

2 SERIES LED INT

ADJUSTABLE

High-output, low profile, and infinite adjustment -- these small aperture downlights make elegant design statements in discerning residential, retail, and hospitality environments.

PROJECT NAME:	TYPE:
---------------	-------



ORDERING INFORMATION

TRIM	RATING	FLANGE FINISH	CRI	WATTAGE	CCT	OPTIC (UGR)	INSTALL TYPE	CEILING THICKNESS	POWER SUPPLY	MEDIA	FLANGE CONFIGURATION								
							EX												
2RA Round Expanded Aperture 2PA Round Pinhole Aperture 2SA Square Expanded Aperture	1 IP20 Dry/Damp 2 IP64 Wet* *(Lens sealed in place)	WH White	LOW FLUX/ HIGH FLUX STATIC WHITE	LOW FLUX STATIC WHITE 3.73" TALL HOUSING 06A 06W Lm - 2RA 578, 2PA 469, 2SA 520 11A 11W Lm - 2RA 928, 2PA 764, 2SA 872 15A 15W Lm - 2RA 1268, 2PA 1029, 2SA 1195	24 2400K* *90 CRI only, 15W max) 27 2700K 30 3000K 35 3500K 40 4000K	10 10°* (<13) * (15W packages only) 15 15° (<13) 20 20° (<13) 25 25° (<13) 40 40° (<13) 60 60°** (<13) ** (Not recommended for 2PA)	EX Export	0 3mm-13mm 1 13mm-20mm 2 20mm-32mm 3 32mm-51mm 4 51mm-76mm	(120-277V) TR2 Philips, 2% Forward/Reverse* *(120V, for Mexico only) AN3 eldoLED, ECOdrive 1.0% 0-10V, LOG LN1 eldoLED, ECOdrive 1.0% 0-10V, LIN EA1 eldoLED, SOLdrive 0.1% 0-10V, LOG LA1 eldoLED, SOLdrive 0.1% 0-10V, LIN ED1 eldoLED, SOLdrive 0.1% DALI-2, LOG LD1 eldoLED, SOLdrive 0.1% DALI-2, LIN NOD Driver Supplied by Others	Standard Media 04 Soft Focus Lens *(Required for 10° optic) Alternate Media NL No Lens* *(Not available for wet location) 02 Honeycomb Louver* *(Not available for wet location) 03 Clear Glass Lens 05 Frosted Glass Lens 09 Ultra Violet Lens 11 Shatterproof Soft Focus Lens 12 Shatterproof Frosted Lens 26 Frosted Linear Spread Lens* *(Not available for wet location)	F Flange Overlay (No Applique)* *(Required for Zero-Sightline wood applications) G Zero Sightline Gypsum (1.57mm Applique)* *(Not available for wet location) P Zero Sightline Plaster (3.18mm Applique)* *(Not available for wet location)								
		AG Satin Silver										IG Industrial Gray	AU Cashmere Gold	AB Arch Bronze	BB Burnt Bronze	BK Black	PR Primer	SS Stainless Steel*	CF Custom*
		FINISH IMAGES ON PAGE 2 *(Increased lead time) *(Consult Factory)																	
				WARM DIM 6.5" TALL HOUSING 11A 11W 15A 15W 22A 22W Incandescent Profile 11A Lm - 2RA 798, 2PA 682, 2SA 728 15A Lm - 2RA 1064, 2PA 909, 2SA 971 22A Lm - 2RA 1383, 2PA 1182, 2SA 1262 Halogen Profile 11A Lm - 2RA 840, 2PA 718, 2SA 767 15A Lm - 2RA 904, 2PA 756, 2SA 850 22A Lm - 2RA 1501, 2PA 1282, 2SA 1369 *SEE PAGE 3 FOR DETAILED WARM DIM PROFILE COMPARISON.	90L 90+	WL 2700K - 1800K	15 15° (<13) 20 20° (<13) 25 25° (<13) 40 40° (<13) 60 60°** (<13) *(Not recommended for 2PA)												
				TUNABLE WHITE 6.5" TALL HOUSING 17A 17W Warm Profile Lm - 2RA 1067, 2PA 908, 2SA 960 Cool Profile Lm - 2RA 1049, 2PA 900, 2SA 944 *ALL DELIVERED LUMEN OUTPUTS REFLECT 3000K PAIRED WITH 20° OPTIC AND SOFT FOCUS LENS.	90T 90+	TR 4000K - 1800K TH 5000K - 2700K	15 15° (<13) 20 20° (<13) 25 25° (<13) 40 40° (<13) 60 60°** (<13) *(Not recommended for 2PA)		TUNABLE WHITE REMOTE (0.1%, 120-277V) DD1 eldoLED, DUALdrive DALI-2, LOG										
*SEE PAGE 3 FOR UGR RATINGS.																			

PART NUMBER NOTES

- Fitting ships as e.g., 2RA1-WH-80S15A2-2EX1-AN304
- Driver ships with fitting
- Appliqué ships with fitting



2 SERIES LED INT ADJUSTABLE

ACCESSORIES

ALTERNATE MEDIA

- HCL-2** Honeycomb Louver*
- *(Not available for IP64 wet location)
- CGL-2** Clear Glass Lens
- SFL-2** Soft Focus Lens
- FGL-2** Frosted Glass Lens
- UVL-2** Ultra Violet Lens
- FLSL-2** Frosted Linear Spread Lens*
- *(Not available for IP64 wet location)
- SFL-2-SP** Shatterproof Soft Focus Lens
- FGL-2-SP** Shatterproof Frosted Lens

STATIC WHITE REPLACEMENT OPTICS

- RO-50-15-S** 15° optic
- RO-50-20-S** 20° optic
- RO-50-25-S** 25° optic
- RO-50-40-S** 40° optic
- RO-50-60-S** 60° optic*
- *(Not recommended for 2PA)

WARM DIM REPLACEMENT OPTICS

- RO-50-20-W** 20° optic
- RO-50-25-W** 25° optic
- RO-50-40-W** 40° optic
- RO-50-60-W** 60° optic*
- *(Not recommended for 2PA)

TUNABLE WHITE REPLACEMENT OPTICS

- RO-50-15-T** 15° optic
- RO-50-20-T** 20° optic
- RO-50-25-T** 25° optic
- RO-50-40-T** 40° optic
- RO-50-60-T** 60° optic*
- *(Not recommended for 2PA)

ROUTER TOOL GUIDE (IP10 Dry / Damp locations only)
Recommended for Zero-Sightline installations in wood ceilings.

- DLA-RTG-25-RD** Tool, router guide, round; reusable
- DLA-RTG-25-SQ** Tool, router guide, square; reusable

ADJUSTMENT TOOL

- One included with every four fittings.
- TOOL-HEX-050**

FINISHES BY LUCIFER LIGHTING



DRIVE CURRENT SPECIFICS

	80S				90S				97S				90L			90T
	06A	11A	15A	21A	06A	11A	15A	21A	06A	11A	15A	21A	11A	15A	22A	17A
Minimum Vf	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5
Maximum Vf	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	37	37	37	37.6
Current mA	150	250	350	500	150	250	350	500	150	250	350	500	250	350	500	400
Wattage W	5.1	8.2	11.8	17.4	5.1	8.2	11.8	17.4	5.1	8.2	11.8	17.4	8.2	11.8	17.4	17.4

	10 DEGREE OPTIC		
	80S15C	90S15C	97S15C
Minimum Vf	30.5	30.5	30.5
Maximum Vf	36.2	36.2	36.2
Current mA	350	350	350
Wattage W	11.8	11.8	11.8

2 SERIES LED INT ADJUSTABLE

PERFORMANCE - 3000K

CRI / WATTAGE PACKAGE	WATTAGE	ADJUSTABLE - 20° OPTIC - SOFT FOCUS LENS					
		2RA		2PA		2SA	
		DELIVERED	LPW	DELIVERED	LPW	DELIVERED	LPW
80S06A	6	670	112	544	91	603	100
80S11A	11	1076	98	886	80	1011	92
80S15A	15	1471	98	1194	80	1386	92
80S21A	21	1974	94	1624	77	1856	88
90S06A	6	578	96	469	78	520	87
90S11A	11	928	84	764	69	872	79
90S15A	15	1268	84	1029	69	1195	80
90S21A	21	1702	81	1400	67	1600	76
97S06A	6	509	85	413	69	458	76
97S11A	11	817	74	672	61	767	70
97S15A	15	1116	74	905	60	1052	70
97S21A	21	1498	71	1232	59	1408	67
90L11AWL (2700K-1800K)	11	798	73	682	62	728	66
90L11AWD (3000K-1800K)	11	840	76	718	65	767	70
90L15AWL (2700K-1800K)	15	1064	71	909	61	971	65
90L15AWD (3000K-1800K)	15	1120	75	957	64	1022	68
90L22AWL (2700K-1800K)	22	1383	63	1182	54	1262	57
90L22AWD (3000K-1800K)	22	1501	68	1282	58	1369	62
90T17ATR (4000K-1800K)	17	1067	57	908	54	960	56
90T17ATH (5000K-2700K)	17	1049	60	900	53	944	56

CRI / WATTAGE PACKAGE	WATTAGE	ADJUSTABLE - 10° OPTIC - FIELD REDUCER					
		2RA		2PA		2SA	
		DELIVERED	LPW	DELIVERED	LPW	DELIVERED	LPW
80S15C	15	491	33	415	28	453	30
90S15C	15	423	28	358	24	390	26
97S15C	15	365	24	309	21	337	22

OUTPUT MULTIPLIER

CCT	CCT SCALE
2400K	0.76
2700K	0.97
3000K	1.000
3500K	1.03
4000K	1.08

MEDIA LIGHT LOSS FACTOR

MEDIA	LIGHT LOSS FACTOR
NO LENS	1.15
CGL	1.03
SFL	1.00
FGL	0.79
FSFL	0.70
FLSL	0.70
HCL	0.81

TUNABLE WHITE MULTIPLIER

CCT	5000K-2700K	4000K-1800K
5000K	1.16	-
4000K	1.08	1.14
3500K	1.04	1.07
3000K	1.00	1.00
2700K	0.96	0.92
2400K	-	0.84
1800K	-	0.69

UNIFIED GLARE RATING

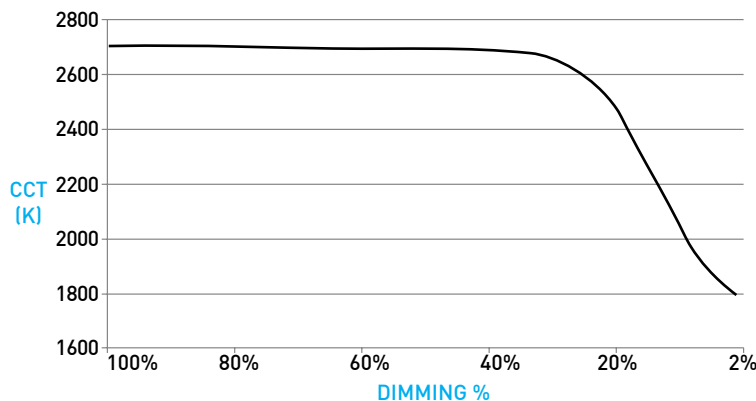
10° OPTIC FIELD REDUCER	20° OPTIC SOFT FOCUS LENS	25° OPTIC SOFT FOCUS LENS	40° OPTIC SOFT FOCUS LENS	60° OPTIC SOFT FOCUS LENS
<13	<13	<13	<13	<13

Part L 75+ LPW configurations comply with residential Part L
95+ LPW configurations comply with commercial Part L

WARM DIM PERFORMANCE - 2RA - 20° OPTIC - SOFT FOCUS LENS

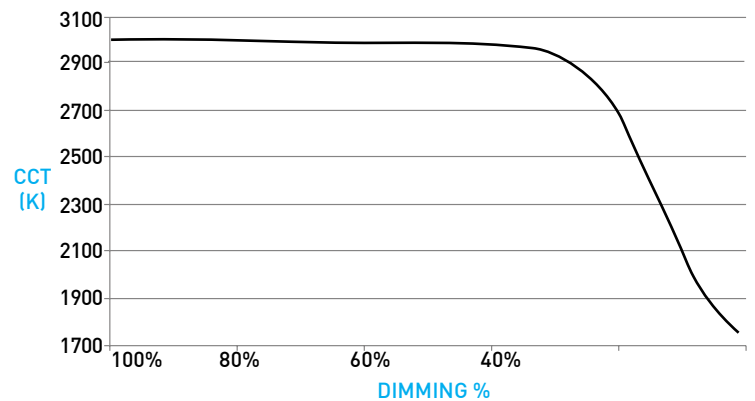
INCANDESCENT PROFILE

	Full on 100%	Dimmed to 80%	Dimmed to 70%	Dimmed to 50%	Dimmed to 20%	Dimmed to 10%	Dimmed to 2%
90L11AWL 2700K - 1800K	2700K	2700K	2700K	2600K	2200K	1900K	1800K
CCT (K)	2700K	2700K	2700K	2600K	2200K	1900K	1800K
Light Output (Lm)	798	638	559	399	160	80	16
Power (W)	11	8.8	7.7	5.5	2.2	1.1	.2
Efficacy (LPW)	73	73	73	73	73	73	73
90L15AWL 2700K - 1800K	2700K	2700K	2700K	2700K	2500K	1900K	1800K
CCT (K)	2700K	2700K	2700K	2700K	2500K	1900K	1800K
Light Output (Lm)	1064	851	745	532	213	106	21
Power (W)	15	12	10.5	7.5	3	1.5	.3
Efficacy (LPW)	71	71	71	71	71	71	71
90L22AWL 2700K - 1800K	2700K	2700K	2700K	2700K	2600K	2100K	1800K
CCT (K)	2700K	2700K	2700K	2700K	2600K	2100K	1800K
Light Output (Lm)	1383	1106	968	692	277	138	28
Power (W)	22	17.6	15.4	11	4.4	2.2	.4
Efficacy (LPW)	63	63	63	63	63	63	63



HALOGEN PROFILE

	Full on 100%	Dimmed to 80%	Dimmed to 70%	Dimmed to 50%	Dimmed to 20%	Dimmed to 10%	Dimmed to 2%
90L11AWD 3000K - 1800K	3000K	3000K	3000K	3000K	2500K	1900K	1800K
CCT (K)	3000K	3000K	3000K	3000K	2500K	1900K	1800K
Light Output (Lm)	840	672	588	420	168	84	17
Power (W)	11	8.8	7.7	5.5	2.2	1.1	.2
Efficacy (LPW)	76	76	76	76	76	76	76
90L15AWD 3000K - 1800K	3000K	3000K	3000K	3000K	3000K	2000K	1800K
CCT (K)	3000K	3000K	3000K	3000K	3000K	2000K	1800K
Light Output (Lm)	1120	896	784	560	224	112	22
Power (W)	15	12	10.5	7.5	3	1.5	.3
Efficacy (LPW)	75	75	75	75	75	75	75
90L22AWD 3000K - 1800K	3000K	3000K	3000K	3000K	3000K	2500K	1800K
CCT (K)	3000K	3000K	3000K	3000K	3000K	2500K	1800K
Light Output (Lm)	1501	1201	1051	751	300	150	30
Power (W)	22	17.6	15.4	11	4.4	2.2	.4
Efficacy (LPW)	68	68	68	68	68	68	68



2 SERIES LED INT ADJUSTABLE

DOWNLIGHT FITTING

Hot-aim adjustment from below up to 45° tilt and 357° rotation, faceplate conceals adjustment mechanisms.

- A ADJUSTABLE YOKE**
Adjustable yoke allows for quick exchange of optics and media. Accommodates up to 2 media; add 4.1mm to fitting height with use of each media.
- B OPTICS**
Robust light engine with optimized optic pairing integrates Reflection, Refraction, and TIR offering 10°, 15°, 20°, 25°, 40° & 60° beams. Soft Focus Lens, Honeycomb Louver, and Field Reducer provided with 10° optic.
- C TILT GUIDE**
Features adjustment angles and allows for pre-aiming prior to insertion of fitting.
- D MEDIA**
Soft Focus Lens standard; media must be specified. Lens is sealed in IP64 Wet location fitting. Secondary media available.
- E FITTING PLATE**
Features removable faceplate providing access to adjustment mechanisms. Rare Earth magnets secure faceplate firmly to fitting mechanism and do not degrade over time.
 - IP10 Dry / Damp Location: Thickness measures 1.5mm
 - IP64 Wet Location: Sealed aperture and integral silicone gasket. 4.3mm return, installed as flange overlay only.
- F DOWNLIGHT FITTING ADAPTER**
Included with fitting and required for installation. Uses (2) #6-32 flat-head screws with varying lengths to accommodate ceiling depth. Installed after ceiling is complete. Requires 92mm diameter cutout for flange overlay applications.
- F1 RETENTION**
Integral ball plungers correspond to trim adapter ensuring snug fit against finished ceiling.

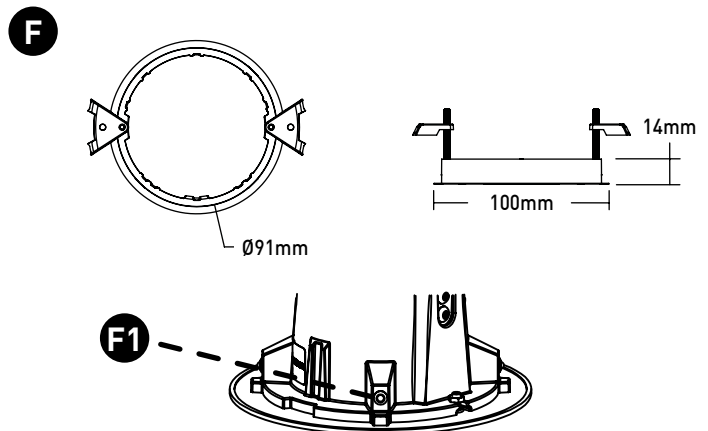
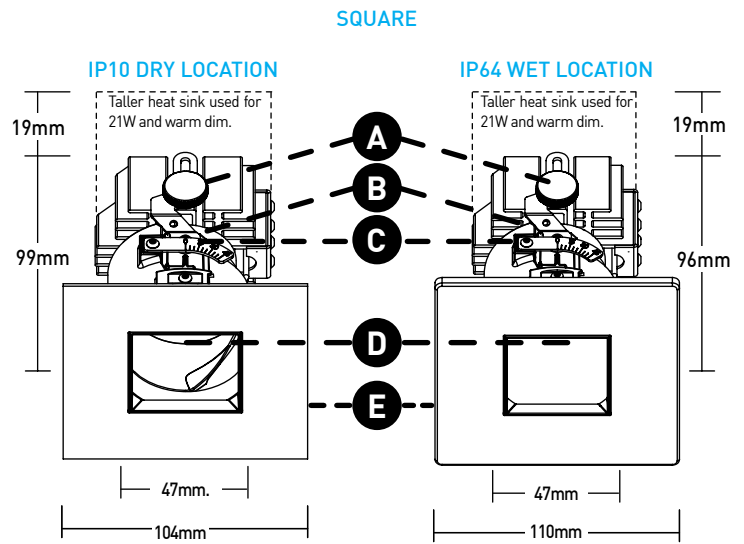
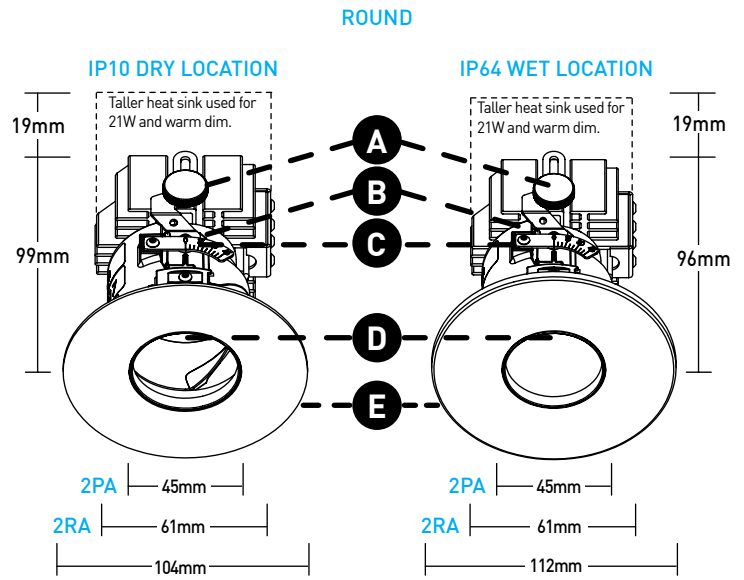
TILT CHART

Chart references abbreviated ceiling thickness and use of 1 media.

CEILING THICKNESS	13mm "-0" collar	19mm "-1" collar	25mm "-2" collar	32mm "-2" collar
Low Flux	45°	45°	45°	38°
High Flux	45°	45°	45°	45°

CEILING THICKNESS	38mm "-3" collar	51mm "-3" collar	70mm "-4" collar	76mm "-4" collar
Low Flux	32°	18°	8°	6°
High Flux	38°	25°	13°	6°

DIMENSIONS / DRAWINGS



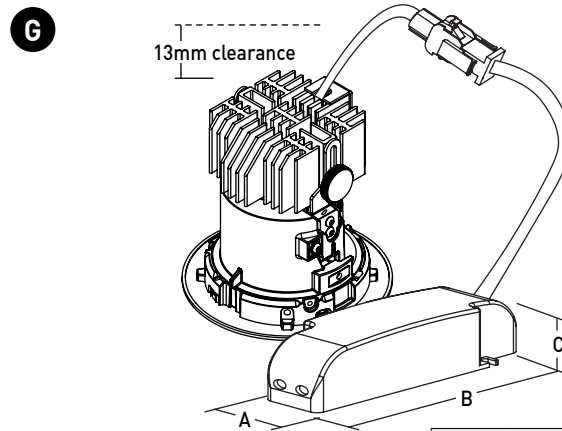
2 SERIES LED INT ADJUSTABLE

POWER SUPPLY

G FITTING WITH TETHERED POWER SUPPLY

- Requires 113mm diameter cutout.
- Tethered power supply protected wiring and quick-connect plug between fitting and power supply.
- Minimum 13mm clearance from top of fitting.
- Minimum setback from combustible and non-combustible materials of 168mm radius from fitting centerline; minimum 76mm from surfaces of power supply if not situated within above noted radius from fitting centerline.
- Minimum additional 76mm setback from insulation material with max R-Value 30 from any surface of fitting assembly.
- Minimum additional 152mm setback from polycell spray foam insulation with max R-Value 60 from any surface of fitting assembly.
- Consult factory for spacing requirements for any installations exceeding R-Value 60.
- Do not install in environments where ambient temperatures exceed 40°C (104°F).

DIMENSIONS / DRAWINGS



POWER SUPPLY DIMENSIONS			
Model	A	B	C
TR2	85mm	176mm	51mm
AN3	41mm	210mm	34mm
LN1			
EA1			
LA1			
ED1	76mm	152mm	31mm
LD1			

ZERO-SIGHTLINE INSTALLATIONS

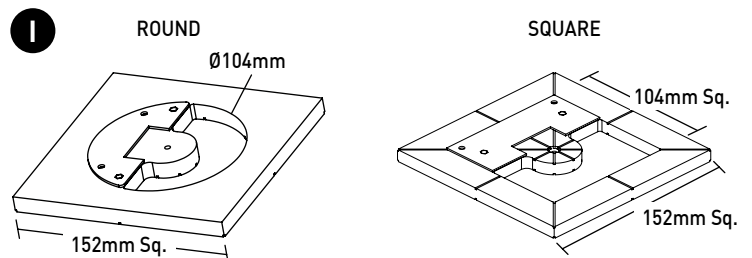
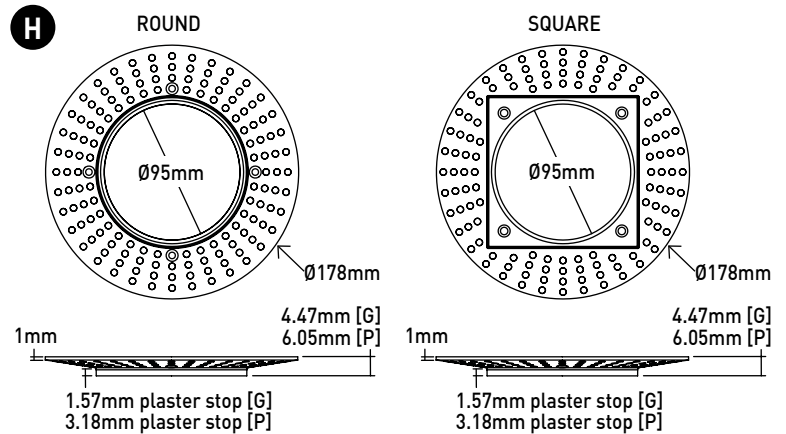
Fixture regresses flush with the finished ceiling plane when installed according to manufacturer instructions and finished ceiling conditions are met. Consult 2-Series Installation Guidelines for appropriate ceiling cutouts and instructions for proper Zero-Sightline installations.

H APPLIQUÉ

- Specified on Flange Configuration and ships with housing; ships separately on remodel installations.
- For use in sheetrock ceiling applications.
 - 1.57mm Appliqué (G Flange Configuration) recommended for gypsum ceiling installations and has plaster stop thickness of 1.57mm. Recommended for painted ceiling applications.
 - 3.18mm Appliqué (P Flange Configuration) offers double thick plaster stop of 3.18mm where a heavier application of mud is preferred. Recommended for colorfast and venetian plaster applications. Not recommended for stucco applications.

I 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, minimum one per installer required.



2 SERIES LED INT ADJUSTABLE

TECHNICAL INFORMATION

CONSTRUCTION

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

Downlight Fitting Adapter: High-impact composite and stainless steel.

Appliqué: Zinc alloy.

LED

2-step MacAdam ellipse LED module available in 80+, 90+ and 97+ CRI configurations in color temperatures of 2700K, 3000K, 3500K and 4000K. 3-step MacAdam ellipse LED module available in 90+ CRI configuration in color temperatures of 2400K. Average rated lamp life of 50,000 hours. LED and driver assemblies are field-replaceable.

WARM DIM LED

3-step MacAdam ellipse warm dim LED module available in 90+ CRI configuration. 3000K or 2700K at full brightness, warming to 1800K at full dim. Average rated lamp life of 50,000 hours. LED and driver assemblies are field-replaceable.

TUNABLE WHITE LED

3-step MacAdam ellipse tunable white LED module available in 90+ CRI configuration. Features tuning range of 2700K to 5000K and 1800K to 4000K. Average rated lamp life of 50,000 hours. Driver assemblies are field-replaceable.

POWER SUPPLY PERFORMANCE AND DIMMING INFORMATION

Power Supply	PHASE	0-10V					DALI-2		
	TR2	EA1	LA1	AN3	LN1	ED1	LD1	DD1	
Minimum °C	-20 °C	-20 °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	
Dimming %	2.0%	0.1%	0.1%	1.0%	1.0%	0.1%	0.1%	0.1%	

Note: For EA1 and LA1 drivers consult chart on page 7 to confirm appropriate dimming curve for compatibility with selected control.

LISTING

CE Listed for IP10 Dry / Damp and IP64 Wet locations. NOM Certified.

DECLARE

LBC Red List Approved.

PART L

Part L compliant for all 75+ LPW residential and 95+ LPW commercial configurations.

WEIGHT

Fitting - 1.6 lbs max

Driver - 0.4 lbs

LIMITED WARRANTY

Manufacturer's Limited Warranty guarantees product(s) listed to be free from defects in material and workmanship under normal use and service for 1-year. LED and power supplies are warranted to operate with 70% of original flux and remain within a range of 3 duv for a period of 5-years.

10-year Lutron Advantage limited warranty available on Lutron equipped systems. Warranty period begins from the date of shipment by Seller.

[Consult website for full warranty terms and conditions.](#)

CHANGE LOG

- 1.01/12/2021: ADDED 2200K, 2700K-1800K WARM DIM AND 10 DEGREE OPTIC OFFERINGS.
- 2.10/08/2019: NEW CONSOLIDATED SPEC SHEETS WITH SINGLE NOMENCLATURE FOR SPECIFICATION.
- 3.10/17/2022: REMOVED 90WA13H 3200K-1800K WARM DIM AND ADDED 90WA12H 3000K-1800K WARM DIM.
- 4.08/08/2023: UPDATED WITH NEW LED AND OPTIC SYSTEM.
- 5.02/07/2024: ADDED 2400K, LOW WATTAGE, AND TUNABLE WHITE OFFERINGS.
- 6.2/15/2024: PART L COMPLIANCE ADDED
- 7.3/15/2024: ADDED 10 DEGREE FIELD REDUCER, UPDATED 10 DEGREE PERFORMANCE DATA
- 8.2/14/2025: UPDATED FINISH OFFERINGS
- 9.5/2/2025: UPDATED WARM DIM OFFERINGS AND PERFORMANCE



2 SERIES LED INT ADJUSTABLE

DIMMING COMPATIBILITY

eldoLED DRIVER COMPATIBILITY

Power supply EA1 / LA1 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	Diva® - DVTV
Lutron Electronics	Nova® - NFTV
Merten	5729
Pass & Seymour	CD4FB-W
The Watt Stopper	DCLV1
Sensor Switch	nIO EZ
Synergy	ISD BC
Power supply EA1 / LA1 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