SOLID STATE AREA LIGHTING

SIGMA SERIES-PLED

PROJECT NAME:

FIXTURE TYPE:

FEATURES

Luminaire
Heavy cast low copper aluminum assembly (A356 alloy, <0.2% copper). Minimum wall thickness is .188". Traditional styling of the housing provided with cast aluminum housing top hinges for easy access.

PLED™ Optics
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. In asymmetric distributions, a micro-reflector inside the refractor 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 standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments.

LED Emitters
High output LED's are utilized with drive currents ranging from 350mA to 875mA. 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.

LED Driver
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. 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 installation.)

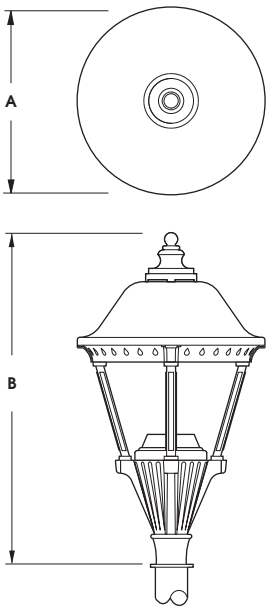
Amber LED's
PCA (Phosphor Converted Amber) LED's utilize phosphors to create color output similar to LPS lamps and have a slight output in the blue spectral bandwidth. TRA (True Amber) LED's utilize material that emits light in the amber spectral bandwidth only without the use of phosphors.

Finish
Polyester powder coat incorporates four step iron phosphate process to pretreat metal surface for maximum adhesion. Top coat is baked at 400°F for maximum hardness and exterior durability.

SIG

SIG23 shown

Patent pending



Fitter supplied to fit over 2 7/8" X 3" (73mm X 76mm) tennon.

Fixture	A	B
SIG23	23.5" 597mm	41.75" 1060mm
SIG18	18.5" 470mm	32" 813mm

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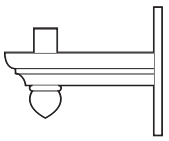
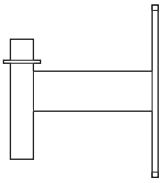
SUN VALLEY LIGHTING

Sigma SERIES - PLED

SPECIFICATIONS

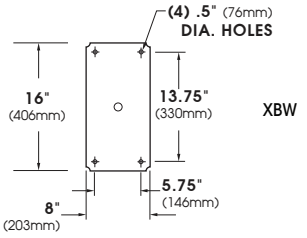
Wall Mount Options

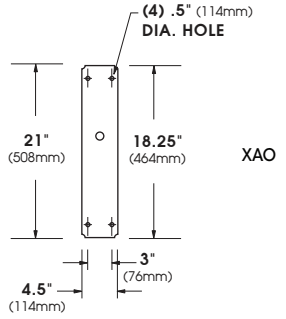




Extruded aluminum arm and cast aluminum wall bracket assembly provided with built in gasketed wire access for fixture/supply wire connection. Mounting hardware by others.

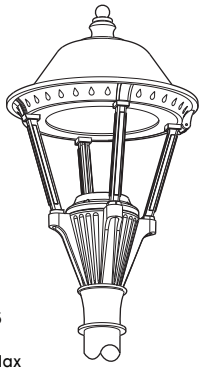
Wall Plate



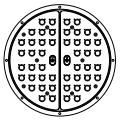


Mounting hardware by others.

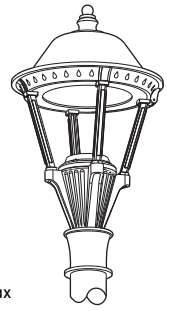
PLED™ Modules



SIG23 E.P.A.= 1.65
Available in:
48 LED Module Max



48 LED Module



SIG18 E.P.A.= 1.05
Available in:
36LED Module Max

36 LED Module

ORDERING INFORMATION

Spec/Order Example: SIG18/PLED-II/48LED-350mA/NW/347/WM-XAO/RAL-7005-S

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options
Luminaire	**Optics**	**LED**	**Voltage**	**Mounting**	**Finish**	**Options**
☐ **SIG23-PLED** ☐ **SIG18-PLED**	**PLED™** Distribution Type ☐ Type II **PLED-II** ☐ Type II Front Row **PLED-II-FR** ☐ Type III Med. **PLED-III-M** ☐ Type III Wide **PLED-III-W** ☐ Type IV **PLED-IV** ☐ Type IV **PLED-IV-FT** ☐ Type V Narrow **PLED-VSQ-N** ☐ Type V Med. **PLED-V-SQ-M** ☐ Type V Wide **PLED-V-SQ-W**	# of LEDs **SIG23** ☐ **48LED**[1] ☐ **36LED** ☐ **20LED** **SIG18** ☐ **36LED**[1] ☐ **20LED** Drive Current ☐ **1050mA**[2] ☐ **875mA**[2] ☐ **700mA**[2] ☐ **525mA** ☐ **350mA** Color Temp - CCT ☐ **NW (4000K)*** *Standard ☐ **CW (5000K)** ☐ **WW (3000K)** Other LED Colors Available Consult Factory Amber[3] ☐ Phosphor Converted Amber **PCA**[4] ☐ True Amber **TRA**[5] **NOTES:** 1 - 875mA maximum 2 - 700mA and 875mA not for use with TRA LED's 3 - Narrow band Ambers have no definable CCT equivalent 4 - 700mA maximum 5 - Available in 350mA & 525mA drive currents only	☐ **120** ☐ **208** ☐ **240** ☐ **277** ☐ **347** ☐ **480**	Post Top ☐ **FM** Expansion Fitter Flush Mount ☐ **PT** Pole Tenon Arm Mount ☐ **1** ☐ **2-180** ☐ **2-90** ☐ **3-90** ☐ **3-120** ☐ **4-90** Wallmount ☐ **XBW-WM** ☐ **XAO-WM** See USALTG.COM for additional arm styles	Standard Textured Finish ☐ Black **RAL-9005-T** ☐ White **RAL-9003-T** ☐ Grey **RAL-7004-T** ☐ Dark Bronze **RAL-8019-T** ☐ Green **RAL-6005-T** For smooth finish replace suffix "T" with suffix "S" (Example: RAL-9500-S) Consult factor for custom colors	☐ Internal House Side Shield inc. LED Count (Example: HS-PLED/48) **HS-PLED** ☐ Twist Lock Receptable Only **TPR** ☐ 7-Pin Twist Lock Receptable Only **TPR7** ☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) **HLSW** ☐ Photo Cell + Voltage (Example: PC120V) **PC+V** ☐ Single Fuse (120V, 277V) **SF** ☐ Double Fuse (208V, 240V) **DF** ☐ Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) **MS-F211** ☐ Remote Motion Sensor Configurator **MS-FC10**

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SUN VALLEY LIGHTING

A Note on B-U-G Ratings for Open Frame Luminaires

U.S. Architectural/Sun Valley Lighting practices full disclosure in photometric testing/reporting. To this end we address the Uplight component of the B-U-G Rating System as it applies to Open Frame luminaires.

All U.S. Architectural/Sun Valley VLED and PLED Optical Systems have a U0 B-U-G rating, however the luminaire model in which they are used impacts the overall Uplight rating. In no unit does the Uplight component exceed .3% and this is due to the light bouncing off the arm structure of post top mounted luminaires. This is so in ANY manufacturer's product, however the test protocol allows a manufacturer/test lab to subjectively ignore this "bounce" illumination and report the Uplight as U0. We refer to this as our Applied B-U-G Rating. In addition, the U0 rating in combination with the use of 3000K CCT LED's meets the intent of Dark Skies applications.

For questions, please contact Applications Engineering at Lucasp@usaltg.com or call 661-233-2051.

Excerpt from article written by a software developer of a popular Photometric Applications program regarding B-U-G ratings:

"...If any luminaire has a U0 rating, it can only be because the photometric laboratory technician made a decision to either not measure the upper hemisphere or simply ignore the measurements. Somewhat surprisingly, this is explicitly permitted by TM-15-11, which reads in Appendix A:

> To determine BUG ratings, the photometric test data must include data in the upper hemisphere unless no light is emitted above 90 degrees vertical (for example if the luminaire has a flat lens and opaque sides) per the IES Testing Procedures Committee recommendations.

Simply put, U0 ratings are not based on the measured photometric data. Rather, they are achieved by fiat.

The problem is that it is possible for the same luminaire to be measured by two independent photometric laboratories and as a result be assigned two completely different BUG ratings. Given that there are no IESNA or CIE requirements to subtract stray light from the photometric measurements, the same luminaire could be assigned an uplight rating of U0, U1, or even U2, and a glare rating of G0 or G1."

LED Count	Applied B-U-G Rating	Source	Initial Lumens - 4000K CCT	Initial Lumens - 3000K CCT	Initial Lumens - 5000K CCT	L70 greater than (HR)	Starting Temp.	System Watts	Volts	Max Input Amps
20	III B1-U0-G1 VSQ B2-U0-G0	**20 PLED® Optical Module – 350mA**	2023 - 2376	1922 - 2258	2124 - 2494	90,000+	-40°F	22	120 277 347	.18 .08 .06
20	III B1-U0-G1 VSQ B2-U0-G1	**20 PLED® Optical Module – 525mA**	2871 - 3373	2728 - 3204	3014 - A3541	90,000+	-40°F	33	120 277 347	.28 .12 .10
20	III B1-U0-G1 VSQ B3-U0-G1	**20 PLED® Optical Module – 700mA**	3602 - 4231	3422 - 4020	3781 - 4442	90,000+	-40°F	44	120 277 347	.37 .16 .13
20	III B1-U0-G1 VSQ B3-U0-G1	**20 PLED® Optical Module – 875mA**	4328 - 5084	4112 - 4830	4544 - 5338	90,000+	-40°F	55	120 277 347	.46 .20 .16
20	III B1-U0-G2 VSQ B3-U0-G1	**20 PLED® Optical Module – 1050mA**	5035 - 5915	4784 - 5619	5286 - 6210	90,000+	-40°F	66	120 277 347	.55 .24 .19
36	III B1-U0-G1 VSQ B3-U0-G1	**36 PLED® Optical Module – 350mA**	3642 - 4278	3641 - 4065	3824 - 4491	90,000+	-40°F	39.6	120 277 347	.33 .14 .11
36	III B2-U0-G2 VSQ B3-U0-G1	**36 PLED® Optical Module – 525mA**	5172 - 6075	4914 - 5772	5430 - 6377	90,000+	-40°F	59.4	120 277 347	.50 .21 .17
36	III B2-U0-G2 VSQ B3-U0-G2	**36 PLED® Optical Module – 700mA**	6485 - 7616	6161 - 7236	6808 - 7995	90,000+	-40°F	79.2	120 277 347	.66 .29 .23
36	III B2-U0-G2 VSQ B3-U0-G2	**36 PLED® Optical Module – 875mA**	7794 - 9154	7405 - 8697	8182 - 9610	90,000+	-40°F	99	120 277 347	.83 .36 .29
36	III B2-U0-G2 VSQ B4-U0-G2	**36 PLED® Optical Module – 1050mA**	9069 - 10651	8616 - 10119	9521 - 11183	90,000+	-40°F	118.8	120 277 347	.99 .43 .34

Sigma SERIES - PLED

LED/ Electrical Guide

LED Count	Applied B-U-G Rating	Source	Initial Lumens - 4000K CCT	Initial Lumens - 3000K CCT	Initial Lumens - 5000K CCT	L70 greater than (HR)	Starting Temp.	System Watts	Volts	Max Input Amps
48	III B1-U0-G2 VSQ B3-U0-G1	48 PLED® Optical Module – 350mA	4857 - 5704	4614 - 5419	5099 - 5990	90,000+	-40°F	52.8	120 277 347	.44 .19 .15
48	III B2-U0-G2 VSQ B3-U0-G2	48 PLED® Optical Module – 525mA	6896 - 8100	6552 - 7696	7239 - 8504	90,000+	-40°F	79.2	120 277 347	.66 .29 .23
48	III B2-U0-G2 VSQ B3-U0-G2	48 PLED® Optical Module – 700mA	8645 - 10153	8214 - 9647	9075 - 10660	90,000+	-40°F	105.6	120 277 347	.88 .38 .30
48	III B2-U0-G2 VSQ B4-U0-G2	48 PLED® Optical Module – 875mA	10393 - 12207	9874 - 11597	10911 - 12816	90,000+	-40°F	132	120 277 347	1.10 .48 .38
Phosphor Converted Amber LED										
20	III B0-U0-G0 VSQ B1-U0-G0	20 PLED® Optical Module – 350mA	1054 - 1238			51,000+	-40°F	24.6	120 277 347	.21 .09 .07
20	III B1-U0-G1 VSQ B1-U0-G0	20 PLED® Optical Module – 525mA	1495 - 1756			51,000+	-40°F	37	120 277 347	.31 .13 .11
20	III B1-U0-G1 VSQ B2-U0-G2	20 PLED® Optical Module – 700mA	1873 - 2200			51,000+	-40°F	49.3	120 277 347	.41 .18 .14
36	III B1-U0-G1 VSQ B2-U0-G0	36 PLED® Optical Module – 350mA	1895 - 2226			51,000+	-40°F	44.4	120 277 347	.37 .16 .13
36	III B1-U0-G1 VSQ B2-U0-G1	36 PLED® Optical Module – 525mA	2691 - 3160			51,000+	-40°F	66.5	120 277 347	.55 .24 .19
36	III B1-U0-G1 VSQ B2-U0-G1	36 PLED® Optical Module – 700mA	3372 - 3961			51,000+	-40°F	88.7	120 277 347	.74 .32 .26
48	III B1-U0-G1 VSQ B2-U0-G1	48 PLED® Optical Module – 350mA	2525 - 2966			51,000+	-40°F	59.1	120 277 347	.49 .21 .17
48	III B1-U0-G1 VSQ B3-U0-G1	48 PLED® Optical Module – 525mA	3587 - 4213			51,000+	-40°F	88.7	120 277 347	.74 .32 .26
48	III B1-U0-G1 VSQ B3-U0-G1	48 PLED® Optical Module – 700mA	4496 - 5281			51,000+	-40°F	118.3	120 277 347	.99 .43 .34
True Amber LED - 590nm										
20	III B0-U0-G0 VSQ B1-U0-G0	20 PLED® Optical Module – 350mA	606 - 712			66,500+	-40°F	17	120 277 347	.14 .06 .05
20	III B0-U0-G0 VSQ B1-U0-G0	20 PLED® Optical Module – 525mA	861 - 1011			66,500+	-40°F	25.4	120 277 347	.21 .09 .07
36	III B0-U0-G0 VSQ B1-U0-G0	36 PLED® Optical Module – 350mA	1094 - 1284			66,500+	-40°F	30.5	120 277 347	.25 .11 .09
36	III B1-U0-G1 VSQ B1-U0-G0	36 PLED® Optical Module – 525mA	1552 - 1823			66,500+	-40°F	45.7	120 277 347	.38 .16 .13
48	III B1-U0-G0 VSQ B1-U0-G0	48 PLED® Optical Module – 350mA	1457 - 1711			66,500+	-40°F	40.7	120 277 347	.34 .15 .12
48	III B1-U0-G1 VSQ B2-U0-G0	48 PLED® Optical Module – 525mA	2069 - 2431			66,500+	-40°F	61	120 277 347	.51 .22 .18

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. For electronic driver and LED component protection, use 10KV – 20KV surge suppressors.
5. L70(14K) – TM-21 6x rule applied.
6. Applied B-U-G Rating reflects adjustment for bounce illumination from the luminaire housing pre TM-15-11. Actual values are in the IES file.

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.