

2 SERIES LED

WALLWASH

Our smallest aperture family of pin-hole fixtures offers high-output illumination for high-drama design statements in discerning residential, retail, and hospitality environments.

PROJECT NAME:	TYPE:
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ORDERING INFORMATION

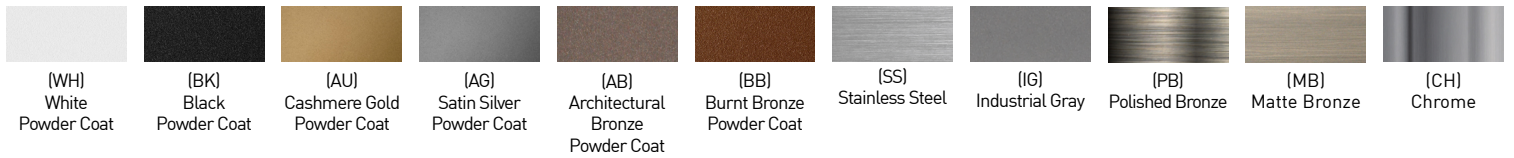


Quick Ship Product. All rough in components ship within 10 days up to quantities of 100.



JA8-2019 INDICATED BY SHADING

TRIM	RATING	FLANGE FINISH	LUMEN PACKAGE	CCT	OPTIC	INSTALL TYPE	CEILING THICKNESS	POWER SUPPLY	EFFECTS DEVICE	FLANGE CONFIGURATION
									WL	
2RW Round Expanded 2SW Square Expanded	1 Dry/Damp 2 Wet* *(Lens sealed in place)	WH White BK Black AU Cashmere Gold AG Satin Silver PR Primer AB Arch Bronze BB Burnt Bronze SS Stainless Steel* *(Increased lead time) IG Industrial Gray PB Polished Bronze* *(Increased lead time) MB Matte Bronze* *(Increased lead time) CH Chrome* *(Increased lead time) CF Custom* *(Consult Factory)	<p>STATIC WHITE</p> <p>80CA12L 80+ CRI, 1200 Source Lumens (Delivered - 2RW 555, 2SW 480)</p> <p>80CA16L 80+ CRI, 1600 Source Lumens (Delivered - 2RW 765, 2SW 660)</p> <p>80CA23H 80+ CRI, 2300 Source Lumens (Delivered - 2RW 1052, 2SW 909)</p> <p>90CA10L 90+ CRI, 1000 Source Lumens (Delivered - 2RW 477, 2SW 412)</p> <p>90CA14L 90+ CRI, 1400 Source Lumens (Delivered - 2RW 653, 2SW 564)</p> <p>90CA19H 90+ CRI, 1900 Source Lumens (Delivered - 2RW 902, 2SW 779)</p> <p>97CA10L 97+ CRI, 1000 Source Lumens (Delivered - 2RW 425, 2SW 367)</p> <p>97CA12L 97+ CRI, 1200 Source Lumens (Delivered - 2RW 582, 2SW 502)</p> <p>97CA17H 97+ CRI, 1700 Source Lumens (Delivered - 2RW 804, 2SW 694)</p> <p>WARM DIM</p> <p>90WA13H 90+ CRI, 1360 Source Lumens (Delivered - 2PG 598, 2SG 501)</p> <p>L = 3.73" tall housing H = 6.5" tall housing</p>	27 2700K 30 3000K 35 3500K 40 4000K	WW Wallwash Optic	<p>Housing W/Integral Driver (HB)</p> <p>NC NIC IC IC AT IC, Airtight, Chicago Plenum</p> <p>Housing W/Remote Driver (HR)</p> <p>NR NIC, Remote IR IC, Remote AR IC, Airtight, Chicago Plenum</p> <p>Remodel RR Remote-Remodel</p>	0 0.125" - 0.49"* *(RM, RR Install Types only) 1 0.50" - 0.75" 2 0.76" - 1.25"	<p>(120V)</p> <p>TR2 Philips, 2% Leading/Trailing/Triac* *(Not available for 80CA12L, 90CA10L, 97CA10L)</p> <p>L23 Lutron, Hi-Lume 1% 2-Wire</p> <p>(120-277V)</p> <p>LH1 Lutron, Hi-Lume 1% Ecosystem LP1 Lutron, Premier 0.1% Ecosystem AN4 Philips Xitanium 1% 0-10V, LOG LN2 Philips Xitanium 1% 0-10V, LIN EA2 eldoLED, SOLdrive 0.1% 0-10V, LOG LA2 eldoLED, SOLdrive 0.1% 0-10V, LIN ED1 eldoLED, SOLdrive 0.1% DALI, LOG LD1 eldoLED, SOLdrive 0.1% DALI, LIN</p>	WL Wallwash Lens	<p>F Flange Overlay (No Applique)</p> <p>G Zero Sightline Gypsum (1/16" Applique)* *(Not available for wet location)</p> <p>P Zero Sightline Plaster (1/8" Applique)* *(Not available for wet location)</p>



PART NUMBER NOTES

- Trims ships as e.g. 2SW1-WH-80CA16LW-2HB1-L23WL
- Housing ships as e.g. NCL-2RF-1-LED-01
- Drivers ship with trim

- Remote drivers ship with trim as e.g. PS-RMT-80CA16L-1L23
- Applique ships with housing

ACCESSORIES

ROUTER TOOL GUIDE (Dry / Damp locations only)
Recommended for Zero-Sightline installations in wood ceilings.

- **DLA-RTG-2S-RD** Tool, router guide, round; reusable
- **DLA-RTG-2S-SQ** Tool, router guide, square; reusable

REPLACEMENT OPTIC
Interchangeable optics accessible through fixture aperture.

- **RO-50-WW-2** Wallwash Optic

EMERGENCY LIGHTING - REMOTE MOUNT ONLY

During disruption of main power, emergency battery inverter provides temporary 120V or 277V to fixture.

- **EMB-S-20/25-120/277-LEDX** 20/25 watt max capacity, 120 or 277 VAC 60Hz, Non-Dimmable
- **EMB-S-100-120-LEDX** 100 watt max capacity, 120 VAC 60Hz, Dimmable
- **EMB-S-100-277-LEDX** 100 watt max capacity, 277 VAC 60Hz, Dimmable
- **EMB-S-250-120/277-LEDX** 250 watt max capacity, 120 or 277 VAC 60Hz, Dimmable

2 SERIES LED WALLWASH

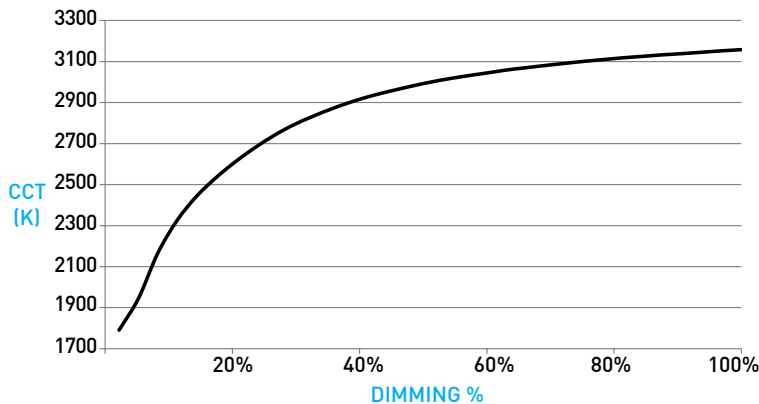
STATIC WHITE PERFORMANCE - 3000K WITH 40° OPTIC

LUMEN PACKAGE	WATTAGE	WALLWASH			
		2RW		2SW	
		DELIVERED	LPW	DELIVERED	LPW
80CA12L	10	555	56	480	49
80CA16L	14	765	54	660	47
80CA23H	21	1052	50	909	43
90CA10L	10	477	48	412	42
90CA14L	14	653	46	564	40
90CA19H	21	902	43	779	37
97CA10L	10	425	43	367	37
97CA12L	14	582	41	502	36
97CA17H	21	804	38	694	33
90WA13H	14	598	43	501	36

OUTPUT MULTIPLIER			
CCT	80+ CRI	90+ CRI	97+ CRI
2700K	1.118	0.961	0.860
3000K	1.167	1.000	0.895
3500K	1.187	1.014	0.907
4000K	1.198	1.016	0.918

WARM DIM PERFORMANCE

DETAILED PERFORMANCE	Full on 100%	Dimmed to 80%	Dimmed to 70%	Dimmed to 50%	Dimmed to 20%	Dimmed to 10%	Dimmed to 2%
CCT (K)	3200	3150	3100	3000	2700	2200	1800
Light Output (Lm)	1300	1050	900	630	250	115	25
Power (W)	14	11	10	7	3	1.5	0.3
Efficacy (LPW)	92	93	90	90	83	76	74



JA8-2019 TITLE 24 COMPLIANT CONFIGURATIONS



	Wallwash Optic						
	90CA			97CA			90WA
	10L	14L	19H	10L	12L	17H	13H
2RW	✓			✓			
2SW							

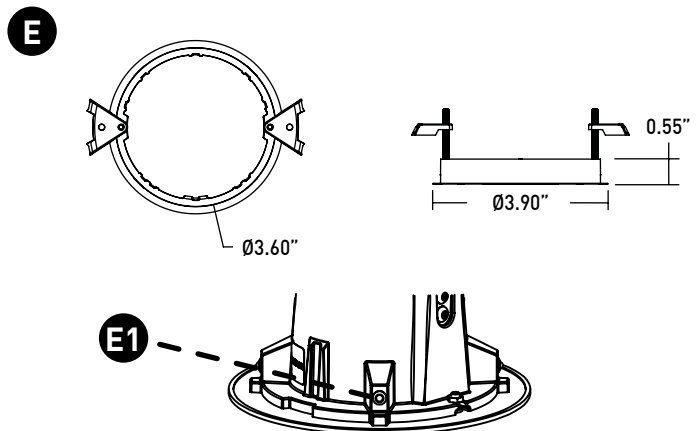
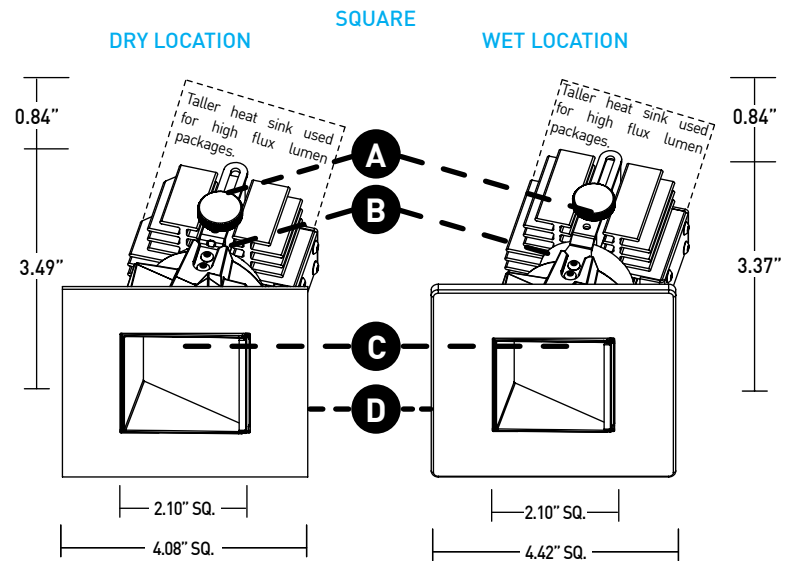
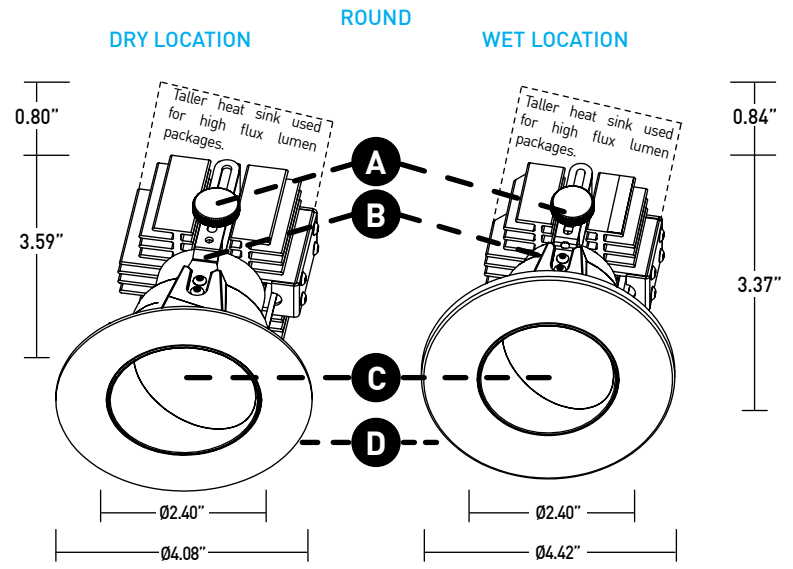
2 SERIES LED WALLWASH

DOWNLIGHT

Die-cast baffle and precision kick reflector provide dynamic wallwashing and minimal aperture glare.

- A** **ADJUSTABLE YOKE**
Adjustable yoke allows for quick access to optic and effects device.
- B** **OPTICS**
40° optic for optimal wallwashing.
- C** **EFFECTS DEVICES**
Wallwash lens included and sealed in place on wet location fixtures
- D** **TRIM PLATE**
Wet location features integral silicone gasket.
 - Dry / Damp Location: Thickness measures 0.065" (1.7mm)
 - Wet Location: 0.15" return, installed as flange overlay only.
- E** **DOWNLIGHT TRIM ADAPTER**
Included with fixture and required for installation. Uses (2) #6-32 flat-head screws with varying lengths to accommodate ceiling depth. Installed after ceiling is complete. Requires 3.75" (95mm) diameter cutout for flange overlay applications.
- E1** **RETENTION**
Engineered integral ball plungers correspond to trim adapter ensuring snug fit against finished ceiling.

DIMENSIONS / DRAWINGS



2 SERIES LED WALLWASH

HOUSING

- F LOW FLUX NO INSULATION CONTACT (NON-IC) HOUSING**
- Included with NC and NR Low Flux lumen packages.
 - Minimum 0.50" (13mm) setback from combustible and non-combustible materials on all sides and top of housing.
 - Minimum 3.00" (76mm) setback from insulation material having max R-Value 30 on all sides and top of housing.
 - Minimum 6.00" (152mm) setback from polycell spray foam insulation having max R-Value 60.

- LOW FLUX INSULATION CONTACT (IC) HOUSING**
- Included with IC, IR, AT, and AR LOW Flux lumen packages.
 - No setback from polycell spray foam insulation having max R-Value of 60 on all sides and top of housing.

- G HIGH FLUX HOUSING**
- Satisfies IC, Airtight and NON-IC configurations.
 - Included with all HIGH Flux lumen packages.
 - No setback from polycell spray foam insulation having max R-Value of 60 on all sides and top of housing.

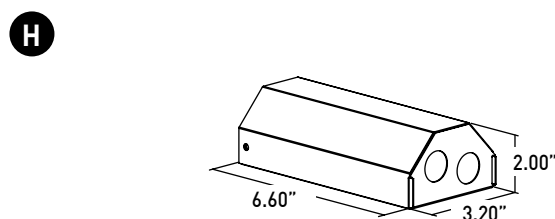
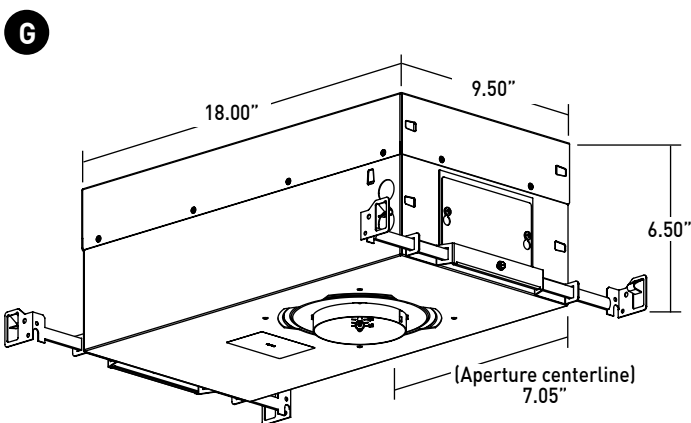
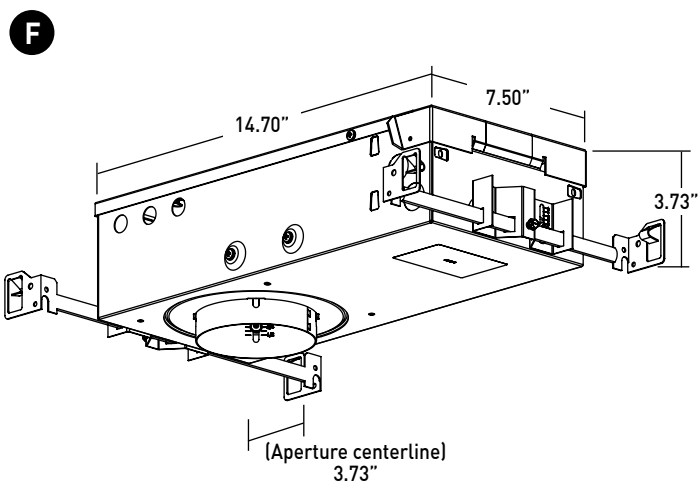
HOUSING MOUNTING NOTES

- AT and AR install types are required for Chicago Plenum, Airtight and Title 24 (JA8) applications.
- Do not install in environments where ambient temperatures exceed 40°C (104°F).
- Power supply compartment and all splice connections may be serviced from room side.
- Consult factory for spacing requirements for any installations exceeding R-Value 60.
- Hanger bars fitted to short side of housing, and long side of Low Flux housings; extend from 14.0" to 24.0", but may be field cut to accommodate narrow stud spacing.
- Hanger bars and brackets add 4.00" to the overall dimension, but are exclusive of the setback requirements.
- Driver assembly ships with trim, not housing. Housing and trim feature mating quick-connect plugs for ease of installation.

REMOTE POWER SUPPLY

- H** Provided with install types "IR", "NR" and "AR". Remote power supply provides additional driver options. Consult installation guide for maximum allowable secondary run lengths between PS-RMT and fixture. Must be installed in an accessible location.

DIMENSIONS / DRAWINGS



2 SERIES LED WALLWASH

REMODEL POWER SUPPLY

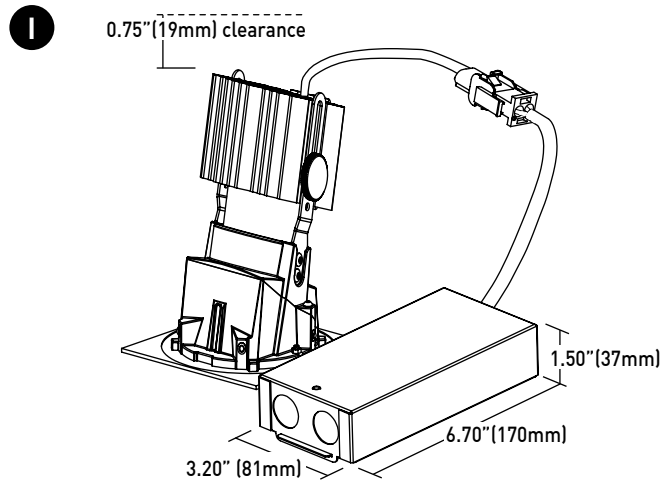
I REMODEL POWER SUPPLY

- Included with RM Install Type.
- UL2043 listed for air-handling plenum.
- Fixture mounts without conventional housing using supplied downlight trim adapter.
- Minimum 0.75" (19mm) clearance from top of fixture.
- Minimum setback from combustible and non-combustible materials of 6.63" (168mm) radius from fixture centerline.
- Minimum 3.00" (76mm) setback from surfaces of power supply / junction box if not situated within above noted radius from fixture centerline.
- Minimum additional 3.00" (76mm) setback from insulation material with max R-Value 30 from any surface of downlight fixture assembly.
- Minimum additional 6.00" (152mm) setback from polycell spray foam insulation with max R-Value 60 from any surface of downlight fixture assembly.

J REMOTE APPLICATIONS

- Remote power supply and DLA2-RMT-AK accessory kit included with RR Install Type.

DIMENSIONS / DRAWINGS



REMODEL NOTES

- Do not install in environments where ambient temperatures exceed 40°C (104°F).
- Power supply compartment and all splice connections may be serviced from room side.
- Consult factory for spacing requirements for any installations exceeding R-Value 60.

ZERO-SIGHTLINE INSTALLATIONS

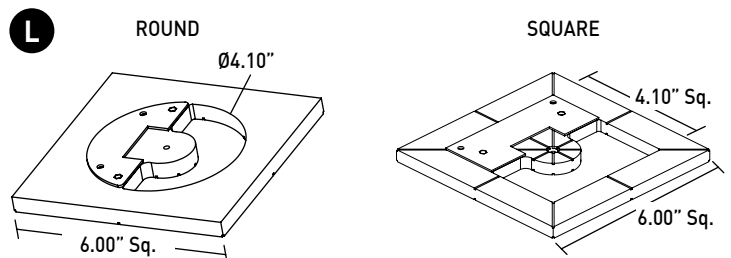
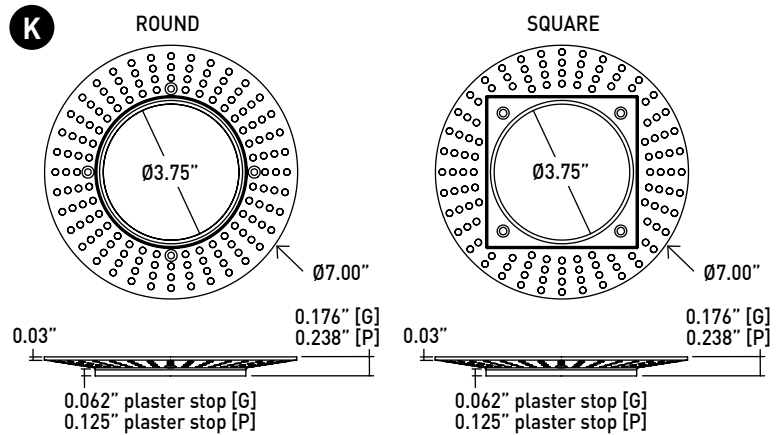
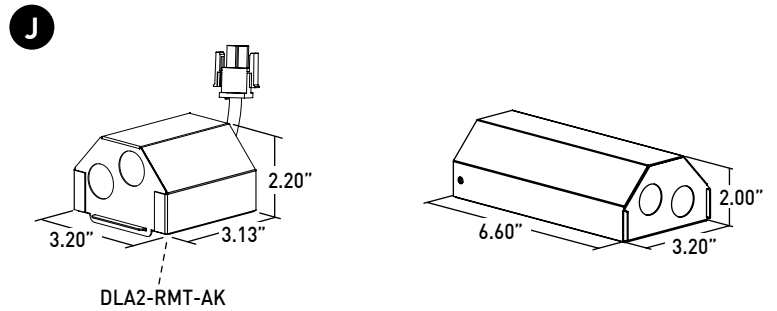
Zero-Sightline installations available for Dry / Damp location fixtures only. When installed according to manufacturer's instructions and ceiling conditions are met, fixture is flush with the ceiling plane. Consult 2-Series Installation Guidelines for appropriate ceiling cutouts and instructions for proper Zero-Sightline installations.

K APPLIQUÉ

- Specified on Flange Configuration and ships with housing; ships separately on remodel installations.
- For use in sheetrock ceiling applications.
- 1/16" Appliqué (G Flange Configuration) recommended for gypsum ceiling installations and has plaster stop thickness of 1/16" (1.6mm).
- Recommended for painted ceiling applications.
- 1/8" Appliqué (P Flange Configuration) offers double thick plaster stop of 1/8" (3.2mm) where a heavier application of mud is preferred. Recommended for colorfast and venetian plaster applications.
- Not recommended for stucco applications.

L ROUTER TOOL GUIDE

- Specified separately and used with Flange Overlay configurations.
- For use in wood ceiling applications.
- **DLA-RTG-2S-RD** or **DLA-RTG-2S-SQ** required for wood Zero-Sightline ceiling installations.
- Router tool guide is reusable and suitable for multiple fixtures.



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TECHNICAL INFORMATION

CONSTRUCTION

Downlight: Steel and aluminum; extruded aluminum heat-sink; painted finishes are granulated powder coat. 304 corrosion resistant stainless steel faceplate for wet location fixtures.

Trim Adapter: High-impact composite and stainless steel.

Housing: 22 Gauge galvanized steel.

Appliqué: Zinc alloy.

LED

Proprietary Citizen 2-step MacAdam ellipse LED module available in 80+, 90+ and 97+ CRI configurations in color temperatures of 2700K, 3000K, 3500K and 4000K. Average rated lamp life: 50,000 hours. LED and driver assemblies are field-replaceable.

WARM DIM LED

Proprietary 3-step MacAdam ellipse warm dim LED module available in 90+ CRI configuration. 3200K at full brightness, warming to 1800K at full dim. Average rated lamp life: 50,000 hours. LED and driver assemblies are field-replaceable.

POWER SUPPLY PERFORMANCE AND DIMMING INFORMATION

Power Supply	2 WIRE		ECO		0-10V				DALI	
	L23	TR2	LH1	LP1	EA2	LA2	AN4	LN2	ED1	LD1
Minimum °C	0 °C	-20 °C	0 °C	0 °C	-20 °C	-20 °C	-20 °C	-20 °C	-20 °C	-20 °C
Maximum °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Dimming %	1.0%	2.0%	1.0%	0.1%	0.1%	0.1%	1.0%	1.0%	0.1%	0.1%

Note: For EA2, LA2 and L23 drivers consult chart on page 4 to confirm appropriate dimming curve for compatibility with selected control.

SPACING

Recommended fixture spacing is 36" on center with 36" setback from wall plane.

LISTING

cTUVus listed to UL1598 standard for Dry / Damp and Wet locations. Chicago Plenum, Airtight and Title 24 JA8-2019 Listed.

WARRANTY

Manufacturer's 1-year warranty guarantees product(s) listed to be free from defects in material and workmanship under normal use and service. 5-year warranty on LED and power supply to operate with 70% of the original flux and remain within a range of 3 duv. 10-year Lutron Advantage limited warranty available on Lutron equipped systems. Warranty period begins from the date of shipment by Seller and conditional upon the use of manufacturer-supplied power supply. [Consult website for full warranty terms and conditions.](#)

CHANGE LOG

- 1.02/10/2020: ADDED CHICAGO PLENUM TO AT AND AR HOUSING DESCRIPTIONS
- 2.10/08/2019: NEW CONSOLIDATED SPEC SHEETS WITH SINGLE NOMENCLATURE FOR SPECIFICATION
- 3.10/08/2019: NOW OFFERING QUICK SHIP FOR ROUGH-IN COMPONENTS.

2 SERIES LED WALLWASH

DIMMING COMPATIBILITY

PHILIPS DRIVER COMPATIBILITY

Power supply TR2 Manufacturer	Family/Model #
Lutron Electronics	DV-600P
Lutron Electronics	DVELV-303P
Lutron Electronics	NTELV-600
Lutron Electronics	MAELV-600
Lutron Electronics	SELV-300P
Lutron Electronics	DVLV-600P
Lutron Electronics	NFTU-5A
Lutron Electronics	CTCL-153P
Lutron Electronics	GL-600H
Lutron Electronics	S-600P
Lutron Electronics	PHPM
Power supply AN4 Manufacturer	Family/Model #
Lutron Electronics	DVTV plus PP-DV
Lutron Electronics	DVSCTV plus PP-DV
Lutron Electronics	DVSTV
Lutron Electronics	DVSCSTV
Lutron Electronics	QSGRJ-XP plus GRX-TVI
Lutron Electronics	QSGRJ-XE plus GRX-TVI
Lutron Electronics	QSGR-XE plus GRX-TVI
Lutron Electronics	NFTV plus PP-DV
Lutron Electronics	NTSTV
Lutron Electronics	RMJ-5T
Lutron Electronics	RMJS-8T
Lutron Electronics	FCJS-010
Leviton	IllumaTch IP7 series
Philips	Sunrise - SR1200ZTUNV

LUTRON DRIVER COMPATIBILITY

Power supply L23 Lutron Product Family	Part No.
Maestro WirelessR 600 W dimmer	MRF2-6ND-120-
Maestro WirelessR 1000 W dimmer	MRF2-10ND-120-
Caséta® Wireless Pro 1000 W dimmer	PD-10NXD-
GRAFIK T™ CL® dimmer	GT-250M- GTJ-250M-
HomeWorks® QS adaptive dimmer	HQRD-6NA-
HomeWorks® QS 600 W dimmer	HQRD-6ND-
HomeWorks® QS 1000 W dimmer	HQRD-10ND-
RadioRA® 2 adaptive dimmer	RRD-6NA-
RadioRA® 2 1000 W dimmer	RRD-10ND
myRoom™ DIN power module	MQSE-4A1-D
HomeWorks® QS DIN power module	LQSE-4A1-D
HomeWorks® QS wallbox power module	HQRJ-WPM-6D-120
HomeWorks® wallbox power module	HWI-WPM-6D-120
GRAFIK Eye® QS control unit	QSGR-, QSGRJ-
GRAFIK Eye® 3000 control unit	GRX-3100- GRX-3500-
RPM-4U module (LCP, HomeWorks® QS, GRAFIK Systems™, Quantum®)	HW-RPM-4U-120 LP-RPM-4U-120
RPM-4A module (LCP, HomeWorks® QS, GRAFIK Systems™, Quantum®)	HW-RPM-4A-120, LP-RPM-4A-120
GP dimming panels	Various
Ariadni CL 250W dimmer	AYCL-253P-
Diva CL 250W dimmer	DVCL-253P- DCSCCL-253P-
Nova T CL 250W dimmer	NTCL-250-
Power supply LH1 / LP1 Lutron Product Family	Part No.
PowPak Dimming Modules	RMJ-ECO32-DV-B
PowPak Dimming Modules	FCJ/FCJS-ECO
Energi Savr Nodes	QSN-1ECO-S
GRAFIK Eye QS control unit	QSN-2ECO-S
Homeworks QS control unit	QSGRJ- _E (wireless) QSGR- _E
Quantum Hub	QP2-__ 2C
Quantum Hub	QP2-__ 4C
Quantum Hub	QP2-__ 6C
Quantum Hub	QP2-__ 8C
Homeworks QS power module	LQSE-2ECO-D
myRoom Plus power module	

eldoLED DRIVER COMPATIBILITY

Power supply EA2 / LA2 Dimmer / Switch Control Manufacturer	Family/Model #
Busch-Jaeger	2112U-101
Jung	240-10
Leviton Lighting Controls	IP710-DLX
Lightolier Controls	ZP600FAM120
Lutron Electronics	Nova T® - NTFTV
Lutron Electronics	Div@ - DDTV
Lutron Electronics	Nova@ - NFTV
Merten	5729
Pass & Seymour	CD4FB-W
The Watt Stopper	DCLV1
Sensor Switch	nI0 EZ
Synergy	ISD BC
Power supply EA2 / LA2 Lighting Control Systems	Family/Model #
Lutron Electronics	GrafixEye® GRX-TVI w GRX3503
Lutron Electronics	Energy Savr Node™ - QSN-4T16-S
Lutron Electronics	TVM2 Module
Crestron®	GLX-DIMFLV8
Crestron®	GLXP-DIMFLV8
Crestron®	GLPAC-DIMFLV4-*
Crestron®	GLPAC-DIMFLV8-*
Crestron®	GLPP-DIMFLVEX-PM
Crestron®	GLPP-1DIMFLV2EX-PM
Crestron®	GLPP-1DIMFLV3EX-PM
Crestron®	DIN-A08
Crestron®	DIN-4DIMFLV4
Crestron®	CLS-EXP-DIMFLV
Crestron®	CLCI-1DIMFLV2EX
ABB	SD/S 2.16.1



2 SERIES LED WALLWASH

DRIVE CURRENT SPECIFICS

	80CA			90CA			97CA			90W
	12L	16L	23H	10L	14L	19H	10L	12L	17H	13H
Minimum Vf	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5
Maximum Vf	39	39	39	39	39	39	39	39	39	39
Current mA	250	350	500	250	350	500	250	350	500	14 - 350
Wattage W	8.2	11.8	17.4	8.2	11.8	17.4	8.2	11.8	17.4	14