



# VRMUNV036RD7yyA

## 14" Round Universal Voltage LED Retrofit Kit

- Retrofit Kit Suitable for Canopy, Garage Luminaires
- Suitable replacement for applications using 70-250W HID
- Instant on/off, no cool down time needed
- External SPD for 10kV surge
- Integrated thermal management for optimal performance
- cURus Recognized LED module
- cULus Listed, Class P LED Driver
- cETLus Classified Retrofit Kit for Field Installation

### General Specifications

Input Voltage <sup>①</sup>	120-277VAC; 50/60 Hz
Input Current <sup>①</sup>	0.34A (Max.)
Input Power <sup>①</sup>	ETL Claim: 39W; Typ. measurement 37W
Input PF	>0.9
THD	<20%
Module Operating Voltage	47.1VDC @ 0.75A
Initial Lumen Output	6,067 lumens @ 4000K / 70 CRI
Initial Efficacy	164lm/W @ 4000K / 70CRI
Dimming Type/Range	0-10V Dimming; 100%-10%
Beam Angle	120°
CRI	70 Standard; 80, 90 available
Storage Temperature Range	-20 to +90°C / -4 to +194°F
Operating Ambient Temperature Range (Ta)	-20 to +55°C / -4 to +131°F
Maximum Driver Case Temperature (Tc)	90°C: 30,000hrs Service Life / 80°C: 50,000hrs Service Life
Maximum Module Case Temperature (Tc)	105°C
Estimated Lumen Maintenance <sup>②</sup>	L70 = >54,000hrs / L90 = 37,000hrs @ 105°C Module Tc
Color Consistency	Binning per ANSI C78.377-2015 @ 85°C; 5 SDCM
Overall Size	Whole Kit: 13.98" Dia x 3.03" H
Weight	5.73 lbs (2.6kg)
Packaging per Carton	2pcs
Driver Part Number	Fulham: T1M1UNV0750-38L
DC Module Part Number	Fulham: VMU160085HS7xxA
Maximum Screw Installation Torque	35in-lb (560in-ozf)
Safety/Compliance	Driver: cULus Listed, Class P (E342838: T1M1UNV0750-38L) Module: cURus (E351548: VMU160085HSxxxA ) Retrofit Kit: cETLus (5027868: VRMUNV036RDxyyz) LED Class 2 Lighting System Dry or Damp Locations SPD Rating: 100-277V, MCOV: 320V, I <sub>max</sub> : 10kA RoHS compliant
RFI/EMI	FCC Part 15B Consumer, EN55015
Sound Rating / Noise	A / <24dBA
Percent Flicker / Flicker Index	<30%
Service Life	50,000hrs @ Ta ≤ 55°C (Tc mod ≤ 105°C; Tc driver ≤ 80°C)
Warranty	5 years @ Max. Tc from date of manufacture

<sup>①</sup> Measured electrical data per ETL file      <sup>②</sup> TM-21 Reported Numbers

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## Electrical and Optical Specifications

### Retrofit Kit (without fixture lens)

CCT & CRI	Retrofit Kit	Driver Output Current Setting	Input Power	Nominal Luminous Flux	Efficacy
4000K /70CRI	VRMUNV036RD740A	750mA (Default)	37W (typ.)	6,067 lumens	164 lm/W

### LED Module

LED Module Part Number	Number of LED	Input Current	Nom. Forward Voltage	Nom. Rated Power	Max. Fwd. Voltage	Max. Rated Power	Nom. Lum. Flux @4000K/70 CRI	Nom. Efficacy @4000K/70 CRI
VMU160085HS7xxA	16	200 mA	43.8 VDC	8.8 W	48 VDC	10 W	1732 lm	198 lm/W
		300 mA	44.5 VDC	13.4 W	49 VDC	15 W	2568 lm	192 lm/W
		400 mA	45.2 VDC	18.1 W	50 VDC	20 W	3383 lm	187 lm/W
		500 mA	45.8 VDC	22.9 W	50 VDC	25 W	4177 lm	182 lm/W
		600 mA	46.3 VDC	27.8 W	51 VDC	31 W	4949 lm	178 lm/W
		700 mA	46.8 VDC	32.8 W	52 VDC	36 W	5700 lm	174 lm/W
		750 mA	47.1 VDC	35.3 W	52 VDC	39 W	6067 lm	172 lm/W
		800 mA	47.3 VDC	37.9 W	52 VDC	42 W	6428 lm	170 lm/W
		900 mA	47.8 VDC	43.0 W	53 VDC	48 W	7134 lm	166 lm/W
		1000 mA	48.2 VDC	48.2 W	53 VDC	53 W	7816 lm	162 lm/W
		1100 mA	48.6 VDC	53.5 W	53 VDC	58 W	8475 lm	158 lm/W
		1200 mA	49.0 VDC	58.9 W	54 VDC	65 W	9110 lm	155 lm/W
		1300 mA	49.5 VDC	64.3 W	54 VDC	70 W	9720 lm	151 lm/W
		1400 mA	49.9 VDC	69.9 W	55 VDC	77 W	10306 lm	147 lm/W
		1500 mA	50.4 VDC	75.5 W	55 VDC	83 W	10866 lm	144 lm/W
		1600 mA*	50.8 VDC	81.3 W	56 VDC	90 W	11400 lm	140 lm/W

### CCT & CRI vs. Luminous Flux

	2700K	3000K	3500K	4000K	5000K	5700K	6500K
CRI 70	0.900	0.943	0.971	1.000	1.000	0.971	0.957
CRI 80(R9> 0)	0.814	0.843	0.886	0.914	0.914	0.900	0.900
CRI 90(R9>50)	0.700	0.729	0.743	0.757	0.757	0.757	N/A

### NOTES:

- 1) All retrofit kits are programmed to the default 750mA driver output.
- 2) Performance based on Tc mod = 25°C. See thermal de-rating chart (pg. 3) for higher temperature operation.
- 3) Standard lumen output and efficacy is calculated for standard options. Reference CCT & CRI vs Luminous Flux chart for lumen ratio calculation.
- 4) Specifications are subject to change without notice.

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## Thermal Specifications

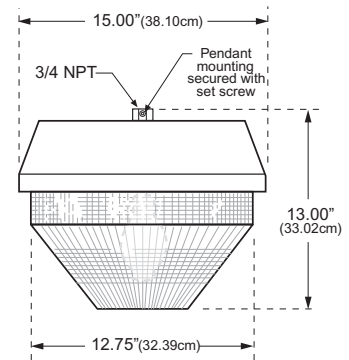
	Retrofit Kit <sup>③</sup>
Storage Temperature Range	-20 to +90°C / -4 to 194°F
Operating Ambient Temperature Range	-20 to +55°C / -4 to 131°F
Maximum Driver Case Temperature (Tc)	90°C / 194°F
Maximum Module Case Temperature (Tc)	105°C / 221°F

### Original Luminaire

Mfr: Philips - Model: RSP-HAZ / RSP-E-HAZ



### Minimum Luminaire <sup>④</sup> Dimensions



## LED Module Thermal De-Rating: Tc vs. Luminous Flux vs. Forward Voltage

Module Case Temperature (Tc)	Total Vf Multiplier	Luminous Flux Multiplier
25°C	1.000	1.000
30°C	0.999	0.992
35°C	0.998	0.984
40°C	0.997	0.976
45°C	0.996	0.968
50°C	0.995	0.959
55°C	0.994	0.951
60°C	0.993	0.943
65°C	0.992	0.935
70°C	0.990	0.927
75°C	0.989	0.919
80°C	0.988	0.911
85°C	0.987	0.903
90°C	0.986	0.895
95°C	0.985	0.887
100°C	0.984	0.878
105°C	0.983	0.870

<sup>③</sup> Driver Tc max. 90°C for 30,000hrs service life; Driver Tc max. 80°C for 50,000hrs service life.

<sup>④</sup> Refer to LED Engine Retrofit Kit Installation Instructions for further detail. This LED Engine Kit can retrofit any similar designed shaped luminaire with volume greater or equal to the minimum dimensions shown on the Installation Instructions (15" Diameter x 11.75") with a minimum mounting surface of 14" Diameter. This LED Engine Kit can be used with luminaires similar to the one illustrated on the Installation Instructions.



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## Certification Chart

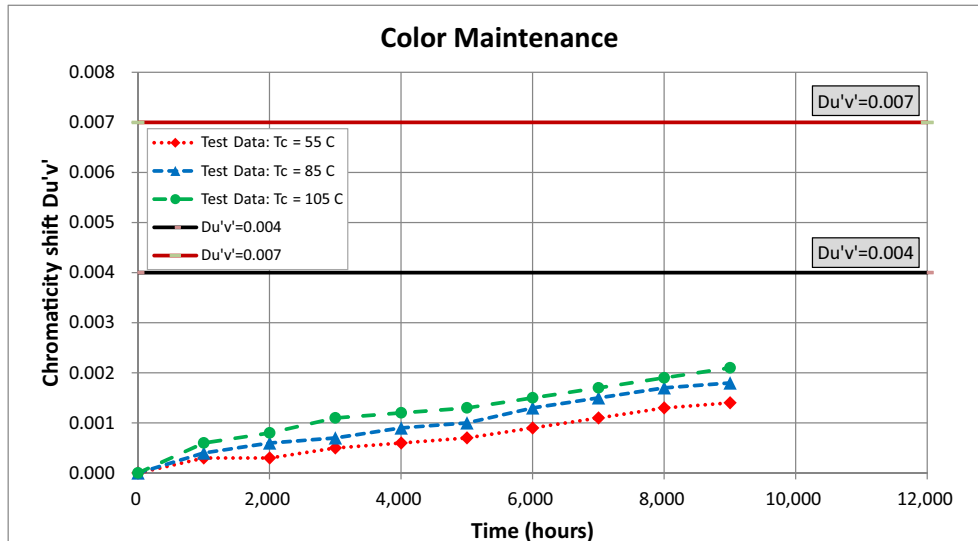
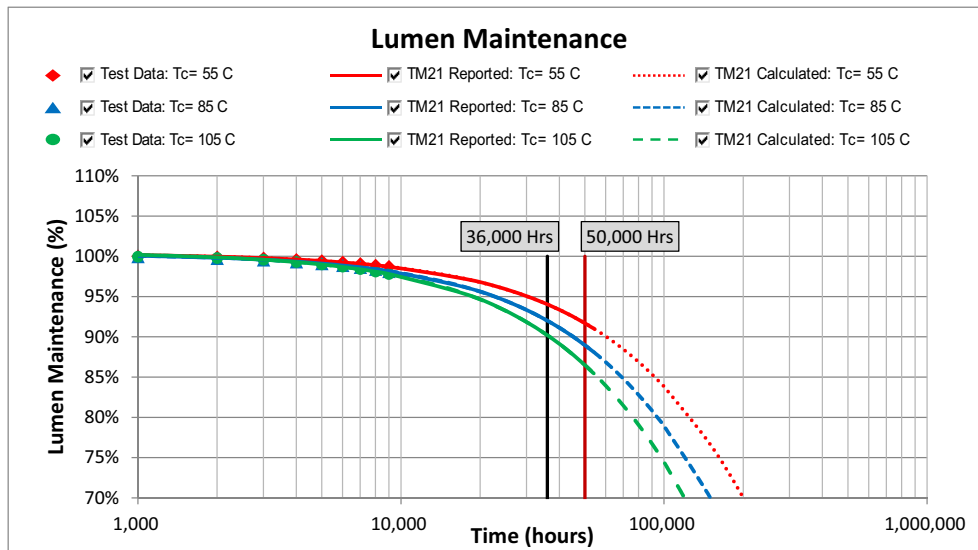
<b>Model</b>	<b>VRMUNV036RD7yyA</b>
<b>Classification</b>	<b>YES</b>
	<b>YES</b>
	<b>YES</b> Module: VMU160085HSxxxA
	<b>YES</b> Driver: T1M1UNV0750-38L
	<b>YES</b> Kit: VRMUNV036RDxyyz

## Energy Star™ TM-21 Calculator Data

Tc Module	Reported L70	Reported L90
55°C	>54,000 Hrs	>54,000 Hrs
85°C	>54,000 Hrs	45,000 Hrs
105°C	>54,000 Hrs	37,000 Hrs

TcModule	Calculated L70	Calculated L90
55°C	200,000 Hrs	60,000 Hrs
85°C	150,000 Hrs	45,000 Hrs
105°C	120,000 Hrs	37,000 Hrs

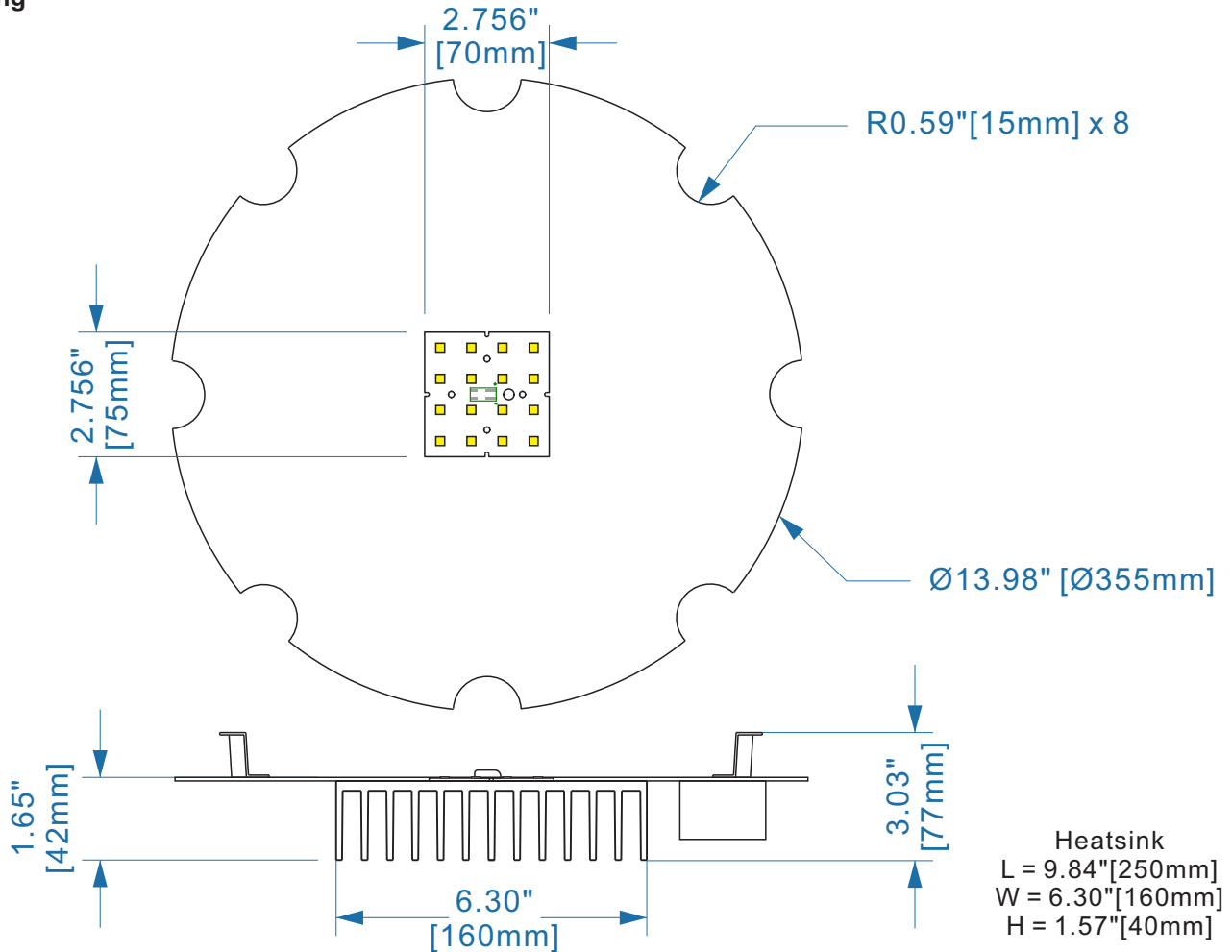




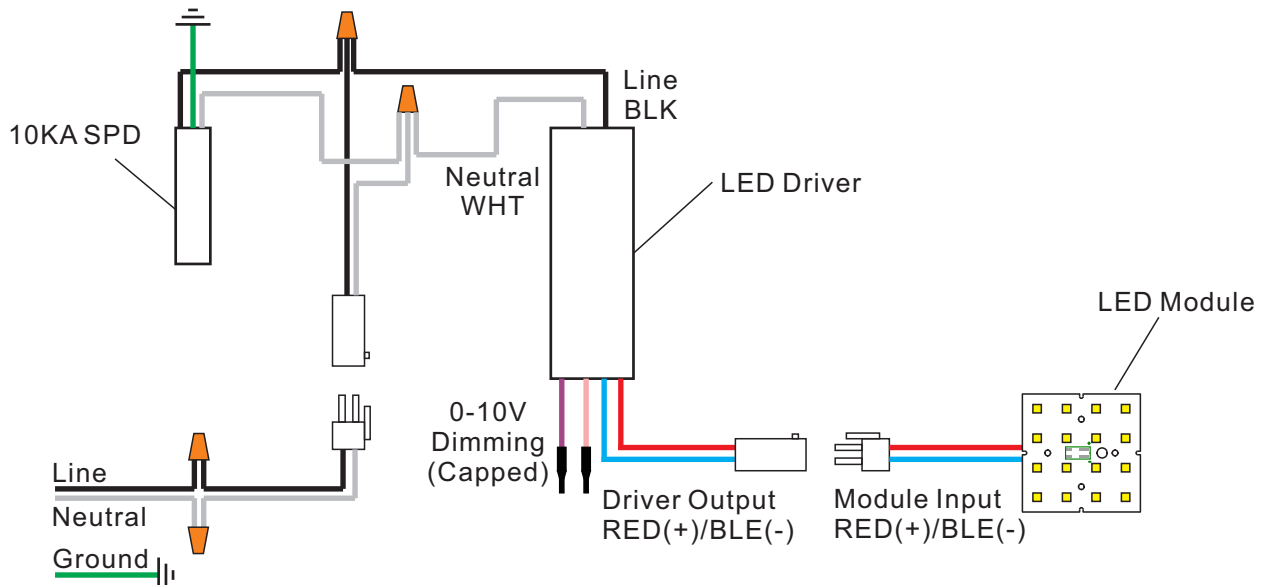
RoHS COMPLIANT

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## Mechanical Drawing



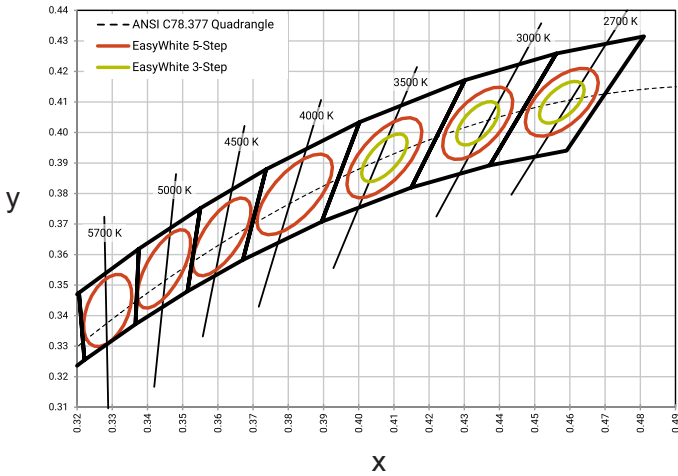
## Wiring Diagram



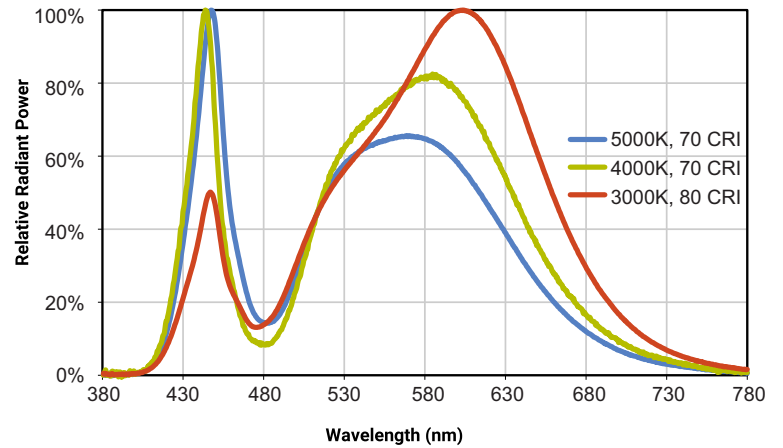


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## Color and Binning



## Optical Spectrum



### NOTES:

- 1) The Color and Binning and Optical Spectrum charts are for reference only. For more detailed info, contact factory.
- 2) Reference Cree Chromaticity Diagram for Color and Binning. Binning per ANSI C78.377-2015 @ 85°C; 5 SDCM.
- 3) The Optical Spectrum values vary depending on product type and color rank.



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## Guidelines

### Instruction Sheets

- Refer to Instruction Sheet for detailed Step by Step Installation.

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## Environmental Rating

- Rated for Dry or Damp locations.

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## Electrostatic Sensitive Product (ESD)

- Fulham LED products should be handled with proper measures to protect against any potential ESD damage.
- When servicing, personnel should be ground and direct contact with LED should be avoided.

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## Wiring

- Intended for Universal Voltage (UNV 120-277VAC) application.
- Connect the Black wire from the kit to the building Line by using the proper connectors or wire nuts.
- Connect the White wire from the kit to the building/source Neutral by using the proper connectors or wire nuts.
- Luminaire must be grounded.
- Please refer to page #5 for the kit internal wiring and the Instruction Sheet for further installation details.



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## Part Number Matrix

**V R M UNV 036 RD 7 40 A**

Product Line	Type	Control Type	Input Voltage	Input Power	Shape	CRI	Color Temperature
V = Vizion	R = Retrofit Kit (ETL Classified)	M = 0-10V	UNV = 120-277VAC	036 = Typ. 36-37W	RD = Round	7 = 70	30 = 3000K 40 = 4000K 50 = 5000K

All CCT, CRI options are made to order with MOQ and lead time.  
Limited stock for 70CRI, 4000K model: VRMUNV036RD740A.

## Product Image: LED Retrofit Kit

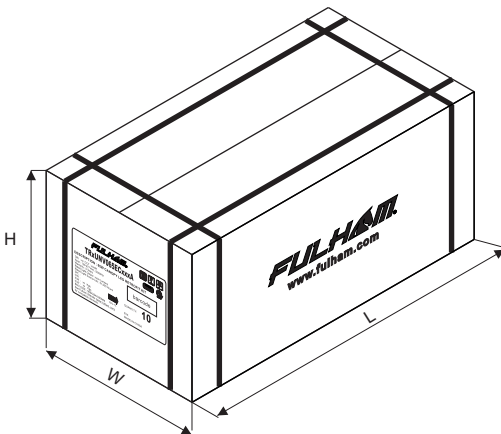


### NOTES:

- 1) Retrofit Kit includes: Pre-wired LED Engine together with SPD, Retrofit Labels and Installation Instruction.
- 2) Refer to Installation Instruction for details.

## Packaging

### Master Carton



OUTER DIMENSION		
L	W	H
15.95"(405mm)	15.55"(395mm)	7.28"(185mm)
Net Weight	Gross Weight	QUANTITY
11.46 lbs. (5.2kg)	14.77 lbs. (6.7kg)	2pcs.