



Lumec TunnelView tunnel/underpass luminaires feature a sleek design that provides seamless replacement of existing HID luminaires. This fixture is available in three sizes, offers multiple lumen packages, and a complete array of optical distributions, making it an outstanding solution for all types of tunnel and underpass applications. Includes Service Tag, Signify's innovative way to provide assistance throughout the life of the product.

Project: _____
 Location: _____
 Cat.No: _____
 Type: _____
 Lumens: _____ Qty: _____
 Notes: _____

Ordering guide

example: TULM-48L700-740-G1-R2M-UNV-DMG-OD-TLL-GY3

Prefix	LED module	Color Temperature	Generation	Distribution	Voltage	Dimming controls ⁴
TULM						
TULM TunnelView medium	48L350 48L530 48L700 48L1050 64L350 64L530 64L700 64L1050 ¹⁴ 80L350 80L530 80L700 80L900 ¹⁴	730 70CRI 3000K 740 70CRI 4000K 827 ¹¹ 80CRI 2700K	G1 Generation 1	Asymmetrical: R2M Type II Medium TW2 ¹² Type II Wall Mount DK Type II Short R3M Type III Medium R3W Type III Wide 4 Type IV Symmetrical: 5 Type V (SYMM) SN Narrow Counter beam: CBL ⁸ Ceiling	UNV 120-277V HVV 347-480V 120 ² 120V 208 ² 208V 240 ² 240V 277 ² 277V 347 ² 347V 480 ² 480V	DMG ⁵ 0-10V DALI ¹ Digitally Addressable Lighting Interface SRD ¹ Sensor Ready Driver standard configuration SRD1 ¹ Sensor Ready Driver alternate configuration

Mounting Bracket	Other Options	Finish
Od ⁸ Fix 0° N5d Fix -5° N10d Fix -10° N15d Fix -15° P5d Fix +5° P10d Fix +10° P15d Fix +15° SLF ¹⁵ Slip Fitter SV Swivel	API Factory Installed NEMA label, ANSI C136.15 compliant F1 ² Single Fuse Holder F2 ^{2,15} Double Fuse Holder JB1 Junction Box, 1" NPT entries JB2 Junction Box, 3/4" NPT entries NER Nyx Hemera Ready RCM7 ³ Remote install Tool less orientable receptacle with 7 pins SP2 20kV / 10kA Surge Protector (optional) TLRD7 ^{3,13,14} Receptacle for Twist-lock photocell or shorting cap, 7 pin TLRSR ⁶ SR receptacle TLL Tool Less Entry Latches VPA Vandal Proof Access BAC ¹⁶ Meets the requirements of the Buy American Act of 1933 (BAA)	BK Black BR Bronze GY3 Gray

Accessories¹⁷ (ordered separately, field installed - mounting hardware included, uses dedicated mounting holes - do NOT remove lens)



- BXK Bird spike
- PH8 ^{1,10} Twist-lock Photoelectric Cell, UNV (120-277VAC)
- PH8/347 ¹⁰ Twist-lock Photoelectric Cell, (347VAC)
- PH8/480 ¹⁰ Twist-lock Photoelectric Cell, (480VAC)
- PHXL ^{1,10} Twist-lock Photoelectric Cell, extended life, UNV (120-277VAC)
- PH9 ¹⁰ Shorting cap

1. Not available with HVU, 347V and 480V.
2. Specific voltage (120, 208, 240, 277, 347 or 480) must be specified with fusing options (F1 or F2).
3. Use of photoelectric cell or shorting cap is required to ensure proper illumination.
4. Select either DALI or DMG or SRD or SRD1 mandatory option.
5. Please note this integrated feature comes standard in this product.
6. Only available with SRD or SRD1 Driver Options.
7. Only available with DMG Driver Options
8. Only recommended for Ceiling Mount applications
9. Not available with SRD Driver Options.
10. TLRD7 or RCM7 must be selected for this option.
11. Extended lead-time may apply. Consult factory.
12. Recommended for Wall Mounting.
13. Available with SLF & SV mounting bracket only.
14. Not available with NER option.
15. Not available with JB1 or JB2 options.
16. Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.
17. Consult Signify to confirm whether specific accessories are BAA-compliant.



TULM TunnelView

Tunnel/Underpass luminaire

Predicted Lumen Depreciation Data

Performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L₇₀ is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L₇₀ hours limited to 6 times actual LED test hours

Ambient Temperature °C	Drive current	Calculated L70 Hours	L70 per TM-21	Lumen Maintenance % at 100,000 hrs
25°C	up to 1050 mA	>100,000 hours	>36,000 hours	>97%

LED Wattage Values

Ordering Code	Total LEDs	System Current (mA)	Average System Watts ¹⁴	Wattage Label ¹⁵
TULM-48L350	48	350	52	50
TULM-48L530	48	530	76	80
TULM-48L700	48	700	104	100
TULM-48L1050 ¹⁶	48	1050	161	160
TULM-64L350	64	350	71	70
TULM-64L530	64	530	106	110

14. Typical values, rounded.

15. As per ANSI C136.15-2015. Consult factory for other labeling needs.

Ordering Code	Total LEDs	System Current (mA)	Average System Watts ¹⁴	Wattage Label ¹⁵
TULM-64L700	64	700	140	140
TULM-64L1050 ¹⁶	64	1050	218	220
TULM-80L350	80	350	87	90
TULM-80L530	80	530	130	130
TULM-80L700	80	700	178	180
TULM-80L900 ¹⁶	80	900	227	230

16. Rated for +40°C / +104°F.

LED Lumen Values – 2700K

Ordering Code	DK		R2M		R3M		R3W		4		5		SN		CBL		TW2	
	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)
TULM-48L350-827	5242	101	5134	99	5029	97	4996	97	4962	96	4878	94	5358	104	5284	102	5169	100
TULM-48L530-827	7438	98	7285	96	7135	94	7089	93	7041	92	6923	91	7603	100	7498	98	7335	96
TULM-48L700-827	9557	92	9360	90	9168	89	9109	88	9046	87	8894	86	9769	94	9634	93	9425	91
TULM-48L1050-827	13365	83	13089	81	12821	79	12737	79	12650	78	12437	77	13660	85	13472	83	13179	82
TULM-64L350-827	7168	101	7019	99	6876	97	6831	96	6784	96	6670	94	7326	103	7225	102	7068	100
TULM-64L530-827	10144	96	9935	94	9732	92	9668	91	9601	91	9440	89	10369	98	10226	97	10004	95
TULM-64L700-827	12783	91	12519	89	12263	87	12183	87	12099	86	11896	85	13066	93	12886	92	12606	90
TULM-64L1050-827	17550	80	17188	79	16837	77	16727	77	16612	76	16333	75	17939	82	17691	81	17308	79
TULM-80L350-827	8922	103	8738	100	8559	98	8503	98	8445	97	8303	95	9120	105	8993	103	8798	101
TULM-80L530-827	12633	97	12373	95	12119	93	12040	92	11958	92	11756	90	12913	99	12735	98	12458	96
TULM-80L700-827	15972	90	15642	88	15322	86	15222	86	15117	85	14863	84	16326	92	16100	91	15750	89
TULM-80L900-827	19364	85	18964	83	18576	82	18455	81	18328	81	18020	79	19793	87	19520	86	19095	84

LED Lumen Values – 3000K

Ordering Code	DK		R2M		R3M		R3W		4		5		SN		CBL		TW2	
	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)
TULM-48L350-730	6354	123	6223	120	6096	118	6056	117	6014	116	5913	114	6495	126	6405	124	6266	121
TULM-48L530-730	9016	118	8830	116	8649	114	8593	113	8534	112	8391	110	9216	121	9089	119	8891	117
TULM-48L700-730	11584	112	11345	110	11113	107	11041	107	10965	106	10781	104	11841	114	11678	113	11424	110
TULM-48L1050-730	16200	100	15865	98	15540	96	15439	96	15333	95	15075	93	16558	103	16330	101	15975	99
TULM-64L350-730	8688	123	8508	120	8334	118	8280	117	8223	116	8085	114	8880	125	8758	124	8567	121
TULM-64L530-730	12296	116	12042	114	11796	112	11719	111	11638	110	11443	108	12568	119	12395	117	12126	115
TULM-64L700-730	15495	111	15175	108	14864	106	14767	105	14666	105	14419	103	15838	113	15619	111	15280	109
TULM-64L1050-730	21273	97	20834	95	20408	93	20275	93	20136	92	19797	91	21744	100	21444	98	20979	96
TULM-80L350-730	10814	124	10591	122	10374	119	10307	118	10236	118	10064	116	11054	127	10901	125	10664	123
TULM-80L530-730	15313	118	14997	115	14690	113	14594	112	14494	111	14250	109	15652	120	15436	118	15101	116
TULM-80L700-730	19360	109	18960	107	18572	104	18451	104	18324	103	18016	101	19789	111	19515	110	19091	107
TULM-80L900-730	23471	103	22987	101	22516	99	22370	98	22216	98	21842	96	23991	106	23660	104	23146	102

LED Lumen Values – 4000K

Ordering Code	DK		R2M		R3M		R3W		4		5		SN		CBL		TW2	
	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)	Lumen Output	Efficacy (LPW)
TULM-48L350-740	6945	134	6802	132	6663	129	6619	128	6573	127	6463	125	7099	137	7001	135	6849	132
TULM-48L530-740	9854	129	9651	127	9453	124	9392	123	9328	122	9171	120	10073	132	9934	130	9718	128
TULM-48L700-740	12661	122	12400	120	12147	117	12068	117	11985	116	11784	114	12942	125	12764	123	12486	121
TULM-48L1050-740	17707	110	17340	107	16985	105	16875	105	16759	104	16477	102	18098	112	17849	111	17461	108
TULM-64L350-740	9496	134	9299	131	9109	128	9050	128	8988	127	8837	125	9706	137	9572	135	9364	132
TULM-64L530-740	13440	127	13162	125	12893	122	12809	121	12720	120	12507	118	13737	130	13548	128	13254	125
TULM-64L700-740	16936	121	16586	118	16246	116	16140	115	16030	114	15760	112	17311	123	17072	122	16701	119
TULM-64L1050-740	23251	107	22772	104	22306	102	22161	102	22009	101	21638	99	23766	109	23438	107	22930	105
TULM-80L350-740	11820	136	11576	133	11339	130	11266	129	11188	129	11000	126	12082	139	11915	137	11656	134
TULM-80L530-740	16737	128	16392	126	16056	123	15951	122	15842	122	15575	120	17108	131	16872	129	16505	127
TULM-80L700-740	21160	119	20723	116	20299	114	20167	113	20028	113	19691	111	21629	122	21330	120	20866	117
TULM-80L900-740	25654	113	25125	111	24610	108	24450	108	24282	107	23873	105	26222	115	25860	114	25299	111

Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.; highly recommended to confirm performance with a layout - contact Applications at outdoorlighting.applications@signify.com. Consult DLC QPL to confirm your specific fixture selection is DLC approved.

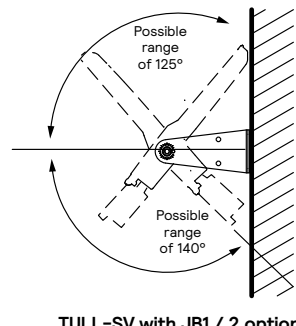
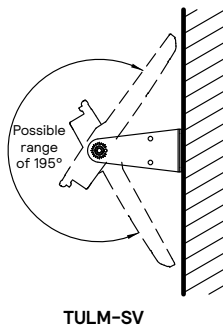
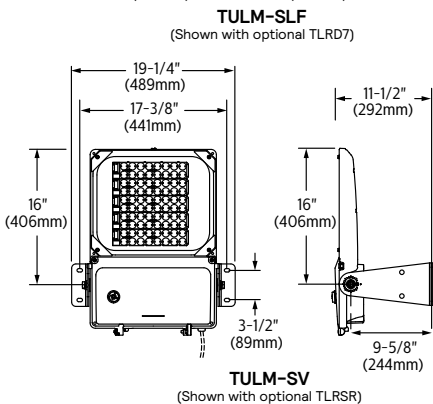
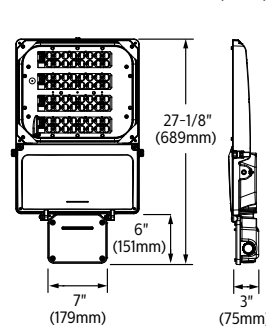
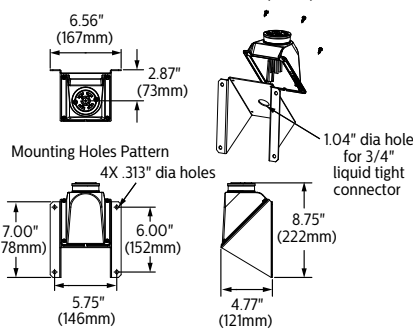
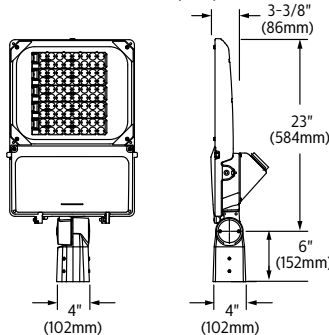
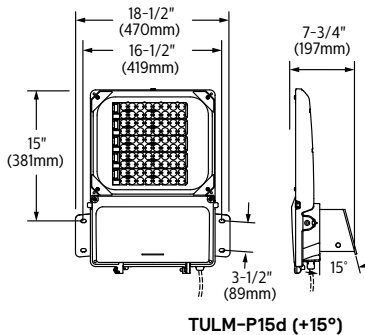
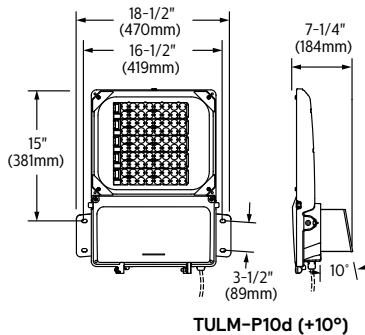
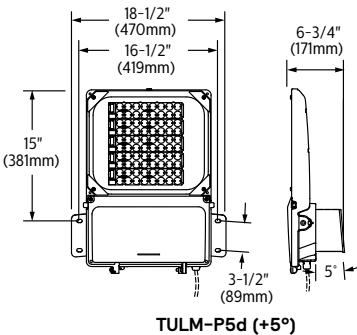
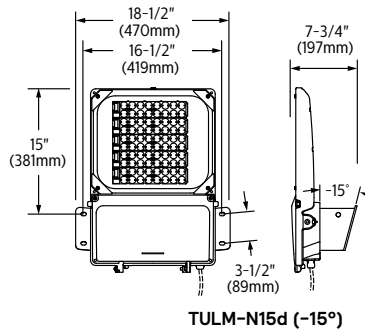
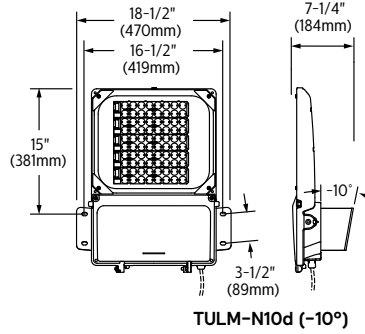
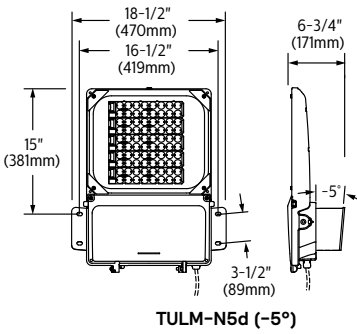
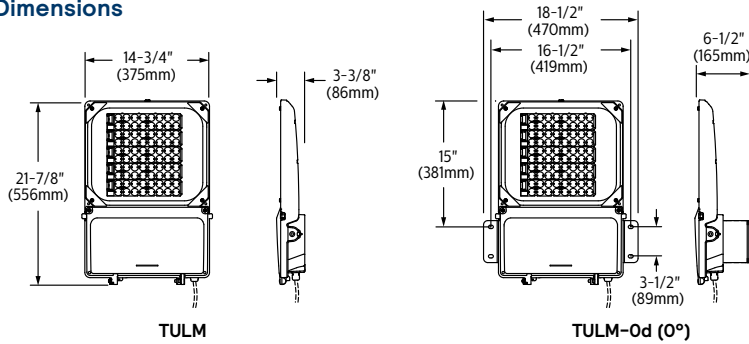
Note: Some data may be scaled based on tests of similar but not identical luminaires.

TULM TunnelView

Tunnel/Underpass luminaire

Dimensions

	Weight	EPA	
		Horizontal	Vertical
TULM	20lbs	0.62 sq. ft	2.93 sq. ft
TULM-SV	24lbs		
TULM-SF	23lbs		
TULM 0-15°	24lbs		
+JB1/JB2 option	+3.5lbs	+0.15 sq. ft	+0.35 sq. ft

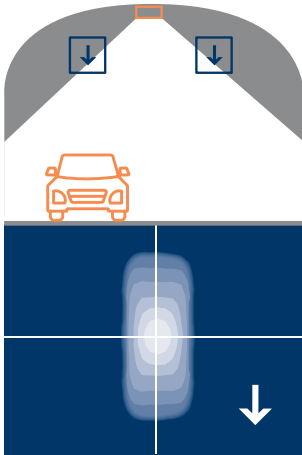


TULM TunnelView

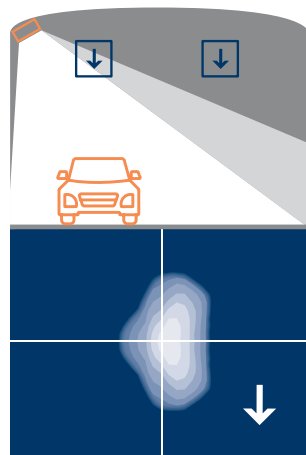
Tunnel/Underpass luminaire

Tunnel Distributions

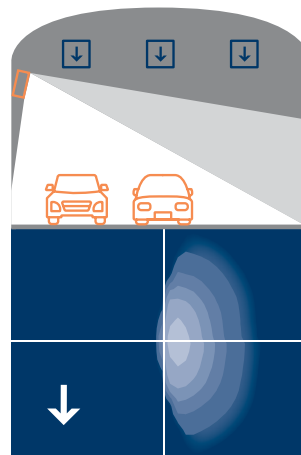
SN
Narrow



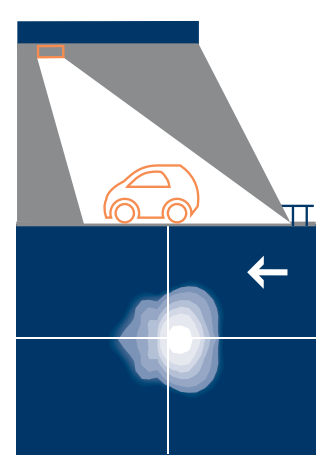
DK
Type II Short



TW2
Type II Wall Mount



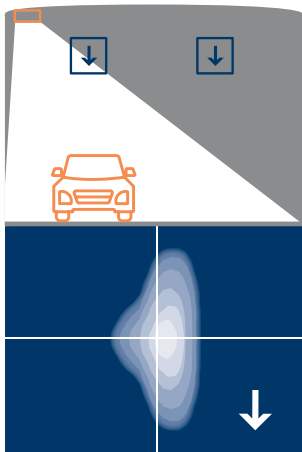
CBL
Ceiling Counter Beam



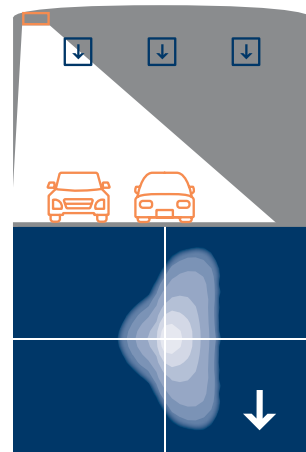
Arrows indicate traffic direction

Underpass Distributions

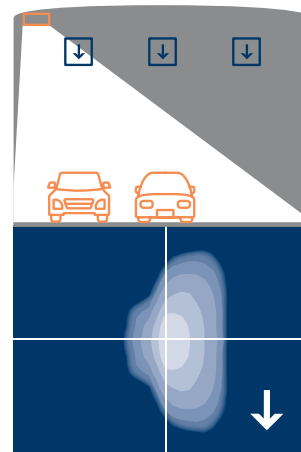
R2M
Type II Medium



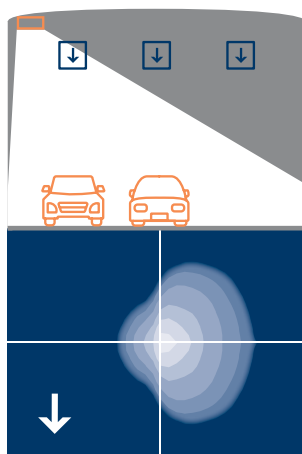
R3M
Type III Medium



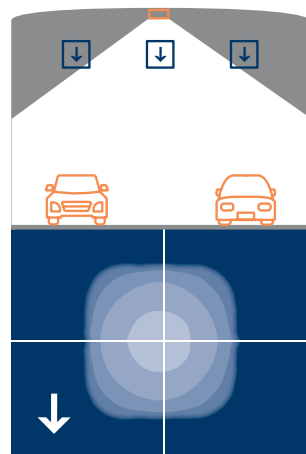
R3W
Type III Wide



4
Type IV



5
Type V



Arrows indicate traffic direction

TULM TunnelView

Tunnel/Underpass luminaire

Specifications

Housing

Made of a low copper die cast Aluminum alloy (A360). Door is complete with hinges and is secured with flanged hex head screws with slotted drive providing access to electronic components and to a terminal block. Door is removable and is secured to prevent accidental dropping or disengagement. Compatible with 1/4" flat blade screwdriver. Complete with ANSI label as per C136.15-2015 to identify wattage and source (included in box). Housing (including electrical compartment) rated IP66 per ANSI C136.37.

Light Engine

Composed of 5 main components: Heat Sink, Lens, LED Module, Optical System, Driver. Electrical components are RoHS compliant. LEDs tested by ISO 17025 2005 accredited lab in accordance with IESNA LM 80 guidelines in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM 21. Metal core board ensures greater heat transfer and longer lifespan.

Lens: Made of soda-lime clear tempered glass flat lens, mechanically assembled and sealed onto the lower part of the heat sink IK09.

LED Module: Composed of high performance white LEDs. Color temperature as per ANSI/NEMA bin 2700 Kelvin nominal (2725 ±145K) CRI 80 min, 3000 Kelvin nominal (3045K +/-175K) or 4000 Kelvin nominal (3985K +/- 275K), CRI 70 Min. 75 Typical. Other CCT/CRI also available, consult factory.

Optical System: Composed of high performance UV stabilized optical grade polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance.

Heat Sink: Built in the housing, designed to ensure high efficacy and superior cooling by natural convection air flow pattern always close to LEDs and driver optimizing their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling). Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +50°C / +122°F unless otherwise specified, refer to LED Wattages Values Table.

Driver: High power factor of 90% min. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 or 347 to 480 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max. The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min).

Controls: Fixture is compatible with most controls system and can integrate proprietary and third parties control modules directly within the electrical compartment.

Integrated Features

DMG: Dimmable driver 0-10V.

SP1: Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA.

Please note that these integrated features always come with Tunnel/Underpass luminaire.

Driver and Luminaire Options

DALI: Pre-set driver compatible with the DALI control system.

SRD: Sensor Ready Driver including SR communication (used for dimming and other functionalities), 24V auxiliary supply and a logical signal input (LSI) connected to the NEMA twist lock receptacle and bottom TLRSR receptacle, if these options included/chosen. This configuration is compatible with Interact City controllers.

SRD1: Sensor Ready Driver including SR communication (used for dimming and other functionalities) but with 24V auxiliary supply and a logical signal input (LSI) not connected to the NEMA twist lock if this option included/chosen. If TLRSR receptacle option included, standard SR communication, 24V auxiliary supply and LSI are connected to the TLRSR receptacle.

SP2: 20kV/10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

TLRD7*: Tool Less orientable receptacle with 7 pins enabling dimming, can be used with a twist lock Interact City or photoelectric cell or a shorting cap. This add-on module is rated IP54.

TLRSR: SR Sensor connector, installed in fixture door. Shipped with protective cover.

API: Factory Installed NEMA label, ANSI C136.15-2015 compliant. Consult factory for other labeling needs.

F1: Fusing, single (120, 277 or 347VAC) installed in electrical compartment

F2: Fusing, double (208, 240 or 480VAC) installed in electrical compartment

JB1: Junction Box option, with 3 conduct entries, 1" NPT, suitable for through wire and continuous row mounting, complete with 2 aluminum hole plugs

JB2: Junction Box option, with 3 conduct entries, 3/4" NPT, suitable for through wire and continuous row mounting, complete with 2 aluminum hole plugs

NER: Fixture is set-up in factory to receive Nyx Hemera TLAC modules. (Modules can be factory installed as well. Consult factory for details)

TLL: Tool Free access 316 stainless steel latches.

VPA: Vandal Proof hardware to prevent access to internal components, 316 stainless steel, complete with Ceramic primer seal to reduce seizing of the parts, also offers a high resistance to corrosion.

RCM7*: Remote install Tool less orientable receptacle with 7 pins enabling dimming and additional functionality (to be determined), can be used with a twist lock Interact City node or photoelectric cell or a shorting cap, Rated IP54. (wiring to fixture not included)

* Use of photoelectric cell or shorting cap is required to ensure proper illumination.

Luminaire Useful Life

Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in situ thermal testing in accordance with UL1598 and UL8750, System Reliability Tool, Advance data and LED manufacturer LM-80/TM-21 data, expected to reach 100,000 + hours with >L70 lumen maintenance @ 25°C.

Luminaire Useful Life accounts for LED lumen maintenance AND all of these additional factors including: LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion.

Wiring

The connection of the luminaire is done using a terminal block connector 600V, 85A for use with #2-14 AWG. wires from the primary circuit, located inside the housing electrical compartment. Due to the inrush current that occurs with electronic drivers, recommend using a 10Amp time delay fuse to avoid unwanted fuse blowing (false tripping) that can occur with normal or fast acting fuses. Housing is completed with a 7/8" (22mm) diameter unthreaded mounting hole to accept a 1/2 NPT liquid tight cord grips connector IP66 rated minimum. Wiring, connector, sealing washer and locknut supplied by others.

Mounting Options

All Brackets are 316 Stainless Steel unless otherwise specified.

Fixed brackets (refer to Dimension section for tilt orientation)

SV: Swivel Mount

SLF: Slip Fitter made of low copper Aluminum alloy (A360) for high resistance to corrosion, adjustable knuckle has 5 degree aiming increments with integral interlocking teeth and bolt to secure aiming in place, integral cast-in aiming marks. Fits on a 2-3/8" thru 3.0" O.D. by minimum 3-3/4" long tenon. AWG 16-3 wires exiting 4" through the Slip Fitter. Integral splice compartment for field wiring with cULus Wet Location rated access cover with seal around entire perimeter.

Hardware

All exposed screws shall be 316 stainless steel, complete with Ceramic primer seal to reduce seizing of the parts, also offers a high resistance to corrosion. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

TULM TunnelView

Tunnel/Underpass luminaire

Specifications (continued)

Finish

Color in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance over anodized pre-finish. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard. The surface treatment achieves a minimum of 3000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

LED products manufacturing standard

The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

Vibration Resistance

The TULM luminaires meet the ANSI C136.31-2018 American National Standard for Roadway Luminaire Vibration specifications for Bridge/overpass applications.

Certifications and Compliance

cULus Listed for Canada and USA. Luminaire meets DOE and MSSLC Model Specification for LED Roadway Luminaires. Most versions are DesignLights Consortium® qualified, consult DLC QPL to confirm your specific fixture selection is approved. Luminaire complies with or exceeds the following ANSI C136 standards: .2, .3, .10, .14, .15, .22, .25, .31, .37, .41.

Service Tag

Each individual luminaire is uniquely identifiable, thanks to the Signify Service tag application. With a simple scan of a QR code, placed on the inside of the mast door, you gain instant access to the luminaire configuration, making installation and maintenance operations faster and easier, no matter what stage of the luminaire's lifetime. Just download the APP and register your product right away. For more details visit: philips.com/servicetag

Limited Warranty

10-year limited warranty.

See signify.com/warranties for details and restrictions.

