21'-40' Heights (FSP221-40) <sup>11</sup>	Build America Buy American (BABA) <sup>5</sup>
		Grey Textured (GRY)	FSP Remote (FSIR) <sup>9</sup>	
		Green Textured (GRN)	Button Photo Cell (PC)	
		Hunter Green Textured (HGN)	Custom Controls Integration (CCI) <sup>3</sup>	
		Custom (CS)		

## NOTES:

1. Consult Factory for Lead Time. Consult Factory for 90 CRI Requests.
2. Consult factory for pendant mount.
3. Please contact Factory for Custom Control Integration requests  
(nLight, NX, WaveLinx, Crestron, DMX/RDM, Synapse, Casambi, Dali II, Avi-On, or other control systems)
4. Turtle Safe
5. Consult factory for all BAA/TAA/BABA requests
6. Consult Factory for Lead Time
7. Not Available above 1000mA
8. Universal Voltage 120-277
9. Projects with sensors require Qty. 1 FSIR per project
10. FSP-211, 120V/277V, 230-240VAC (single phase), 50/60Hz
11. FSP-221, 100-347VAC (single phase) or 208/230/480VAC (phase-to-phase)



701 Kingshill Place, Carson, CA 90746  
Call Us Today (310) 341-2037

nlsighting.com

## PRODUCT SPECIFICATIONS

### ELECTRICAL

- 120-277 Volts (UNV) or 347-480 Volts (HV)
- 0-10V dimming driver by Philips Advance
- Driver power factor at maximum load is  $\geq .95$ , THD maximum load is 15%
- LED Drivers Ambient Temp. Min is -40°C and Ambient Temp. Max ranges from 50°C to 55°C and, in some cases, even higher. Consult the factory for revalidation by providing the fixture catalog string before quoting and specifying it.
- All drivers, controls, and sensors housed in enclosed compartment
- Lumileds Luxeon MX LED's
- CRI 70, 80, or 90
- Color temperatures: Amber, 2700K, 3000K, 3500K, 4000K, 5000K
- Surge Protection: 20KA optional.

### CONSTRUCTION

- Formed Aluminum
- Internal cooling fins
- Corrosion resistant external hardware
- One-piece silicone gasket ensures water tight seal for electronics compartment
- Two-piece silicone Micro Optic system ensures IP67 seal around each PCB

### OPTIONS

- **MARINE GRADE FINISH (MGF)**—A multi-step process creating protective finishing coat against harsh environments. Chemically washed in a 5 stage cleaning system. Pre-baked, Powder coated 3-5 mils of Zinc Rich Super Durable Polyester Primer. Oven Baked. Finished Powder Coating of Super Durable Polyester Powder Coat 3-5 mil thickness.
- Emergency Battery Backup 8W (EM8)
- **VANITY PLATE (VP)**—The Vanity Plate was designed to cover the un-sightly remains on a wall where a larger HID wallpack was removed. The Vanity Plate will be painted to match the finish of the fixture, custom finishes are available, please consult factory. The standard Vanity Plate is 16" x 16".
- 20KA SURGE PROTECTOR (20KA)

### CONTROL OPTIONS

- Button Type Photo Cell (PC)
- Controls Agnostic: Please contact factory for your preferred controls option. (nLight, NX, WaveLinx, Crestron, DMX/RDM, Synapse, Casambi, DALI II, Avi-On, or other control systems)
- FSP-211 (FSP-X) - Passive infrared (PIR) sensor providing multi-level control based on motion/daylight contribution
- All control parameters adjustable via wireless configuration remote storing and transmitting sensor profiles
- FSP-8 Mounting heights 8 feet and below
- FSP-20 mounting heights 9-20 feet
- FSP-40 mounting heights 21-40 feet
- Includes 5 dimming event cycles, 0-10V dimming with motion sensing, re-programmable in the field
- FSIR-100 commissioning remote is required to change sensor settings. Please contact factory for ordering

### FINISH

- 3-5 mils electrostatic powder coat.
- NLS Lighting standard high-quality finishes prevent corrosion and protects against extreme environmental conditions.

### WARRANTY

Five-year limited warranty for drivers and LEDs.

### OPTICS

Silicone optics high thermal stability and light output provide higher powered LEDs with minimized lumen depreciation. UV stability with scratch resistance increases exterior application durability. Silicone optics do not yellow, crack or brittle over time.

### LISTINGS

- UL Listed in compliance with UL 1598, the Standard for Safety of Luminaires, including the applicable wet location requirements
- Compliant with UL 8750 LED driver design and test safety standards0
- CSA C22.2 No. 250.0
- IP67 Rated Optics
- IK10 Rated

### BUY AMERICAN OPTION

While all of the NLS Lighting products listed in this document qualify for the Buy America(n) Act of 1933, we reserve the right to change our listings without notice.

The information provided above is for general informational purposes only. We encourage you to consult legal professionals for advice particular to your projects concerning BAA, TAA, BABA or Buy America.

Additional NLS Products that meet BAA, TAA standards can be found at the following link:

<https://nslighting.com/buy-american/>



The information and specifications on this document are subject to change without any notification. All values are design, nominal, typical or prorated values when measured under internal and external laboratory conditions.



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# PRODUCT SPECIFICATIONS

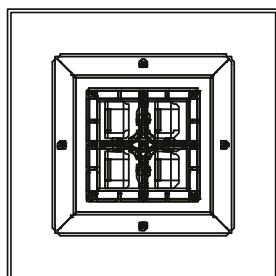
## TWL LUMEN CHART

TRAC LUMEN CHART										
PART NUMBER	T2	LM/W	BUG	T3	LM/W	BUG	T4	LM/W	BUG	WATTS
TWL-16L-175-30K7	1,206	121	B0-U0-G0	1,213	121	B0-U0-G0	1,213	121	B0-U0-G1	10
TWL-16L-175-40K7	1,266	127	B0-U0-G0	1,273	127	B0-U0-G0	1,273	127	B0-U0-G1	10
TWL-16L-175-50K7	1,266	127	B0-U0-G0	1,273	127	B0-U0-G0	1,273	127	B0-U0-G1	10
TWL-1-16L-40-27K7	2478	118		2492	119		2491	119		21
TWL-1-16L-40-27K8	2320	110		2333	111		2332	111		21
TWL-1-16L-40-30K8	2488	118		2502	119		2501	119		21
TWL-1-16L-40-30K7	2679	128		2694	128		2693	128		21
TWL-1-16L-40-35K8	2488	118		2502	119		2501	119		21
TWL-1-16L-40-40K8	2679	128		2694	128		2693	128		21
TWL-1-16L-40-40K7	2895	138		2911	139		2910	139		21
TWL-1-16L-40-50K8	2679	128		2694	128		2693	128		21
TWL-1-16L-40-50K7	2895	138		2911	139		2910	139		21
TWL-16L-53-30K7	3,508	125	B1-U0-G1	3,527	126	B1-U0-G1	3,527	126	B1-U0-G1	28
TWL-16L-53-40K7	3,683	132	B1-U0-G1	3,704	132	B1-U0-G1	3,704	132	B1-U0-G1	28
TWL-16L-53-50K7	3,683	132	B1-U0-G1	3,704	132	B1-U0-G1	3,704	132	B1-U0-G1	28
TWL-16L-7-30K7	4,385	122	B1-U0-G1	4,409	122	B1-U0-G1	4,409	122	B1-U0-G1	36
TWL-16L-7-40K7	4,604	128	B1-U0-G1	4,630	129	B1-U0-G1	4,630	129	B1-U0-G1	36
TWL-16L-7-50K7	4,604	128	B1-U0-G1	4,630	129	B1-U0-G1	4,630	129	B1-U0-G1	36
TWL-16L-1-30K7	6,022	108	B1-U0-G1	6,056	108	B1-U0-G1	6,056	108	B1-U0-G1	56
TWL-16L-1-40K7	6,323	113	B1-U0-G1	6,359	114	B1-U0-G1	6,359	114	B1-U0-G1	56
TWL-16L-1-50K7	6,323	113	B1-U0-G1	6,359	114	B1-U0-G1	6,359	114	B1-U0-G2	56

Lumen Maintenance Data							
Ambient Temperature	Drive Current	L90 Hours*	L70 Hours**	30,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours**
25°C	Up to 700mA	58,000	173,000	95.7%	91.6%	89.6%	82.1%
	1050mA	48,000	143,000	94.3%	89.5%	87.2%	78.5%
*Reported extrapolations per IESNA TM-21				**Projected extrapolations per IESNA TM-21			

## OPTICAL CONFIGURATIONS

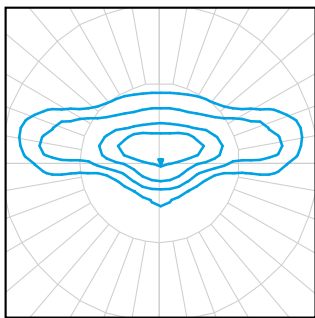
Rotatable Optics (ROR) Rotated Right, (ROL) Rotated Left options available. Optics field and factory rotatable.



TWL / 16L

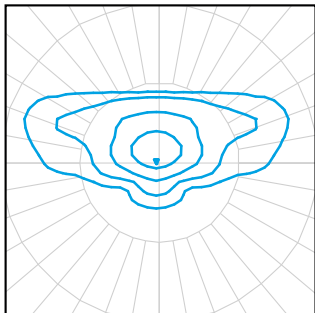
## PRODUCT SPECIFICATIONS

### IES DISTRIBUTIONS



#### T2 OPTIC

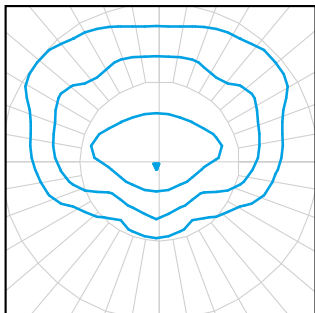
The Type II distribution is used for narrow pathways and trails, narrow entrances of shopping centers, parking lots and office complex's.



#### T3 OPTIC

The type III distribution is meant for roadway lighting, general parking areas and other areas where a larger area of lighting is required. Type III lighting needs to be placed to the side of the area, allowing the light to project outward and fill the area. This produces a filling light flow.

Type III light distributions have a preferred lateral width of 40 degrees. This distribution is intended for luminaires mounted at or near the side of medium width roadways or areas, where the width of the roadway or area does not exceed 2.75 times the mounting height.



#### T4 OPTIC

The type IV distribution produces a semicircular light meant for mounting on the sides of buildings and walls. It's best for illuminating the perimeter of parking areas and businesses. The intensity of the Type IV lighting has the same intensity at angles from 90 degrees to 270 degrees.

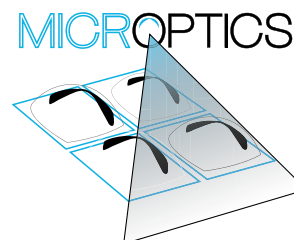
Type IV light distributions have a preferred lateral width of 60 degrees. This distribution is intended for side-of-road mounting and is generally used on wide roadways where the roadway width does not exceed 3.7 times the mounting height.

### SILICONE OPTICS

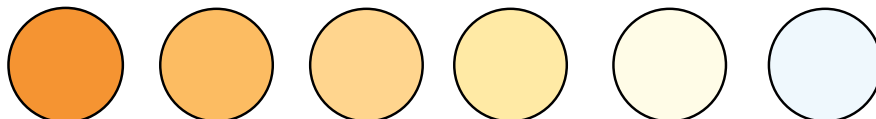
NLS Lighting Silicone Micro Optical System technology takes quality and performance to the highest level. Vandal resistant, superior clarity—Micro Optics have become the best and lasting solution in the industry.

#### BENEFITS

- Produces superior 96% clarity
- Heat resistant to 150° C, 50% higher than acrylic
- Ecologically friendly—no glare
- Vandal-resistant
- Does not brittle, crack, or yellow over time



### LED KELVIN RANGE



AMBER  
585-600 nm

2700K 70 CRI

3000K 70 CRI

3500K 80 CRI

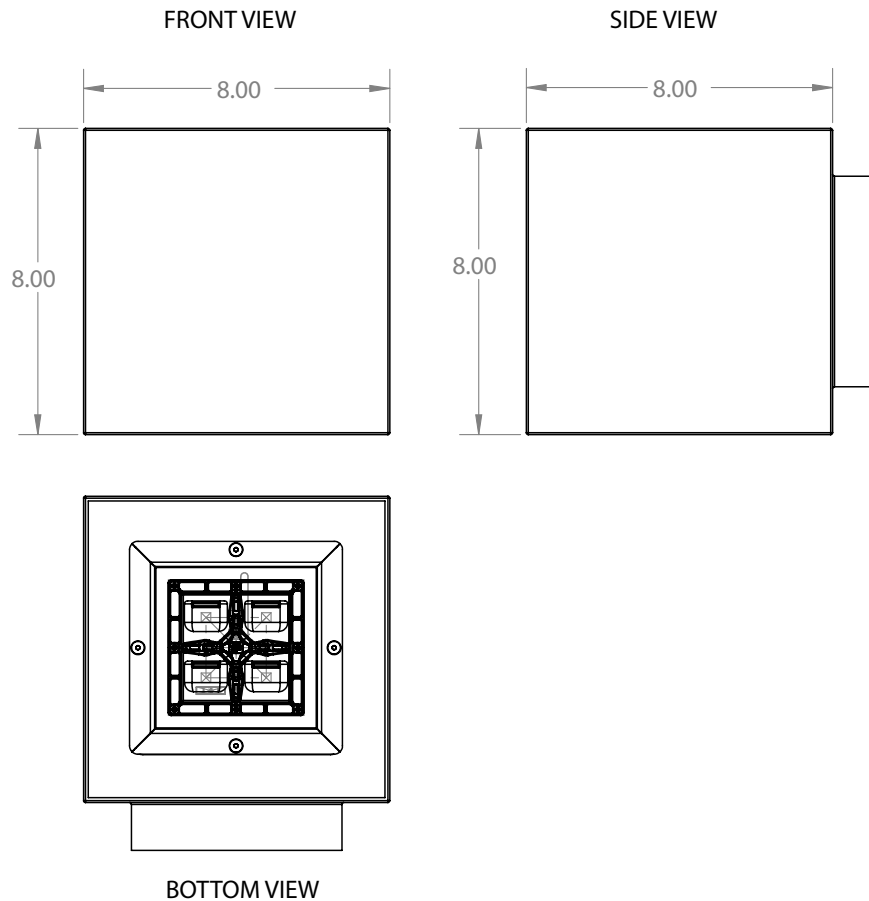
4000K 70 CRI

5000K 70 CRI

Color	Dominant or Peak Wavelength Range (nm)	
	Minimum	Maximum
Amber	585	600

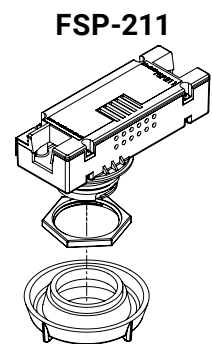
## PRODUCT SPECIFICATIONS

MODEL	WEIGHT
TWL	7.13 LBS



### FSP-211 WITH MOTION SENSOR (FSP-XX)

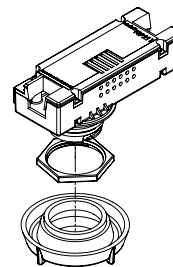
- FSP-211 (FSP-X)—Passive infrared (PIR) sensor providing multi-level control based on motion/daylight contribution
- All control parameters adjustable via wireless configuration remote storing and transmitting sensor profiles
- FSP-20 mounting heights 9-20 feet
- FSP-40 mounting heights 21-40 feet
- Includes 5 dimming event cycles, 0-10V dimming with motion sensing, re-programmable in the field



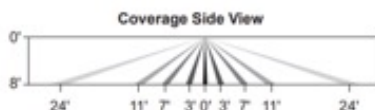
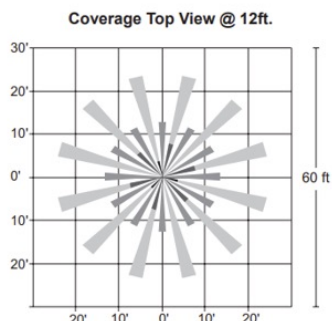
## PRODUCT SPECIFICATIONS

### CONTROLS

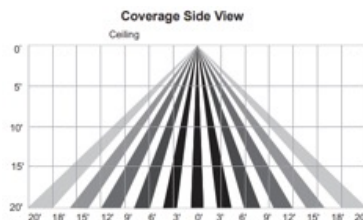
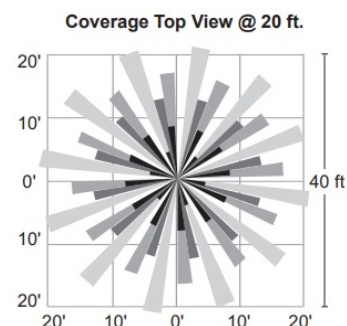
- DIMMING CONTROL (FSP)—Passive infrared (PIR) sensor providing multi-level control based on motion/daylight contribution
- All control parameters adjustable via wireless configuration remote storing and transmitting sensor profiles
- FSP-8 mounting heights 8 feet and below
- FSP-20 mounting heights 9-20 feet
- FSP-40 mounting heights 21-40 feet
- Includes 5 dimming event cycles, 0-10V dimming with motion sensing, re-programmable in the field



### FSP-8



### FSP-20



### FSP-40

