

A6 – Traffic Signals + Vehicular Lighting Specs

B36229
 QTY 52 / ITEM#0214
 VERD-M-D-U-T3-4N7-BK-0A1RA013

DESCRIPTION

The Verdeon LED roadway luminaire combines optical performance, energy efficiency, and outstanding versatility to meet the requirements of any roadway application. Advanced optical technology delivers unparalleled uniformity, scalability, and budget-beating operating costs for municipal streets and highways. UL/cUL listed for wet locations with an optional IP66 enclosure rating available.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Heavy-duty die-cast aluminum housing and door. Tool-less entry, hinged removable door for easy maintenance. 3G vibration rated.

Optics

Optics are precisely designed to shape the distribution maximizing efficiency and fixture spacing. Offered standard in 4000K (+/- 275K) CCT and 70 CRI. Optional 5000K CCT and 3000K CCT are available.

Electrical

120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 10kV/10kA common and differential mode surge protection available. Thermal

management transfers heat away from the LED source for optimal efficiency, light output and lumen maintenance. Operates in ambient temperatures from -40°C to 40°C. 50°C HA (high ambient) option available. Standard three-position tunnel type terminal block. LED modules are IP66 rated.

Mounting

Four-bolt slipfitter with cast-in pipe stop and 2.5° leveling steps. Fixed-in-place bird guard seals around 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) mounting arms. Optional 15" pole mount arm available with round pole adapter and mounting hardware included.

Finish

Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Consult your lighting representative at Eaton for a complete selection of standard colors.

Warranty

Five-year warranty.

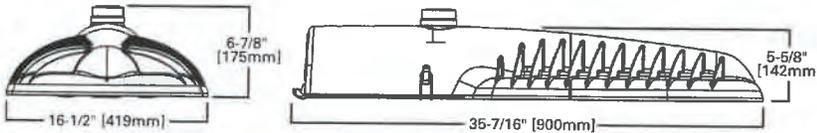


**VERD-M
 VERDEON**

ROADWAY LUMINAIRE

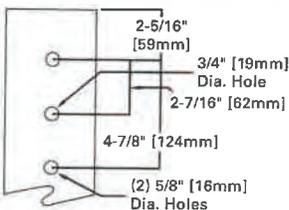
DIMENSIONS

VERD-M



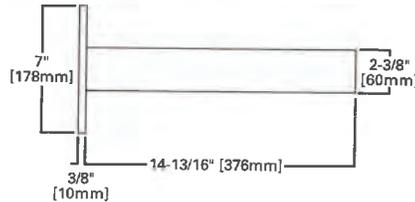
ARM DRILLING

TYPE "M"



OPTIONAL ARM

15" Straight Arm



SHOP DRAWING / SUBMITTAL REVIEW STAMP

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- No Exceptions Taken
 - Comments as Noted
 - Review and Resubmit
 - Rejected - See Remarks
- Robinson Engineering, LTD.
 By: David W. Shilling
 Date: 9/13/2019
 Project No.: B-36229-A



CERTIFICATION DATA
 UL and cUL Wet Location Listed
 IP66-Rated Optics
 3G Vibration Rated
 ISO 9001
 DesignLights Consortium® Qualified*

ENERGY DATA
 Electronic LED Driver
 0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277V/50 and 60Hz,
 347V 60Hz, 480V 60Hz
 -40°C Minimum Temperature Rating
 +40°C Ambient Temperature Rating

EPA
 Effective Projected Area (Sq. Ft.): 0.8

SHIPPING DATA
 Approximate Net Weight:
 35 lbs. (15.9 kgs.)



POWER AND LUMENS

Light Engine	M-A0385	M-A03	M-A0485	M-A04	
Power (Watts)	152	182	210	247	
Current (a) @ 120V	1.41	1.69	1.95	2.29	
Current (a) @ 277V	0.61	0.74	0.85	1.00	
Power (Watts)	167	197	211	255	
Current (a) @ 347V	0.49	0.58	0.62	0.75	
Current (a) @ 480V	0.36	0.41	0.45	0.54	
Optics					
Type II	Lumens	19,571	22,456	26,419	29,829
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4
Type III	Lumens	19,380	22,236	26,161	29,537
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4
Type IV	Lumens	19,377	22,233	26,157	29,533
	BUG Rating	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
Type V	Lumens	19,680	22,592	26,579	30,010
	BUG Rating	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5

NOTE: Lumen output for AP Grey fixture color, 120-277V.

LUMEN MAINTENANCE

M-A03, M-A0385, M-A04, M-A485		
Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	>92%	>259,000
40°C	>82%	>259,000

* A01 Not available in 347V or 480V.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

ORDERING INFORMATION

Sample Number: VERD-M-A04-D-U-T2-4N7-AP

Product Family ^{1,2}	Light Engine ³	Driver ⁴	Voltage	Distribution
VERD=Verdeon	M-A03=3 LEDs, Full Output M-A0385=3 LEDs, Approximately 85% Output M-A04=4 LEDs, Full Output M-A0485=4 LEDs, Approximately 85% Output	E=Non-Dimming D=Dimming (0-10V) SLTD=DALI	U=Universal (120-277V) 8=480V 9=347V	T2=Type II T3=Type III T4=Type IV T5=Type V
Options (Add as Suffix)			Color ¹⁵	Accessories (Order Separately)
7030=70 CRI / 3000K CCT ⁸ 7050=70 CRI / 5000K CCT ⁸ 4=NEMA Twistlock Photocontrol Receptacle 4N7=NEMA 7-PIN Twistlock Photocontrol Receptacle ⁷ 10K=10KV UL 1449 Surge Protective Device 10MSP=10kV MOV Surge Protective Device IP66=IP66 Rated Housing HA=50°C High Ambient Temperature ⁸ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{7,9,10} MS/DIM-L20=Motion Sensor for Dimming Operation, Maximum 9' - 20' Mounting Height ^{7,9,10} MS/DIM-L40=Motion Sensor for Dimming Operation, Maximum 21' - 40' Mounting Height ^{7,9,10} LWR-LN=Factory Installed LumaWatt RF Dimming Control System (Mounting Height 16' and Up) ^{10,11} LWR-LW=Factory Installed LumaWatt RF Dimming Control System (Mounting Height below 16') ^{10,11} K=Level Indicator A15=Arm Included (15" Straight Arm) ¹² HSS=House Side Shield ¹⁵			AP=Grey (Standard) B7=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	OA1223=10kV UL 1449 Surge Module Replacement OA/RA1013=Photocontrol Shorting Cap OA/BA1014=NEMA Photocontrol - 120V OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V FSIR-100=Wireless Configuration Tool for Motion Sensor ¹⁴ HS/VERD=Verdeon House Side Shield ¹⁵ VGS-F/B=Vertical Glare Shield, Front/Back VGS-SIDE=Vertical Glare Shield, Side

- NOTES:**
- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper for more information.
 - DesignLights Consortium[®] Qualified. Refer to www.designlights.org qualified products list under family model details.
 - Standard 4000K CCT and 70 CRI.
 - Consult factory for driver surge protection values.
 - Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
 - Extended lead times apply. Use dedicated IES files for 3000K and 5000K when performing layouts. These files are published on the VERD-M Verdeon Luminaire product page on the website.
 - Must specify dimming driver.
 - HA option not available for M-A04 light engines.
 - The FSIR-100 accessory is required to adjust parameters.
 - Not available with photocontrol receptacle (not required).
 - LumaWatt wireless sensors are factory installed and require network components RF-EM-1, RF-GW-1 and RF-ROUT-1 in appropriate quantities. See website for LumaWatt application information.
 - Round pole adapter and mounting hardware included. "M" drill pattern.
 - Standard photometry based on grey housing. Consult web for alternate color data.
 - This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
 - Option will come factory-installed. Must order one per optic as an accessory. House Side Shield not suitable for T5 distribution.

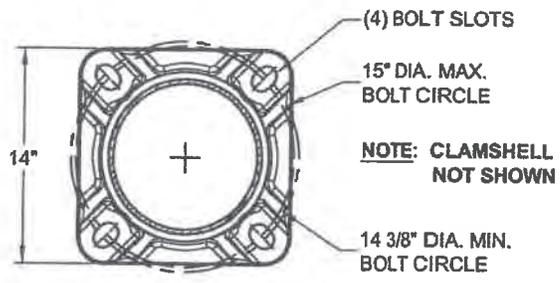
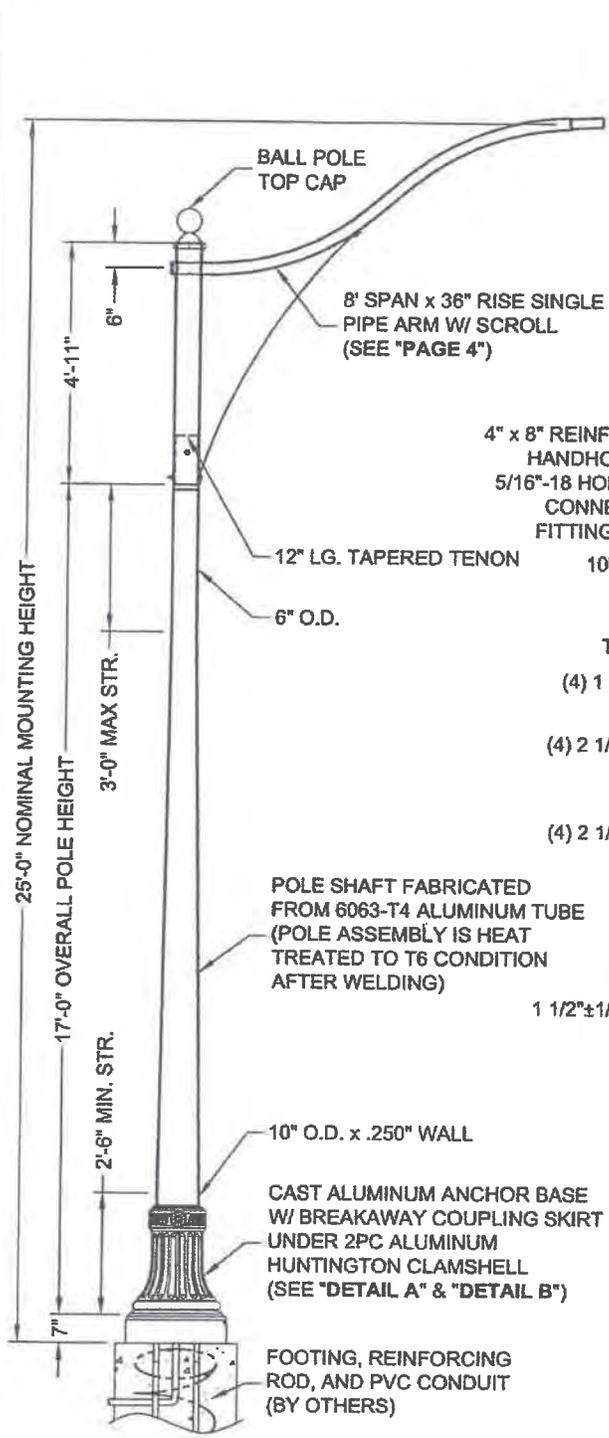
SHOP DRAWING / SUBMITTAL REVIEW STAMP

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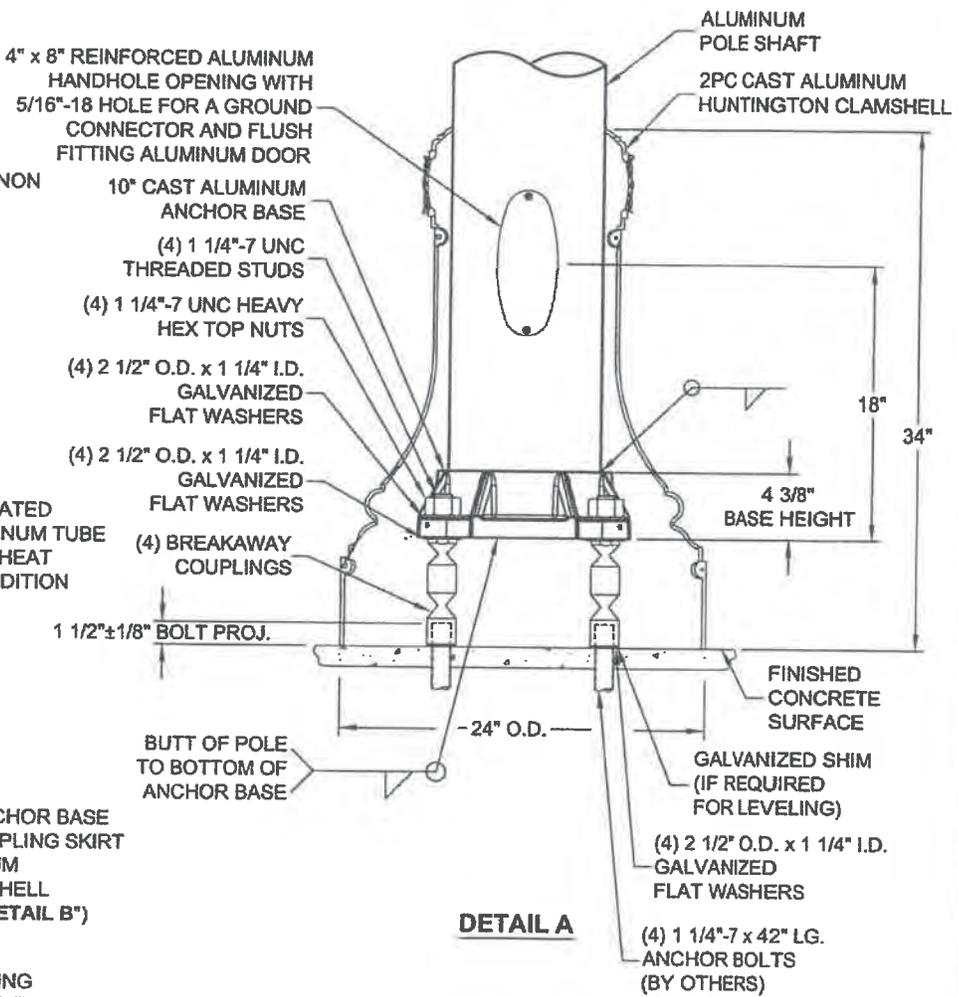
No Exceptions Taken
 Comments as Noted
 Review and Resubmit
 Rejected - See Remarks

Robinson Engineering, LTD.
 By: David W. Shilling
 Date: 9/13/2019
 Project No.: B-36229-A

Ensure driver has 10kV minimum surge protection per plans. If not, please include one of the surge protection options.



DETAIL B



DETAIL A

POLE RATING (PER AASHTO 2013):
 3-SEC GUST WIND SPEED: 90 MPH MAX
 EPA (LUMINAIRE): 2.4 SQ. FT. MAX
 WEIGHT (LUMINAIRE): 53 LBS MAX

DO NOT SCALE



Valmont Industries, Inc. Structures Division
 20805 Eaton Ave Farmington, Minnesota 55024-7932
 Phone: (651) 463-8990 (800) 899-7577
 Fax: (651) 463-3349

TITLE:	S	BREAKAWAY COUPLING ANCHOR BASE POLE	QTY:	8
MODEL NO.:			OWN BY:	PTP
MATERIAL:		ALUMINUM ALLOY	CHKD BY:	
FINISH:		POWDER PAINT - DBL SMOOTH BLACK	APPR BY:	JEB
PROJECT:		B36229	DATE:	08-01-19
SOLD TO:		FIRST ELEC	DWG NO.:	A435996
SHIP TO:			PAGE:	3 / 5
P.O. NO.:		19642		
REP.:		TECHLITE CORP		

SHOP DRAWING / SUBMITTAL REVIEW STAMP

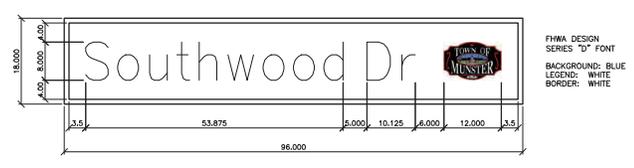
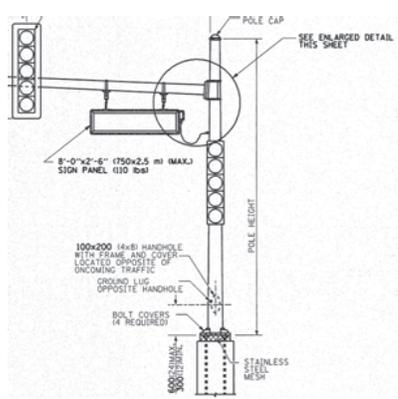
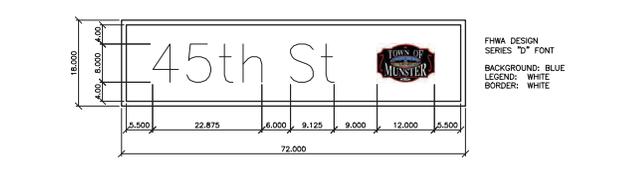
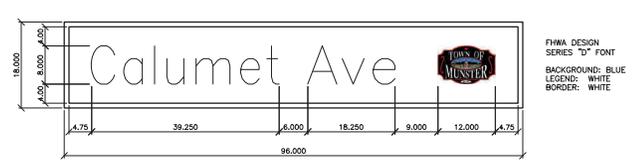
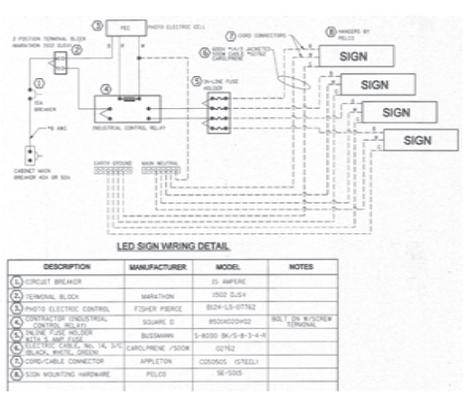
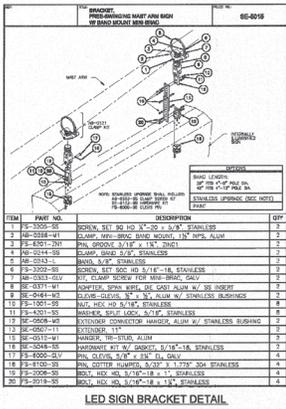
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<input type="checkbox"/> No Exceptions Taken	Submittal Engineering, LTD.
<input type="checkbox"/> Comments as Noted	By: David W. Shilling
<input type="checkbox"/> Review and Rebuild	Date: 8/2/2019
<input type="checkbox"/> Rejected - See Remarks	Project No.: B-36229-A

****CONFIDENTIAL****

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REV	DATE	REVISION DESCRIPTION	BY



<p>88315-SGN-07LS-01-001</p>		RECOMMENDED FOR APPROVAL: DATE: 11/20/18 DESIGN ENGINEER	INDIANA DEPARTMENT OF TRANSPORTATION TRAFFIC SIGNAL INSTALLATION TRAFFIC SIGNAL DETAILS	HORIZONTAL SCALE: ROAD FILE
		DESIGNED: JB DRAWN: RS		NONE DESIGNATION
		CHECKED: JMN CHECKED: AS		NONE SHEETS
		SURVEY BOOK: N/A 154 of 360 CONTRACT: S-35208 PROJECT: 0710006		

