

# IVR2-SPI

1.9" Solid State Illuminated Rail

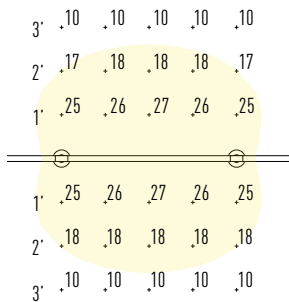
2" Slim Post Integral Power Supply



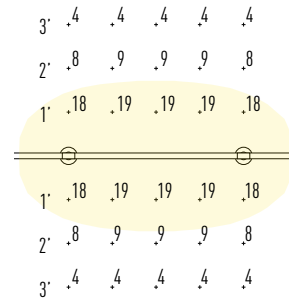
U.S. Patent # D615,217S issued  
Other patents pending

## PHOTOMETRIC DATA

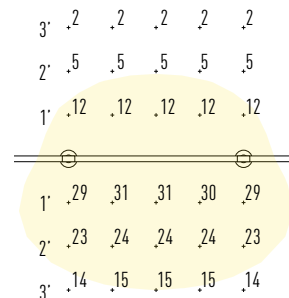
- LED: 4.6W High Output
- CCT: 4000K
- Illuminated Rail Length: 41"
- Rail Height: 36"
- Post Spacing: 48"



60° Flood



20° Narrow



30° Asymmetrical

## CONSTRUCTION

**Internal Rail Construction:** Heavy duty extruded 6061-T6 Aluminum Alloy.

**External Rail Jacket:** Available in 304 or 316 stainless steel. Standard aluminum finishes include silver, white, black, or bronze powder-coat. Consult factory for custom powder coat finishes (AAMA 2604).

## LED LIGHT SOURCE

Closely packed array of small LEDs allow for smooth seamless illumination with immediate overlap to avoid pixilation and provide a continuous flow of light. Color temperatures options include 2700K, 3000K, 3500K or 4000K.

- 85 CRI
- 50,000 hours of average rated life at 70% output
- LED components are easily accessible to allow for easy maintenance
- Maximum run length per driver: 8' (HO)
- Maximum run length per driver: 4' (SHO)

## LED LIGHT ENGINE (PER FOOT):

### High Output

- System Power Consumption: 4.6W
- Cool White 4000K: 241 lm
- Neutral White 3500K: 207 lm
- Warm White 3000K: 202 lm
- Warm White 2700K: 197 lm

### Super High Output

(Integral driver required on each post)

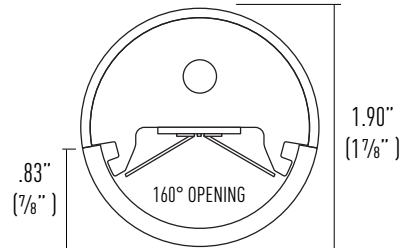
- System Power Consumption: 9.2W
- Cool White 4000K: 483 lm
- Neutral White 3500K: 415 lm
- Warm White 3000K: 404 lm
- Warm White 2700K: 395 lm

## LIGHT DISTRIBUTION & OUTPUT

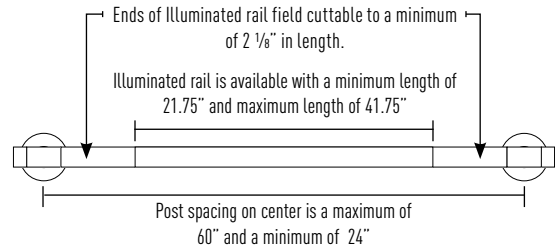
The V-Rail optical system includes a unique reflector that allows you to put the light where it is needed.

Factory preset distributions include 60° symmetric, 20° symmetric and 30° asymmetrical.

JOB NAME		CATALOG NUMBER	
NOTES		TYPE	



Exact decimal and common fraction is shown



## OPTICAL LENS SYSTEM

High-impact acrylic lens is sealed with silicon. Lens is secured with (2) countersunk flush screws, (1) at each end. Vandal resistant "TORX" is also available. Consult factory.

## REFLECTOR SYSTEM

Internal reflector system is constructed of an innovative material that has 99% reflectance properties. Reflector allows up to 140° total adjustment. Right to left side reflector panels are independently adjustable from -30° to 70°. When the outer reflector panel is adjusted toward a stairway, ramp or walkway, the reflector panel will act as a glare shield from distant viewing angles below an elevated platform.

## MOUNTING / INSTALLATION

Each rail support is secured to the swivel mount on specified mounting system. Post or embedded mount is available. See mounting submittal sheets for detailed information.

## EMERGENCY

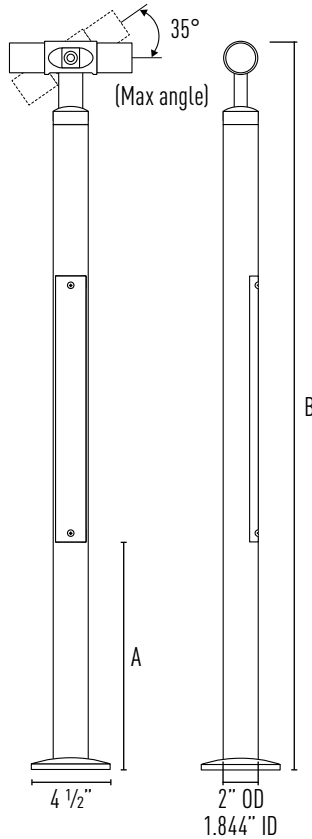
Remote emergency inverter available. Can be remote up to 1000 ft. See IB-IIS specification sheet.

## LISTINGS

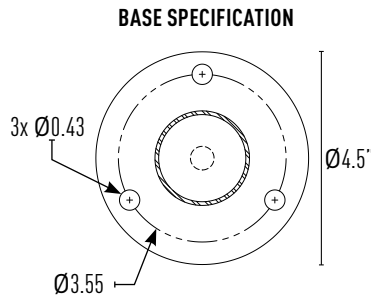
- 5-Year Intense LED Limited Warranty (LED & Power Supply Only)
- UL Wet Location Listed. File #E333075
- IDA approved
- ADA compliant

# IVR2-SPI

## 2" Slim Post Mount Assembly



DIMENSIONS		
	Guardrail	Handrail
A	17"	14"
B	42"	36"



### CONSTRUCTION

Post mount assembly is available in heavy duty steel alloy or No. 4 polished 304 stainless steel. Standard aluminum finishes include silver, white, black, or bronze powder-coat. Consult factory for custom powder coat finishes (AAMA 2604).

### MAINTENANCE

Posts include a driver access door where power supply components are easily accessible. Tamper proof hardware and special tools are standard and included.

### POWER SUPPLY

Lutron Hi-Lume® A-Series Driver is a high-performance LED driver that provides smooth, continuous 1% dimming. See driver specifications.

- Dimming Range: 100% to 1%
- Operating Voltage: 120-277V @ 50/60Hz
- Rated lifetime of 50,000 hrs. @  $t_c = 65^\circ\text{C}$
- Power Factor: > 0.9 at 40W
- Standby Power Consumption: < 1.0W
- Total Harmonic Distortion: < 20% at 40W
- Inrush Current: < 2A

### MOUNTING / INSTALLATION

Post are to be spaced at a maximum of 60" and minimum of 24" on centers. Post mount is to be surface mounted to concrete utilizing 3/8" anchor bolts (supplied by others). Anchoring means must be determined by local codes. Not to be supplied or engineered by Intense Lighting. See post mount installation chart for more information. Anchorage template available by request.

### OPERATION

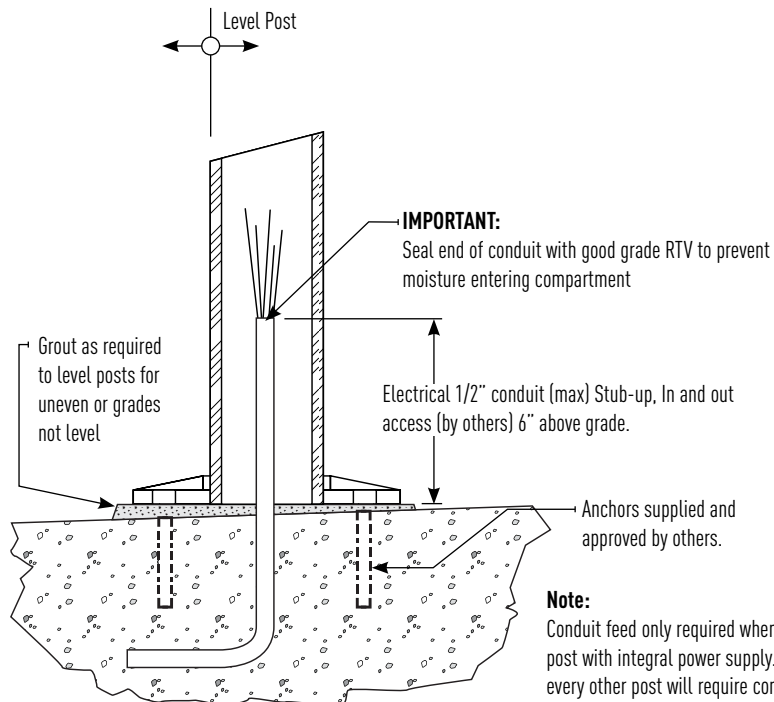
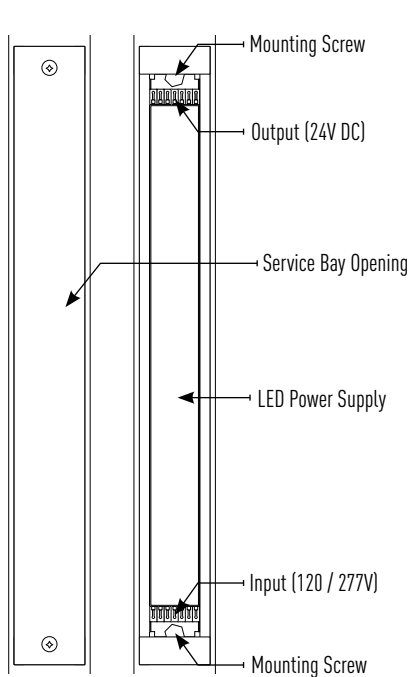
Post with integral power supply will power up-to 83 1/2" of illuminated rail. High output LED only. Super high output not available.

### FITTINGS

Consult factory for standard fittings and epoxy weld adhesive specification.

## Post Specification

## Post Mount Installation Detail



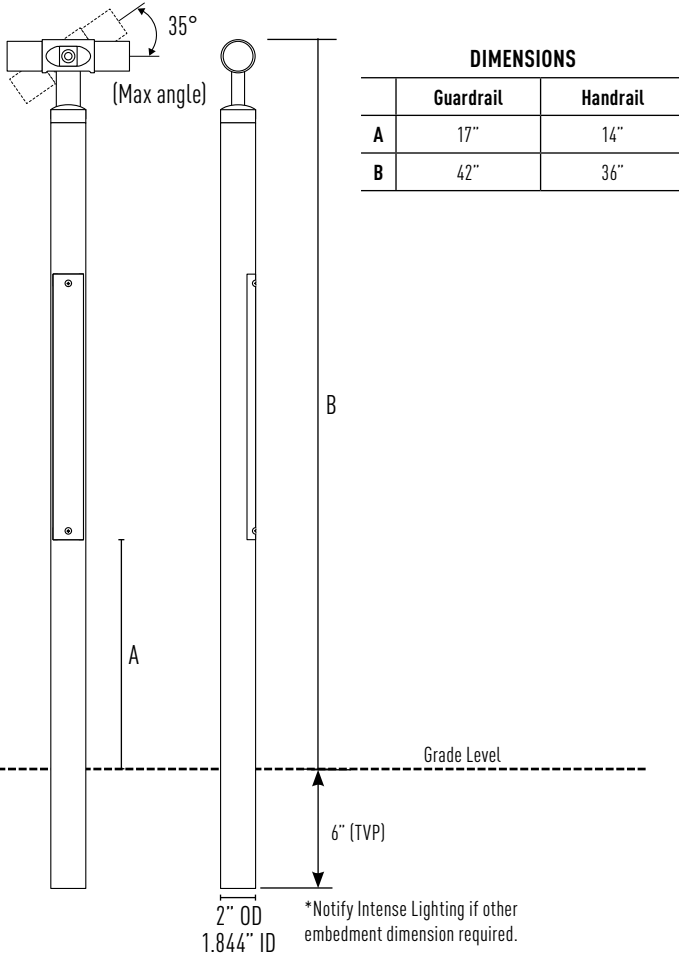
### Note:

Conduit feed only required when installing post with integral power supply. Typically every other post will require conduit feed.

# IVR2-SPI

## 2" Slim Post Embedded Assembly

JOB NAME		CATALOG NUMBER	
NOTES		TYPE	



### CONSTRUCTION

Embedded mount assembly is available in heavy duty steel alloy or No. 4 polished 304 stainless steel. Standard aluminum finishes include silver, white, black, or bronze powder-coat. Consult factory for custom powdercoat finishes (AAMA 2604).

### MAINTENANCE

Posts include a driver access door where power supply components are easily accessible. Tamper proof hardware and special tools are standard and included.

### POWER SUPPLY

Lutron Hi-Lume® A-Series Driver is a high-performance LED driver that provides smooth, continuous 1% dimming. See driver specifications.

- Dimming Range: 100% to 1%
- Operating Voltage: 120-277V @ 50/60Hz
- Rated lifetime of 50,000 hrs. @  $t_c = 65^\circ\text{C}$
- Power Factor: > 0.9 at 40W
- Standby Power Consumption: < 1.0W
- Total Harmonic Distortion: < 20% at 40W
- Inrush Current: < 2A

### MOUNTING / INSTALLATION

Post are to be spaced at a maximum of 60" and minimum of 24" on centers. Embedded mount post are set into place using Rockite® or Kwixset® anchor cement. A minimum of 6" post must be embedded into concrete to structurally secure post. Anchoring means must be determined by local codes. Not to be supplied or engineered by Intense Lighting. See Embedded Mount Installation chart for more information.

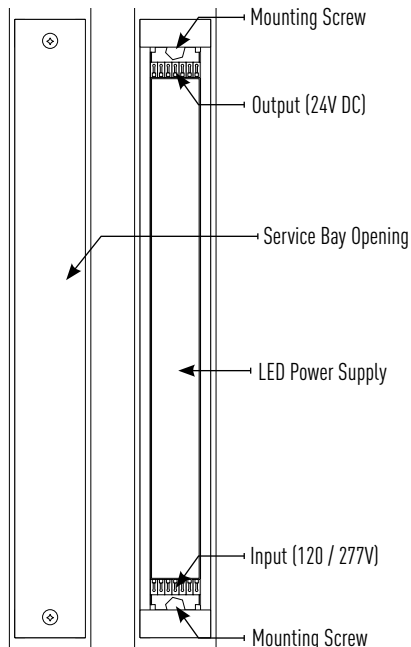
### OPERATION

Post with integral power supply will power up-to 83 1/2" of illuminated rail. High output LED only. Super high output not available.

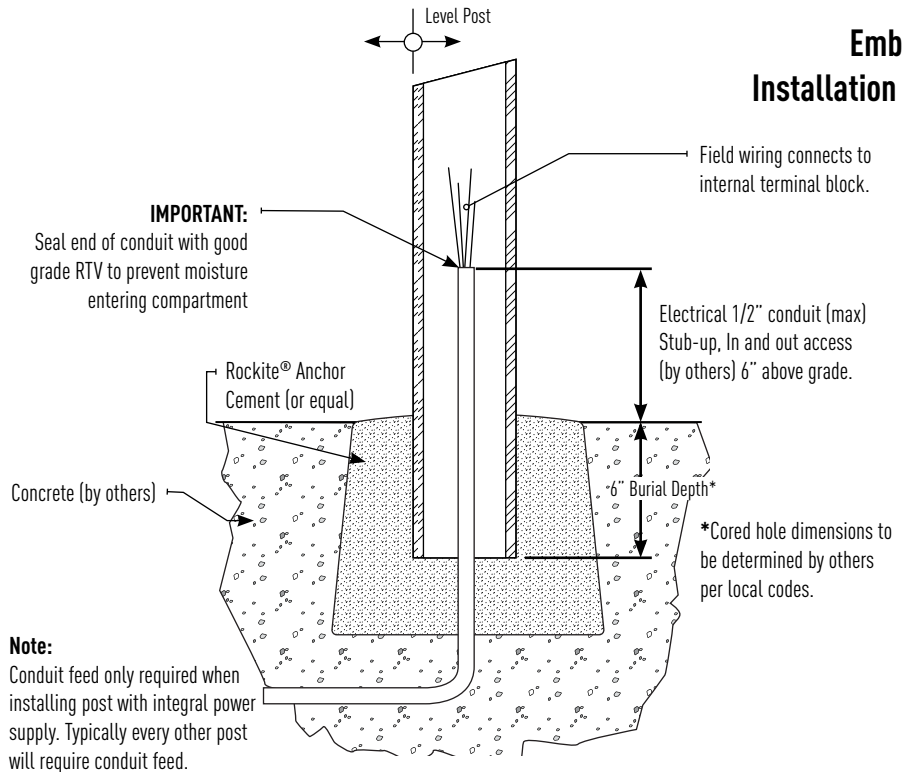
### FITTINGS

Consult factory for standard fittings and epoxy weld adhesive specification.

## Post Specification



## Embedded Installation Detail



# Lutron Hi-lume® A-Series Driver

JOB NAME		CATALOG NUMBER	
NOTES		TYPE	



Width: 1.18" Height: 1.00" Length: 14.25"

Maximum Driver-to-LED Light Engine Wire Length	
Wire Gauge	Maximum Lead Length
18	15 ft (4.5 m)
16	25 ft (7.5 m)
14	40 ft (12 m)
12	60 ft (18 m)

## DESCRIPTION

Hi-lume® A-Series Driver is a high-performance LED driver that provides smooth, continuous 1% dimming.

## FEATURES

- Continuous, flicker free dimming from 100% to 1%
- Compatible with Energi Savr Node™ with EcoSystem® unit, QS control unit, PowPak® dimming allowing for integration into a planned or existing EcoSystem® lighting control solution.
- Standard 3-wire line-voltage phase-control technology for consistent dimming performance and compatibility with all Lutron® 3-wire fluorescent controls.
- Rated lifetime of 50,000 hours @  $t_c = 65^\circ\text{C}$
- UL recognized for United States and Canada
- RoHS Compliant
- Constant Voltage Driver with Pulse Width Modulation (PWM) dimming

## PERFORMANCE

- Dimming Range: 100% to 1%
- Operating Voltage: 120-277V ~ at 50/60Hz
- Rated lifetime of 50,000 hours @  $t_c = 65^\circ\text{C}$
- Patented thermal foldback protection
- LEDs turn on to any dimmed level without going to full brightness
- Nonvolatile memory restores all driver settings after power failure
- Power Factor: > 0.9 at 40W
- Standby Power Consumption: < 1.0W
- Total Harmonic Distortion (THD): < 20% at 40W
- Inrush Current: < 2A
- Inrush Current Limiting Circuitry: eliminates circuit breaker tripping, switch arcing and relay failure
- Open circuit protected
- Short circuit protected
- Turn-on time: < 1 second
- PWM Dimming Frequency: 550Hz

## ENVIRONMENTAL

- Sound Rating: Class A
- Relative Humidity: Maximum 90% non-condensing
- Minimum operating ambient temperature  $t_a = 32^\circ\text{F}$  ( $0^\circ\text{C}$ )

## STANDARDS

- Meets ANSI C62.41 category A surge protection standards up to and including 4 kV
- FCC Part 15 compliant for commercial applications at 120V ~ or 277V ~
- UL 8750 recognized

## DRIVER WIRING AND MOUNTING

- Terminal blocks on the driver accept one solid wire per terminal from 18 to 16 AWG (0.75 to 1.5 mm<sup>2</sup>)
- Fixture must be grounded in accordance with local and national electrical codes

## LISTINGS

- UL Recognized for United States and Canada
- RoHS Compliant
- FCC Compliant

# IVR2-SPI

## 1.9" Solid State Illuminated Rail Specification Guide

JOB NAME		CATALOG NUMBER	
NOTES		TYPE	

### V-Rail Part Number (Example: IVR2-SPI-ST-P36-H027-60S-EM)

(Specify Quantity By Foot)

A: Family	B: Finish	C: Mounting/Height	D: LED Output	E: CCT	F: Light Distribution	G: Electrical	H: Options
<b>IVR2-SPI</b>	<b>-ST</b> (304 Stainless Steel) <sup>1</sup> <b>-W</b> (White Aluminum) <b>-B</b> (Black Aluminum) <b>-BR</b> (Bronze Aluminum) <b>-SV</b> (Silver Aluminum) <b>-C</b> (Custom) <sup>2</sup>	<b>-P36</b> (36" Post Mount) <b>-P42</b> (42" Post Mount) <b>-E36</b> (36" Embedded Mount) <b>-E42</b> (42" Embedded Mount)	<b>-HO</b> (High Output) <b>-SHO</b> (Super High Output) <sup>3</sup>	<b>27</b> (2700K) <b>30</b> (3000K) <b>35</b> (3500K) <b>40</b> (4000K)	<b>-60S</b> (60° Symmetric) <b>-20S</b> (20° Symmetric) <b>-30AS</b> (30° Asymmetric)	blank Lutron Hi-Lume® A-Series 120/277V Driver	<b>-I</b> (Infill) <sup>2</sup>

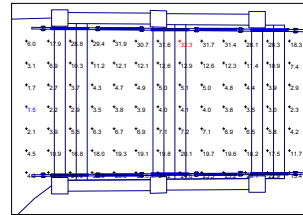
#### Notes:

- 316 Stainless steel available by special order
- Special order, consult factory
- Integral driver required on each post

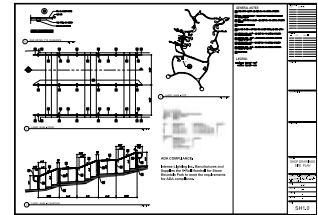
## Specification and Delivery Process

Architectural drawings or detailed elevation drawings are required for a V-Rail quotation. A photometric layout will be provided if requested. Once an order is placed, Intense Lighting will provide detailed shop drawings for approval.

V-Rail will be delivered to the job site ready for installation. A detailed assembly drawing will be provided along with dimensions and locations for remote power supplies. All products included will be labeled clearly to match the assembly drawing. Certain tools and equipment will be required for the assembly of V-Rail. A detailed list of tools can be found in the V-Rail Installation Guide. Installation guide available upon request, consult factory.



Photometric Layout



Shop Drawing / Assembly Guide



Completed Project

#### Notes: