

FORM AND FUNCTION

- Sleek, low profile housing
- Spec grade performance
- Engineered for optimum thermal management
- Low depreciation rate
- Reduces energy consumption and costs up to 65%
- Exceeds IES foot candle levels utilizing the least number of poles and fixtures per project
- Optical system designed for:
 - Parking Lots
 - Auto Dealerships
 - General Area Lighting

CONSTRUCTION

- Die Cast Aluminum
- External cooling fins, Finite Element Analysis (FEA) designed
- Corrosion resistant external hardware
- One-piece silicone gasket ensures IP-65 seal for electronics compartment
- One-piece Optics Plate™ mounting silicone Micro Optics
- Two-piece silicone Micro Optic system ensures IP-67 level seal around each PCB
- Grade 2 Clear Anodized Optics Plate™ standard

FINISH

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

WARRANTY

Five-year limited warranty for drivers and LEDs.



LISTINGS

- Certified to UL 1598
- UL 8750
- CSA C22.2 No. 250.0
- DesignLights Consortium® (DLC)
- DesignLights Consortium Premium® (DLCP)
- IP65/ IP67 Rated
- 3G Vibration Rated per ANSI C136.31-2010

LED WATTAGE CHART

	16L	32L	48L	64L	80L	96L	112L	128L
350 milliamps	18w	-	-	-	-	-	-	-
530 milliamps	28w	-	-	-	-	-	-	-
700 milliamps	36w	71w	104w	136w	168w	200w	243w	265w
1050 milliamps	56w	106w	156w	205w	263w	316w	366w	409w
	NV-1				NV-2			

Project Name:	Type:
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Cat #	Light Dist.	No. of LEDs	Milliamps	Kelvin	Volts	Mounting	Color	Options
NV Size 1 (NV-1)	Type 2 (T2)	NV-1 16 (16L) 32 (32L)	350 (35) *NV-1 Only	3000K (30K)	120-277 (UNV)	Direct Pole For (NV-1): Single, D180 3" (DPS3)	Bronze (BRZ)	Bird Deterrent (BD) Marine Grade Finish (MGF) Optic Plate Painted to Match Fixture (OPP)
NV Size 2 (NV-2)	Type 3 (T3)	48 (48L) 64 (64L)	530 (53) *NV-1 Only	4000K (40K)	347-480 (HV)	For (NV-1): D90, T90, T120, QD 7" (DPS7) For (NV-2): Single, D180 6" (DPS6)	White (WHT)	Mounting Painted to Match Fixture (MP) Nema 7-Pin Receptacle (PE7) Photocell + Receptacle (PCR)
	Type 4 (T4)	NV-2 80 (80L) 96 (96L) 112 (112L) 128 (128L)	700 (7) 1050 (1)	5000K (50K)		For (NV-2): D90, T90, T120, QD 11" (DPS11) Knuckle Mount (KM) Sweep Arm (SA) Wall Mount (WM) Trunnion Mount (TM) Tennis Arm (TA)	Silver (SVR)	Receptacle + Shorting Cap (PER)
	Type 5 (T5)						Black (BLK)	FSP-211 with Motion Sensor (UNV Voltage) (FSP-20) *9"-20' Heights (FSP-40) *21'-40' Heights
	Nema 2 24" Narrow Beam (N2) *NV-1 Only						Graphite (GPH)	Surge Protector (10K) Quick Mount Bracket (QMB) Retrofit Mount Bracket (RQMB)
	Nema 3 30" Narrow Beam (N3)					*Standard finish is stainless steel. Can be painted to match fixture *See next page for Arm Configurations *For Round Pole, please specify RPA4 or RPA5	Grey (GRY)	Round Pole Adaptor 3"- 4" Pole (RPA4) Round Pole Adaptor 5"- 6" Pole (RPA5) Rotated Optic Left (ROL) Rotated Optic Right (ROR)
							Custom (CS)	House Side Shield (HSS)
							Green (GRN)	*HSS not applicable with N2 - NEMA 24" Optics *HSS not applicable with N3 - NEMA 30" Optics

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%
- All internal wiring UL certified for 600 VAC and 105°C
- All drivers, controls, and sensors housed in enclosed IP-65 compartment
- Lumileds Luxeon MX LED's
- **CRI >70**
- Color temperatures: 3000K, 4000K, 5000K

OPTIONS

- **BIRD DETERRANT (BD)**—offers effective and humane deterrent for larger bird species and provides cost-effective long-term solution to nuisance bird infestations and protect your property.
- **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.
 - 1-2 feet inside pole coverage top and bottom.
 - Oven Baked.
 - Finished Powder Coating of Super Durable Polyester Powder Coat 3-5 mil thickness.
- **HOUSE SIDE SHIELD (HSS)**—Micro Optics' House Side Shield (HSS) is designed for full property line cut-off.
- **ROUND POLE ADAPTER (RPA)**— When using round poles, specify Round Pole Adapter (RPA). Specify RPA4 when installing on 3"-4" round poles, and RPA5 when installing on 5"-6" round poles.

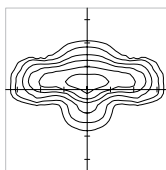
CONTROLS

- **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, reprogrammable in the field.
- **NEMA 7-PIN RECEPTACLE (PE7)**—An ANSI C136.41-2013 receptacle provides electrical and mechanical interconnection between photo control cell and luminaire. Dimming receptacle available two or four dimming contacts supports 0-10 VDC dimming methods or Digital Addressable Lighting Interface (DALI), providing reliable power interconnect.

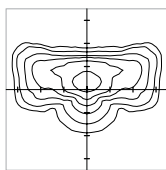
OPTICS

Silicone optics high photothermal stability and light output provides higher powered LEDs with minimized lumen depreciation LED life. UV and thermal stability with scratch resistance increases exterior application durability.

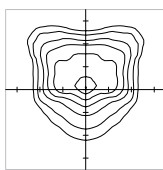
- IES Types



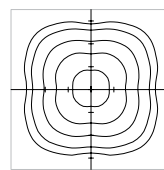
TYPE II (T2)



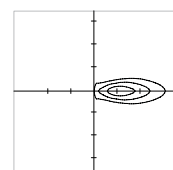
TYPE III (T3)



TYPE IV (T4)

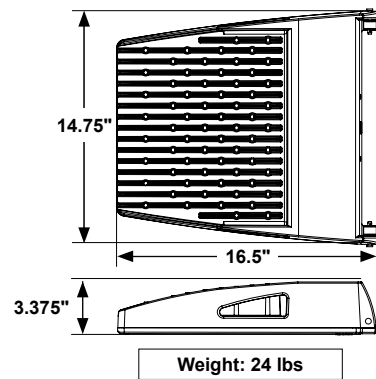


TYPE V (T5)

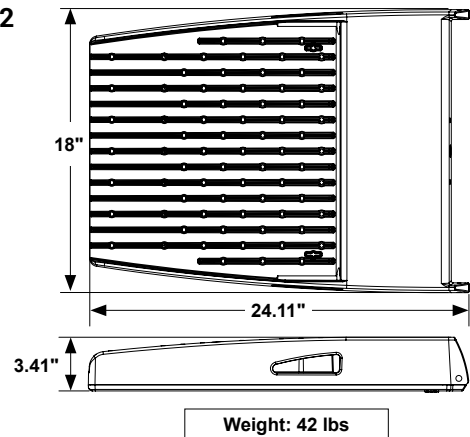


NEMA 2 (N2)

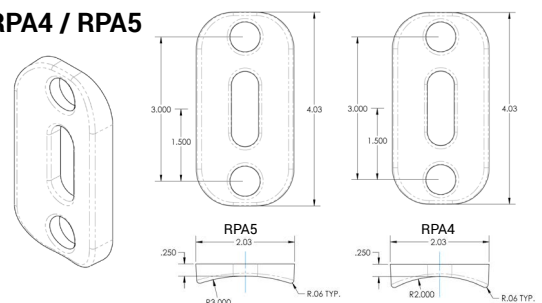
NV-1



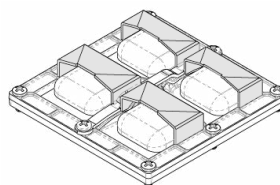
NV-2



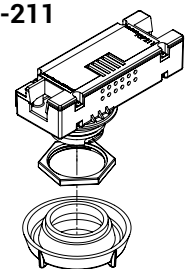
RPA4 / RPA5



HOUSE SIDE SHIELD

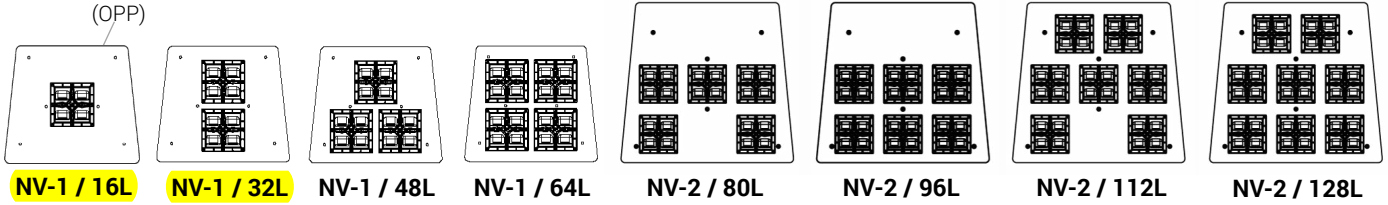


FSP-211



OPTICAL CONFIGURATIONS

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



* OPTIC PLATE PAINTED TO MATCH FIXTURE FINISH (OPP)– Optic Plate standard clear anodized, Grade 2. When (OPP) specified, Optic Plate finish will match fixture finish.

LUMENS

PART NUMBER	N2 LUMENS	LM/W	BUG	T2 LUMENS	LM/W	DLC	BUG	T3 HSS LUMENS	LM/W	BUG	T3 LUMENS	LM/W	DLC	BUG	T4 HSS LUMENS	LM/W	BUG	T4 LUMENS	LM/W	DLC	BUG	T5 LUMENS	LM/W	DLC	BUG	W
NV-1-16L-35-30K	1944	108	B2-U0-G0	2209	117	P	B1-U0-G1	1134	63	B0-U0-G0	2106	117	P	B1-U0-G1	1116	62	B0-U0-G0	2187	116	P	B1-U0-G1	2124	118	P	B2-U0-G0	18
NV-1-16L-35-40K	2016	112	B2-U0-G0	2268	126	P	B1-U0-G1	1206	67	B0-U0-G0	2286	127	P	B1-U0-G1	1188	66	B0-U0-G0	2250	125	P	B1-U0-G1	2304	128	P	B2-U0-G0	18
NV-1-16L-35-50K	2088	116	B2-U0-G0	2376	132	P	B1-U0-G1	1278	71	B0-U0-G0	2394	133	P	B1-U0-G1	1260	70	B0-U0-G0	2358	131	P	B1-U0-G1	2412	134	P	B2-U0-G2	18
NV-1-16L-53-30K	3024	108	B3-U0-G1	3192	114	P	B1-U0-G1	1764	63	B0-U0-G1	3220	115	P	B1-U0-G1	1736	62	B0-U0-G1	3119	113	P	B1-U0-G1	3248	116	P	B2-U0-G1	28
NV-1-16L-53-40K	3136	112	B3-U0-G1	3472	124	P	B1-U0-G1	1876	67	B0-U0-G1	3472	124	P	B1-U0-G1	1848	66	B0-U0-G1	3444	123	P	B1-U0-G1	3500	125	P	B2-U0-G1	28
NV-1-16L-53-50K	3248	116	B2-U0-G1	3612	129	P	B1-U0-G1	1988	71	B0-U0-G1	3640	130	P	B1-U0-G1	1960	70	B0-U0-G1	3584	128	P	B1-U0-G1	3668	131	P	B2-U0-G1	28
NV-1-16L-7-30K	3888	108	B3-U0-G1	3960	110	P	B1-U0-G1	2268	63	B0-U0-G1	3960	110	P	B1-U0-G1	2232	62	B0-U0-G1	3973	109	P	B1-U0-G1	3996	111	P	B3-U0-G1	36
NV-1-16L-7-40K	4032	112	B3-U0-G1	4428	123	P	B1-U0-G1	2412	67	B0-U0-G1	4284	119	P	B1-U0-G1	2376	66	B0-U0-G1	4212	117	P	B1-U0-G1	4320	120	P	B3-U0-G1	36
NV-1-16L-7-50K	4176	116	B3-U0-G1	4644	129	P	B1-U0-G1	2556	71	B0-U0-G1	4500	125	P	B1-U0-G1	2520	70	B0-U0-G1	4428	123	P	B1-U0-G1	4500	125	P	B3-U0-G1	36
NV-1-16L-1-30K	6048	108	B3-U0-G1	6160	110	S	B1-U0-G1	3528	63	B0-U0-G1	6384	114	P	B1-U0-G1	3472	62	B0-U0-G1	6232	112	P	B1-U0-G1	6440	115	P	B3-U0-G1	56
NV-1-16L-1-40K	6272	112	B3-U0-G1	6832	122	P	B1-U0-G1	3752	67	B0-U0-G1	6888	123	P	B2-U0-G2	3696	66	B0-U0-G1	6776	121	P	B2-U0-G2	6944	124	P	B3-U0-G2	56
NV-1-16L-1-50K	6496	116	B4-U0-G1	7168	128	P	B1-U0-G2	3976	71	B0-U0-G1	7224	129	P	B2-U0-G2	3920	70	B0-U0-G1	7112	127	P	B2-U0-G2	7280	130	P	B3-U0-G2	56
NV-1-32L-7-30K	7668	108	B4-U0-G1	7810	110	S	B1-U0-G2	4473	63	B0-U0-G1	7810	110	S	B2-U0-G2	4402	62	B0-U0-G1	7739	109	S	B2-U0-G2	7881	111	S	B3-U0-G2	71
NV-1-32L-7-40K	7952	112	B4-U0-G1	9017	127	P	B1-U0-G2	4757	67	B0-U0-G1	8449	119	P	B2-U0-G2	4686	66	B0-U0-G2	8307	117	P	B2-U0-G2	8520	120	P	B3-U0-G2	71
NV-1-32L-7-50K	8236	116	B4-U0-G1	9159	129	P	B2-U0-G2	5041	71	B0-U0-G2	8875	125	P	B2-U0-G2	4970	70	B0-U0-G2	8733	123	P	B2-U0-G2	8946	126	P	B3-U0-G2	71
NV-1-32L-1-30K	11448	108	B4-U0-G1	11660	110	S	B2-U0-G2	6678	63	B0-U0-G2	12084	114	S	B2-U0-G2	6572	62	B0-U0-G2	11820	112	S	B2-U0-G2	12190	115	S	B4-U0-G2	106
NV-1-32L-1-40K	11872	112	B4-U0-G1	12932	122	P	B2-U0-G2	7102	67	B0-U0-G2	13038	123	P	B2-U0-G2	6996	66	B0-U0-G2	12826	121	P	B3-U0-G2	13144	124	P	B4-U0-G2	106
NV-1-32L-1-50K	12296	116	B4-U0-G1	13568	128	P	B2-U0-G2	7526	71	B0-U0-G2	13674	129	P	B3-U0-G3	7420	70	B0-U0-G2	13462	127	P	B3-U0-G3	13780	130	P	B4-U0-G2	106
NV-1-48L-7-30K	11232	108	B4-U0-G1	11440	110	S	B2-U0-G2	6552	63	B0-U0-G2	11440	110	S	B2-U0-G2	6448	62	B0-U0-G2	11336	109	S	B2-U0-G2	11544	111	S	B4-U0-G2	104
NV-1-48L-7-40K	11648	112	B4-U0-G1	13208	127	P	B2-U0-G2	6968	67	B0-U0-G2	12376	119	P	B2-U0-G2	6864	66	B0-U0-G2	12168	117	P	B2-U0-G2	12376	119	P	B4-U0-G2	104
NV-1-48L-7-50K	12064	116	B4-U0-G1	13520	130	P	B2-U0-G2	7384	71	B0-U0-G2	13000	125	P	B3-U0-G3	7280	70	B0-U0-G2	12792	123	P	B3-U0-G3	12992	125	P	B4-U0-G2	104
NV-1-48L-1-30K	16848	108	B5-U0-G1	17160	110	S	B3-U0-G3	9828	63	B1-U0-G2	17784	114	S	B3-U0-G3	9672	62	B1-U0-G2	17472	112	S	B3-U0-G3	17940	115	S	B4-U0-G2	156
NV-1-48L-1-40K	17472	112	B5-U0-G1	19032	122	P	B3-U0-G3	10452	67	B1-U0-G2	19188	123	P	B3-U0-G3	10296	66	B1-U0-G2	18876	121	P	B3-U0-G3	19344	124	P	B5-U0-G3	156
NV-1-48L-1-50K	18096	116	B5-U0-G1	19968	128	P	B3-U0-G3	11076	71	B1-U0-G2	20124	129	P	B3-U0-G3	10920	70	B1-U0-G2	19812	127	P	B3-U0-G3	20280	130	P	B5-U0-G3	156
NV-1-64L-7-30K	14688	108	B5-U0-G1	14960	110	S	B2-U0-G2	8568	63	B0-U0-G2	14960	110	S	B3-U0-G3	8432	62	B1-U0-G2	14824	109	S	B3-U0-G3	15096	111	S	B4-U0-G2	136
NV-1-64L-7-40K	15232	112	B5-U0-G1	17272	127	P	B3-U0-G3	9112	67	B0-U0-G2	16184	119	P	B3-U0-G3	8976	66	B1-U0-G2	15912	117	P	B3-U0-G3	16320	120	P	B4-U0-G2	136
NV-1-64L-7-50K	15776	116	B5-U0-G1	17680	130	P	B3-U0-G3	9656	71	B1-U0-G2	17000	125	P	B3-U0-G3	9520	70	B1-U0-G2	16728	123	P	B3-U0-G3	17136	126	P	B4-U0-G2	136
NV-1-64L-1-30K	22140	108	B5-U0-G1	22550	110	S	B3-U0-G3	12915	63	B1-U0-G2	23370	114	S	B3-U0-G3	12710	62	B1-U0-G2	22960	112	S	B3-U0-G3	23575	115	S	B5-U0-G3	205
NV-1-64L-1-40K	22960	112	B5-U0-G1	25010	122	P	B3-U0-G3	13735	67	B1-U0-G2	25215	123	P	B3-U0-G3	13530	66	B1-U0-G2	24805	121	P	B3-U0-G4	25420	124	P	B5-U0-G3	205
NV-1-64L-1-50K	23780	116	B5-U0-G1	26240	128	P	B3-U0-G3	14555	71	B1-U0-G2	26445	129	P	B3-U0-G3	14350	70	B1-U0-G2	26035	127	P	B3-U0-G4	26650	130	P	B5-U0-G3	205
NV-2-80L-7-30K	-	-	-	19744	116	S	B3-U0-G3	9744	58	B1-U0-G2	19218	113	S	B3-U0-G3	9576	57	B1-U0-G2	18992	112	S	B3-U0-G3	19713	117	P	B5-U0-G3	168
NV-2-80L-7-40K	-	-	-	21000	125	P	B3-U0-G3	10416	62	B1-U0-G2	20328	121	P	B3-U0-G3	10248	61	B1-U0-G2	20160	120	P	B3-U0-G3	21168	126	P	B5-U0-G3	168
NV-2-80L-7-50K	-	-	-	21672	129	P	B3-U0-G3	11088	66	B1-U0-G2	21168	126	P	B3-U0-G3	10920	65	B1-U0-G2	21000	125	P	B3-U0-G3	21840	130	P	B5-U0-G3	168
NV-2-80L-1-30K	-	-	-	28141	107	S	B3-U0-G3	15254	58	B1-U0-G3	27352	104	S	B3-U0-G4	14991	57	B1-U0-G3	27089	103	S	B3-U0-G4	28404	108	S	B5-U0-G3	263
NV-2-80L-1-40K	-	-	-	30245	115	S	B3-U0-G3	16306	62	B1-U0-G3	29456	112	S	B3-U0-G4	16043	61	B1-U0-G3	29193	111	S	B3-U0-G4	30508	116	S	B5-U0-G3	263
NV-2-80L-1-50K	-	-	-	31297	119	P	B3-U0-G4	17358	66	B1-U0-G3	30508	116	S	B3-U0-G4	17095	65	B1-U0-G3	31034	118	P	B3-U0-G4	31560	120	P	B5-U0-G4	263
NV-2-96L-7-30K	-	-	-	23200	116	S	B3-U0-G3	11600	58	B1-U0-G2	22600	113	S	B3-U0-G3	11400	57	B1-U0-G2	22400	112	S	B3-U0-G3	23400	117	S	B5-U0-G3	200
NV-2-96L-7-40K	-	-	-	25000	125	P	B3-U0-G3	12400	62	B1-U0-G2	24200	121	P	B3-U0-G3	12200	61	B1-U0-G2	24000	120	P	B3-U0-G3	25200	126	P	B5-U0-G3	200
NV-2-96L-7-50K	-	-	-	25800	129	P	B3-U0-G3	13200	66	B1-U0-G2	25200	126	P	B3-U0-G3	13000	65	B1-U0-G2	25000	125	P	B3-U0-G4	26000	130	P	B5-U0-G3	200
NV-2-96L-1-30K	-	-	-	33812	107	S	B3-U0-G4	18328	58	B1-U0-G3	32864	104	S	B4-U0-G4	18012	57	B1-U0-G3	32548	103	S	B3-U0-G4	34128	108	S	B5-U0-G4	316
NV-2-96L-1-40K	-	-	-	36340	115	S	B3-U0-G4	19592	62	B1-U0-G3	35392	112	S	B4-U0-G4	19276	61	B1-U0-G3	35076	111	S	B3-U0-G4	36656	116	S	B5-U0-G4	316
NV-2-96L-1-50K	-	-	-	37604	119	P	B3-U0-G4	20856	66	B1-U0-G4	36656	116	S	B4-U0-G4	20540	65	B1-U0-G4	37288	118	P	B3-U0-G4	37920	120	P	B5-U0-G4	316
NV-2-112L-7-30K	-	-	-	28188	116	S	B3-U0-G3	14094	58	B1-U0-G3	27459	113	S	B3-U0-G4	13851	57	B1-U0-G3	27216	112	S	B3-U0-G4	28431	117	P	B5-U0-G3	243
NV-2-112L-7-40K	-	-	-	30375	125	P	B3-U0-G3	15066	62	B1-U0-G3	29403	121	P	B3-U0-G4	14823	61	B1-U0-G3	29160	120	P	B3-U0-G4	30618	126	P	B5-U0-G3	243
NV-2-112L-7-50K	-	-	-	31347	129	P	B3-U0-G4																			

EPA

EPA	SGL	D90	D180	T90	T120	QD
NV-1-DP	0.46	1.14	0.92	1.34	1.37	1.34
NV-1-KM	0.54	N/A	1.08	N/A	N/A	N/A
NV-1-SA	0.75	1.29	1.50	1.99	2.05	1.99
NV-2-DP	0.89	1.22	1.78	1.96	1.91	1.96
NV-2-KM	0.69	1.18	1.38	1.85	2.68	1.85
NV-2-SA	0.98	1.96	1.75	2.66	2.62	2.66

L70/L90 DATA

TEMP.	NV-1		NV-2	
	L70 (64L-1050mA)	L90 (64L-1050mA)	L70 (128L-1050mA)	L90 (128L-1050mA)
25°C	483,000	160,000	483,000	160,000

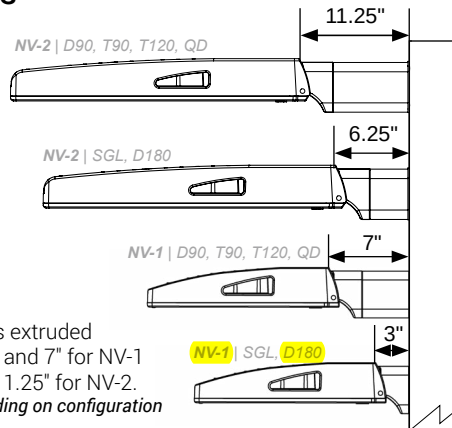
DPX ARM LENGTH

DPX ARM LENGTH	SGL	D90	D180	T90	T120	QD
NV-1	3"	7"	3"	7"	7"	7"
NV-2	6.25"	11.25"	6.25"	11.25"	11.25"	11.25"

MOUNTING OPTIONS

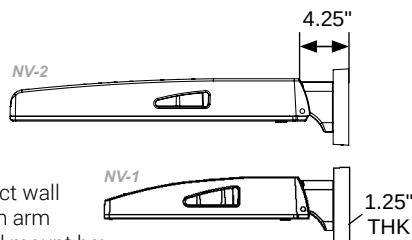
DIRECT POLE (DP)

Standard mounting arm is extruded aluminum in lengths of 3" and 7" for NV-1 and lengths of 6.25" and 11.25" for NV-2.
**Arm lengths may vary depending on configuration*



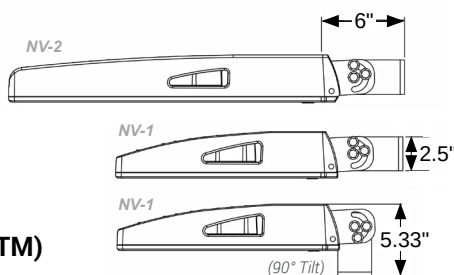
WALL MOUNT (WM)

Cast Aluminum Plate for direct wall mount. 3" extruded aluminum arm mounts directly to a cast wall mount box.



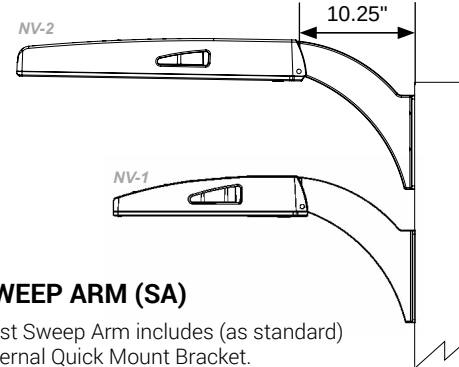
TRUNNION MOUNT (TM)

Steel, bolt-on-mounting for adjustable installation with a maximum uplift of 90 degrees.
**Unpainted stainless steel is standard*



SWEEP ARM (SA)

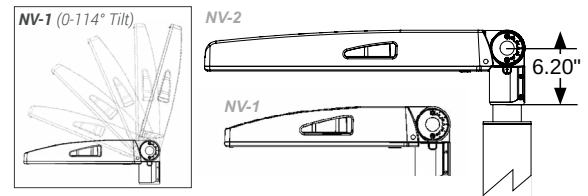
Cast Sweep Arm includes (as standard) Internal Quick Mount Bracket.



KNUCKLE MOUNT (KM)

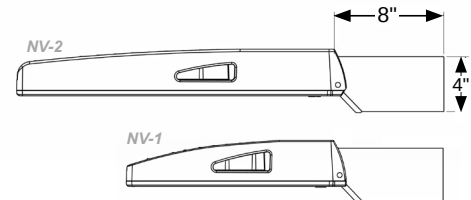
Die Cast Knuckle great for adjustable installation on 2-3/8" OD vertical or horizontal tenon.

- Max Uplift of 114 degrees (NV-1)
- Max Uplift of 90 degrees (NV-2)
- Adjustable in 6 degree increments



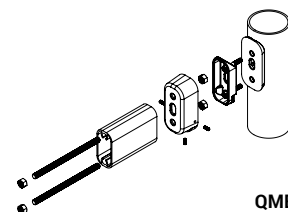
TENNIS ARM (TA)

Steel fitter slips over 3.5" x 1.5" rectangular arm.
**See Tennis Arm Spec Sheet for details*

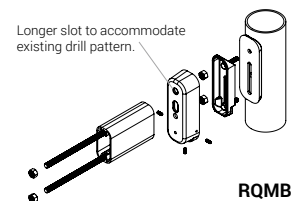


OPTIONAL

Optional Cast Aluminum Bracket, **Quick Mount Bracket (QMB)** and **Retrofit Quick Mount Bracket (RQMB)**, designed for quick mounting on Direct Square or Round Poles. Cleat mounts directly to pole for easily hung fixtures.



QMB



RQMB