

# SOLID STATE AREA LIGHTING

## RAZAR WALLMOUNT-LED

### S P E C I F I C A T I O N S

#### OPTICAL HOUSING

Heavy cast low copper aluminum (A356 alloy; <0.2% copper) assembly with integral cooling fins. The Optical Panel mounting surface is milled flat (surface variance  $\leq \pm .003"$ ) to facilitate thermal transfer of heat to housing and cooling fins. The Optical Housing bolts to the Electrical Housing forming a unified assembly. The minimum wall thickness is .188".

#### ELECTRICAL HOUSING

Heavy cast low copper aluminum (A356 alloy; <0.2% copper) assembly. Minimum wall thickness is .188". Fixture Mounting Plate affixes to mounting surface over a recessed j-box. Electrical Housing anchors on the top edge of the Mounting Plate and stainless steel recessed socket head screws tighten the Electrical Housing to the Mounting Plate from the bottom.

#### PLED™ OPTICAL MODULES

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. The asymmetric distributions, have a micro-reflector inside the refractor which re-directs the house side emitter output towards the street side and functions as a house side shielding element. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce Type II, III, and Type IV site/area distributions as well as other specialty asymmetric distributions. Panels are field replaceable and field rotatable in 90° increments.

#### LED DRIVER(S)

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized and mounted directly against the Electrical Housing to facilitate thermal transfer, held down by universal clamps to facilitate easy removal. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50,60Hz. (0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with 20KV surge protector for field accessible installation.)

#### LED EMITTERS

High output LED's are utilized with drive currents ranging from 350mA to 1050mA. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

#### AMBER LED's

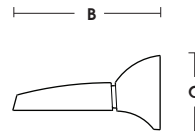
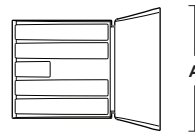
**PCA** (Phosphor Converted Amber) LED's utilize phosphors to create color output similar to LPS lamps and have a slight output in the blue spectral bandwidth. **TRA** (True Amber) LED's utilize material that emits light in the amber spectral bandwidth only without the use of phosphors.

#### FINISH

Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step media blast and iron phosphate pretreatment for protection and paint adhesion. 400°F bake for maximum hardness and durability.

PROJECT NAME: \_\_\_\_\_

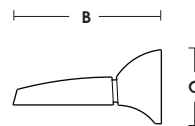
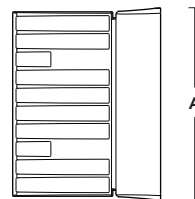
PROJECT TYPE: \_\_\_\_\_



FIXTURE	A	B	C
RZRW1	8.75" (22mm)	12" (305mm)	6" (152mm)
RZRW1-EM	11" (279mm)	14" (356mm)	6.5" (165mm)

### RZR-WM1

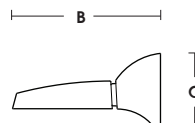
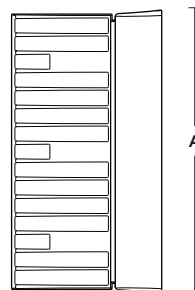
PATENT PENDING



FIXTURE	A	B	C
RZRW2	16" (406mm)	12" (305mm)	6" (152mm)
RZRW2-EM	16" (406mm)	14" (356mm)	6.5" (165mm)

### RZR-WM2

PATENT PENDING



FIXTURE	A	B	C
RZRW3	23" (584mm)	12" (305mm)	6" (152mm)
RZRW3-EM	23" (584mm)	14" (356mm)	6.5" (165mm)

### RZR-WM3

PATENT PENDING

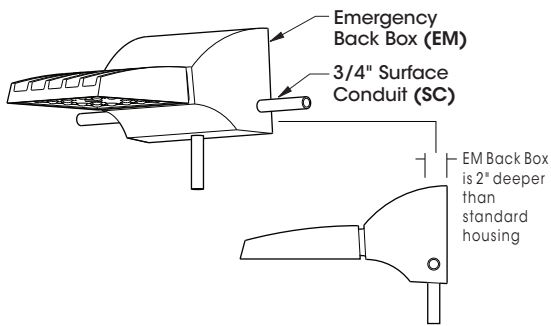


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# RAZAR WALLMOUNT SERIES-LED

## S P E C I F I C A T I O N S

### EMERGENCY OPTION



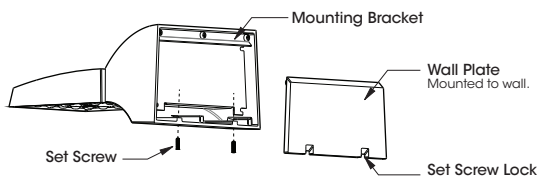
THE EMERGENCY OPTION BACK BOX EXTENDS 2" BEYOND THE STANDARD HOUSING AND CONTAINS THE EMERGENCY COMPONENTS (EC) INCLUDING BATTERIES OR CAN BE USED FOR SURFACE CONDUIT (SC) APPLICATIONS. THERE IS TO BE AN SC1, SC2, AND SC3 OPTION FOR THE DIFFERING HOUSING SIZES. SC SHIPS WITH THREADED CONDUIT PLUGS.

THE EM-LED SYSTEM PROVIDES POWER TO ALL LEDS IN THE ARRAY (20, 40, or 60) TO MEET THE FOLLOWING LIGHT LEVELS FOR A MINIMUM OF 90 MINUTES -

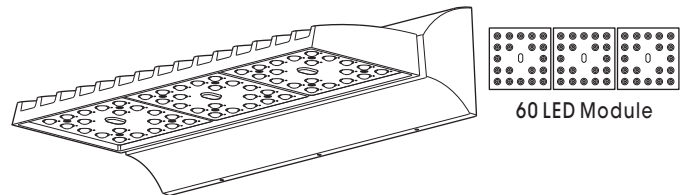
- WM1 = 45% @ 350MA
- WM2 = 36% @ 350MA
- WM3 = 24% @ 350MA

\*MULTIPLY THE % ABOVE BY THE LUMEN OUTPUT @ 350MA

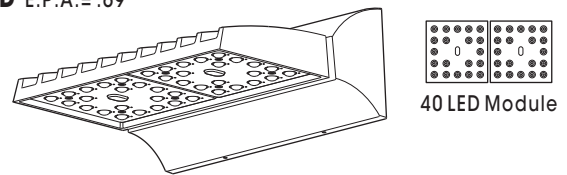
### WALL MOUNTING



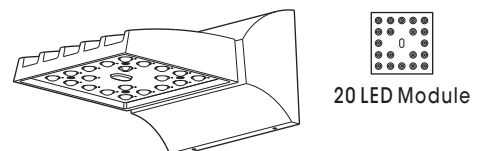
### PLED® MODULES



**RZR-WM3-LED** E.P.A.= .69  
Available in:  
60 LED Module



**RZR-WM2-LED** E.P.A.= .47  
Available in:  
40 LED Module



**RZR-WM1-LED** E.P.A.= .33  
Available in:  
20 LED Module

### MAX INPUT WATTAGE

# OF LED's	350mA	525mA	700mA	1050mA
60	68W	99W	131W	198W
40	45W	66W	87W	134W
20	23W	33W	44W	66W

Spec/Order Example: RZR-WM2/PLED-IV/40LED-700mA/CW/277/RAL-8019-S/SF

## S P E C / O R D E R I N G I N F O R M A T I O N

MODEL	OPTICS	LED MODE			VOLTAGE	FINISH	OPTIONS
MODEL	OPTICS	LED MODE			VOLTAGE	FINISH	OPTIONS
<input type="checkbox"/> RZR-WM1	<b>PLED® DISTRIBUTION TYPE</b> <input type="checkbox"/> TYPE II PLED-II ..... <input type="checkbox"/> TYPE II FRONT ROW PLED-II-FR .....	<b>NO. LEDs</b> <b>RZR-WM1</b> <input type="checkbox"/> 20LED	<b>DRIVE CURRENT</b> <input type="checkbox"/> 350mA <input type="checkbox"/> 525mA <input type="checkbox"/> 700mA <sup>1</sup>	<b>COLOR TEMP - CCT</b> <input type="checkbox"/> NW (4000K)* *STANDARD <input type="checkbox"/> CW (5000K) <input type="checkbox"/> WW (3000K)	<input type="checkbox"/> 120 <input type="checkbox"/> 208 <input type="checkbox"/> 240 <input type="checkbox"/> 277 <input type="checkbox"/> 347 <input type="checkbox"/> 480	<b>STANDARD TEXTURED FINISH</b> <input type="checkbox"/> BLACK RAL-9005-T <input type="checkbox"/> WHITE RAL-9003-T <input type="checkbox"/> GREY RAL-7004-T <input type="checkbox"/> DARK BRONZE RAL-8019-T <input type="checkbox"/> GREEN RAL-6005-T FOR SMOOTH FINISH REPLACE SUFFIX "T" WITH SUFFIX "S" (EXAMPLE: RAL-9005-S)	<input type="checkbox"/> HIGH-LOW DIMMING FOR EXTERNAL CONTROL... <b>HLSW</b> <input type="checkbox"/> HOUSE SIDE SHIELDING ..... <b>HS-PLED</b> <input type="checkbox"/> PHOTO CELL + VOLTAGE (EXAMPLE: PC120V) ... <b>PC+V</b> <input type="checkbox"/> SINGLE FUSE (120V & 277V) ..... <b>SF</b> <input type="checkbox"/> DOUBLE FUSE (208V & 240V) ..... <b>DF</b> <input type="checkbox"/> BLUE-TOOTH PROGRAMMABLE PHOTO/MOTION SENSOR (FACTORY - MOTION 50/100; PHOTO 75FC) ..... <b>MS-F311</b> <input type="checkbox"/> EMERGENCY BACKUP 1... <b>EM1</b> <input type="checkbox"/> EMERGENCY BACKUP 1 (HOUSING ONLY) ..... <b>EMH1</b> <input type="checkbox"/> EMERGENCY BACKUP 2... <b>EM2</b> <input type="checkbox"/> EMERGENCY BACKUP 3... <b>EM3</b> <input type="checkbox"/> SURFACE CONDUIT 1... <b>SC1</b> <input type="checkbox"/> SURFACE CONDUIT 2... <b>SC2</b> <input type="checkbox"/> SURFACE CONDUIT 3... <b>SC3</b>
<input type="checkbox"/> RZR-WM2	<input type="checkbox"/> TYPE III PLED-III ..... <input type="checkbox"/> TYPE III WIDE PLED-III-W .....	<b>RZR-WM2</b> <input type="checkbox"/> 40LED	<input type="checkbox"/> 1050mA <sup>1</sup>	CONSULT FACTORY FOR OTHER LED COLORS  <b>AMBER<sup>2</sup></b> <input type="checkbox"/> PHOSPHOR CONVERTED AMBER <b>PCA</b> <input type="checkbox"/> TRUE AMBER <sup>3</sup> <b>TRA</b>			
<input type="checkbox"/> RZR-WM3	<input type="checkbox"/> TYPE IV PLED-IV ..... <input type="checkbox"/> TYPE IV-FT PLED-IV-FT .....	<b>RZR-WM3</b> <input type="checkbox"/> 60LED					

NOTES:  
 1 - 700mA and 1050mA NOT FOR USE WITH TRA LED'S  
 2 - NARROW BAND AMBERS HAVE NO DEFINABLE CCT EQUIVALENT  
 3 - AVAILABLE IN 350mA & 525mA DRIVE CURRENTS ONLY

# RAZAR WALLMOUNT-LED

## LAMP/ELECTRICAL GUIDE

LED COUNT	SOURCE TYPE	SOURCE	INITIAL LUMENS - 4000K	INITIAL LUMENS - 3000K	INITIAL LUMENS - 5000K	L70 GREATER THAN (HR)-TM21	STARTING TEMP.	SYSTEM WATTS	VOLTS	MAX INPUT AMPS
20	LED	20 PLED® Optical Module - 350mA	2,706 - 2,993	2,571 - 2,843	2,841 - 3,143	60,000+	-20°F	22	120 277 347	0.19 0.08 0.07
20	LED	20 PLED® Optical Module - 525mA	3,897 - 4,310	3,702 - 4,095	4,092 - 4,526	60,000+	-20°F	33	120 277 347	0.28 0.12 0.10
20	LED	20 PLED® Optical Module - 700mA	4,942 - 5,466	4,695 - 5,193	5,189 - 5,739	60,000+	-20°F	44	120 277 347	0.37 0.16 0.13
20	LED	20 PLED® Optical Module - 1050mA	6,564 - 7,260	6,236 - 6,897	6,892 - 7,623	60,000+	-20°F	65	120 277 347	0.55 0.24 0.19
40	LED	40 PLED® Optical Module - 350mA	5,585 - 6,178	5,206 - 5,869	5,864 - 6,487	60,000+	-20°F	43	120 277 347	0.36 0.16 0.13
40	LED	40 PLED® Optical Module - 525mA	8,059 - 8,914	7,656 - 8,468	8,462 - 9,360	60,000+	-20°F	65	120 277 347	0.55 0.24 0.19
40	LED	40 PLED® Optical Module - 700mA	10,240 - 11,327	9,728 - 10,761	10,752 - 11,893	60,000+	-20°F	87	120 277 347	0.73 0.32 0.26
40	LED	40 PLED® Optical Module - 1050mA	13,642 - 15,089	12,690 - 14,335	14,324 - 15,843	60,000+	-20°F	129	120 277 347	1.08 0.47 0.38
60	LED	60 PLED® Optical Module - 350mA	8,118 - 8,979	7,712 - 8,530	8,524 - 9,428	60,000+	-20°F	65	120 277 347	0.55 0.24 0.19
60	LED	60 PLED® Optical Module - 525mA	11,690 - 12,930	11,106 - 12,284	12,275 - 13,577	60,000+	-20°F	98	120 277 347	0.82 0.36 0.29
60	LED	60 PLED® Optical Module - 700mA	14,825 - 16,398	14,084 - 15,578	15,566 - 17,218	60,000+	-20°F	131	120 277 347	1.09 0.47 0.38
60	LED	60 PLED® Optical Module - 1050mA	19,691 - 21,780	18,706 - 20,691	20,676 - 22,869	60,000+	-20°F	193	120 277 347	1.61 0.70 0.56

### NOTES:

1. Max Input Amps is the highest of starting, operating, or open circuit currents
2. Lumen values for LED Modules vary according to the distribution type
3. System Watts includes the source watts and all driver components.
4. Fuse value should be sufficient to protect all wiring components.
5. L70(10K) - TM-21 6x rule applied  
L70(10K) - Calculated = 244,000 @ 700mA  
= 102,000 @ 1050mA

**WARNING:** All fixtures must be installed in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.