

FRAXION® 4 HIGH FLUX FIXED

Very versatile, and highly configurable, these 4-inch downlights are the widest aperture we offer, ideal for overall illumination in residential and commercial spaces.

PROJECT NAME:	TYPE:
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ORDERING INFORMATION - DOWNLIGHT / HOUSING

SHAPE	TRIM	RATING	FLANGE FINISH	BAFFLE FINISH	LUMEN PACKAGE	CCT	OPTIC	INSTALL TYPE	CEILING THICKNESS	DRIVER	EFFECTS DEVICE
F4R Round	FFS Standard Flange	1 Dry/Damp 2 Wet* *(Requires suction cup to service or aim & focus)	WH White	WH White	HIGH FLUX STATIC WHITE 4.38" TALL HOUSING 80C58B 80+ CRI, Delivered Lumens - 3723 90C50B 90+ CRI, Delivered Lumens - 3188	22 2200K* <small>* (Only available with 90+ CRI)</small> 27 2700K 30 3000K 35 3500K 40 4000K	15 15° 25 25° 40 40° 60 60° 85 85°* <small>* (Requires -14 WDL effects device)</small>	INTEGRAL DRIVER Y NIC	1 0.50" - 1.00" T TG 0.50" - 1.00"* <small>* (Includes adjustable housing height bracket)</small>	L23 Lutron, Hi-Lume 1% 2-Wire* <small>* (Not available for 80C58B, or 90C50B)</small>	STANDARD EFFECTS DEVICE 04 Soft Focus Lens NL No Lens* <small>* (Not available for Wet Location)</small>
	F4S Square		FFS Standard Flange	WH White							
	MFS Microflange Trimless	BK Black	BK Black								
	TFS Trimless	PR Primer	PR Primer	PR Primer							
	FFT Standard Flange Transitional Baffle	AU Cashmere Gold	AU Cashmere Gold	AU Cashmere Gold							
	MFT Microflange Transitional Baffle	AG Satin Silver	AG Satin Silver	AG Satin Silver							
	TFT Trimless Transitional Baffle	BB Burnt Bronze	BB Burnt Bronze	BB Burnt Bronze							
		00 Trimless* *(Required for trimless)	CF Custom Finish* *(Consult Factory)	CF Custom Finish* *(Consult Factory)							



PART NUMBER NOTES

- Housing and trim ship as e.g., F4RMFS1-WHWH-90C50B-3Y1-EA2
- Remote driver ships with fixture as e.g., PSF4-RMT-90C-50B-1EA2

FRAXION4 HIGH FLUX FIXED

ACCESSORIES

ROUND ALTERNATE EFFECTS DEVICES

Dry/Damp location only.

Wet location requires alternate baffle.

- HCL-F4R** Honeycomb Louver w/ Diffusion Film*
*(Not available for Warm Dim)
- CGL-F4R** Clear Glass Lens*
*(Not available for Warm Dim)
- FGL-F4R** Frosted Glass Lens
- SFL-F4R** Soft Focus Lens
- FSFL-F4R** Frosted Soft Focus Lens
- WDL-F4R** Wide Distribution Lens*
*(Required and only available for 85° beam spread)
- FLSL-F4R** Frosted Linear Spread Lens

SQUARE ALTERNATE EFFECTS DEVICES

Dry/Damp location only.

Wet location requires alternate baffle.

- HCL-F4S** Honeycomb Louver w/ Diffusion Film*
*(Not available for Warm Dim)
- CGL-F4S** Clear Glass Lens*
*(Not available for Warm Dim)
- FGL-F4S** Frosted Glass Lens
- SFL-F4S** Soft Focus Lens
- FSFL-F4S** Frosted Soft Focus Lens
- WDL-F4S** Wide Distribution Lens*
*(Required and only available for 85° beam spread)
- FLSL-F4S** Frosted Linear Spread Lens

REPLACEMENT BAFFLE ASSEMBLY (INCLUDES EFFECTS DEVICE)

ASSEMBLY	SHAPE	TRIM	RATING	FLANGE FINISH	EFFECTS DEVICE
RBA					
REPLACEMENT BAFFLE ASSEMBLY	F4R Round	FFS Standard Flange MFS Microflange TFS Trimless	1 Dry / Damp 2 Wet	WH White BK Black PR Primer AU Cashmere Gold AG Satin Silver BB Burnt Bronze CF Custom Finish* *(Consult Factory)	<p style="text-align: center;">Leave blank for standard Soft Focus Lens</p> HCL Honeycomb Louver w/ Diffusion Film* *(Not available for Wet location, or Warm Dim) CGL Clear Glass Lens* *(Not available for Warm Dim) FGL Frosted Glass Lens FSFL Frosted Soft Focus Lens WDL Wide Distribution Lens * *(Required and only available for 85° beam spread) FLSL Frosted Linear Spread Lens
	F4S Square	FFS Standard Flange MFS Microflange TFS Trimless FFT Standard Flange Transitional Baffle MFT Microflange Transitional Baffle TFT Trimless Transitional Baffle			

REPLACEMENT OPTICS

Interchangeable optics accessible through fixture aperture.

- RO-70-15-2** 15° optic
- RO-70-25-2** 25° optic
- RO-70-40-2** 40° optic
- RO-70-60-2** 60° optic

REPLACEMENT SUCTION TOOL

One included with every six fixtures designated Wet location.

- F4-TOOL-SUCTION** Allows for removal of baffle with Wet location

TG BRACKET ASSEMBLY

Supplied with ceiling thickness "T" and recommended for installations in T-Grid and furring channel up to 1.5" tall. Available for ceiling thicknesses from 0.50" - 1.00".

- DHA-TG-KIT**

HANGER BAR EXTENDER KIT

Extends hanger bars from 24.0" to 46.0" maximum.

- FRX-HBE-46** Extender, Hanger Bar

EMERGENCY LIGHTING - REMOTE MOUNT ONLY

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

- 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

FRAXION4 HIGH FLUX FIXED

PERFORMANCE - 3000K

LUMEN PACKAGE	WATTAGE	15° OPTIC SOFT FOCUS LENS		25° OPTIC SOFT FOCUS LENS		40° OPTIC SOFT FOCUS LENS		60° OPTIC SOFT FOCUS LENS		85° OPTIC WIDE DISTRIBUTION LENS	
		DELIVERED	LPW	DELIVERED	LPW	DELIVERED	LPW	DELIVERED	LPW	DELIVERED	LPW
80C58B	53	3670	69	3386	64	3723	70	3878	73	3029	57
90C50B	53	3142	59	2900	55	3188	60	3320	63	2594	49
90W19E	23	-	-	987	43	1085	47	1129	49	883	38
90W31F	27	-	-	1598	59	1757	65	1830	68	1429	53

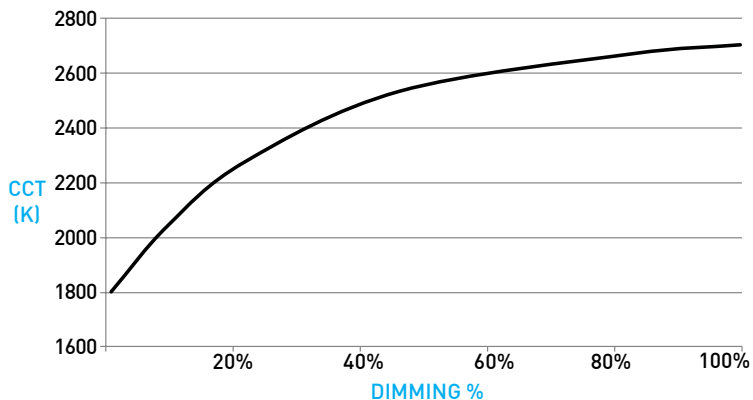
OUTPUT MULTIPLIER	
CCT	CCT SCALE
2700K	0.957
3000K	1.000
3500K	1.019
4000K	1.030

LIGHT LOSS FACTOR MULTIPLIER	
NO LENS	
CGL	1.05
SFL	1.00
FGL	0.90
FSFL	0.87
FLSL	0.83
WDL	0.78
HCL	0.65

WARM DIM PERFORMANCE

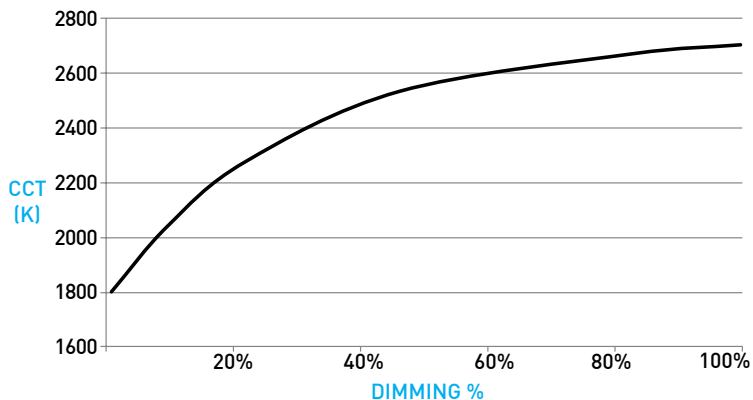
WARM DIM TO MIRROR INCANDESCENT DIMMING PROFILE

90W19E 2700K - 1800K	Full on 100%	Dimmed to 80%	Dimmed to 70%	Dimmed to 50%	Dimmed to 20%	Dimmed to 10%	Dimmed to 2%
CCT (K)	2700	2650	2620	2520	2180	1950	1800
Light Output (Lm)	1085	868	760	543	436	109	22
Power (W)	23	18	16	11	4	2	.5
Efficacy (LPW)	47	47	47	47	47	47	47



WARM DIM TO MIRROR INCANDESCENT DIMMING PROFILE

90W31F 2700K - 1800K	Full on 100%	Dimmed to 80%	Dimmed to 70%	Dimmed to 50%	Dimmed to 20%	Dimmed to 10%	Dimmed to 2%
CCT (K)	2700	2650	2620	2520	2180	1950	1800
Light Output (Lm)	1757	1406	1230	879	351	176	35
Power (W)	27	21	19	13	5	3	.5
Efficacy (LPW)	65	65	65	65	65	65	65

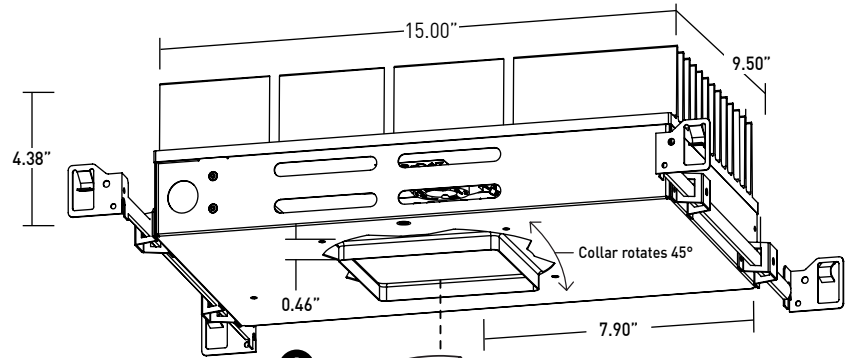


FRAXION4 HIGH FLUX FIXED

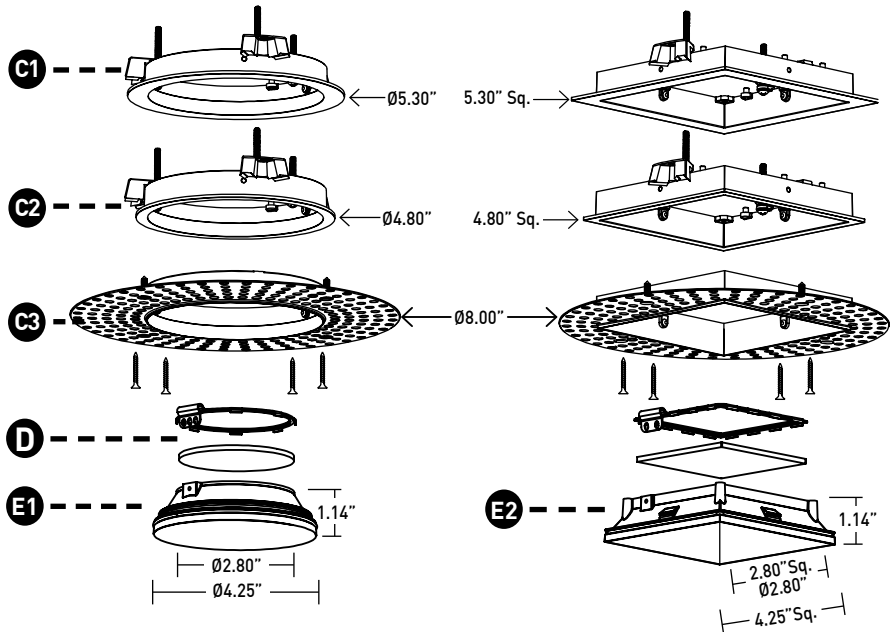
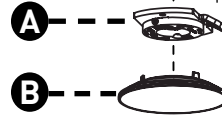
DOWNLIGHT / HOUSING

- A LED**
Integral LED module design enables field service / replacement through housing aperture.
- B OPTIC**
Proprietary optic integrates Reflection, Refraction and TIR offering 10°, 15°, 25°, 40° & 60° beams.
- C1 STANDARD FLANGE PROFILE**
Installed after ceiling is complete. Requires 4.625" (117mm) diameter cutout. Provides 0.86" (22mm) total contractor (goof) allowance with 0.50" (13mm) flange. Thickness measures 0.06" (1.5mm). Wet location features integral silicone gasket.
- C2 MICROFLANGE PROFILE**
Installed after ceiling is complete. Requires 4.625" (117mm) diameter cutout. Provides 0.42" (11mm) total contractor (goof) allowance with 0.28" (7mm) flange. Thickness measures 0.06" (1.5mm). Wet location features integral silicone gasket.
- C3 TRIMLESS PROFILE**
Installs totally flush with the ceiling with no visible trim. Appliqué includes screws for mounting and has 0.06" (1.5mm) plaster stop. Not recommended for stucco applications.
- D EFFECTS DEVICES**
Soft focus lens included and sealed in Wet location option. Fixture is limited to 1 lens. Suction tool provided for removal of wet location baffles.
- E1 ROUND BAFFLE**
Die-cast removable baffle features 72° cutoff. Minimizes aperture glare and conceals view into housing; includes silicone gasket.
- E2 SQUARE / TRANSITIONAL BAFFLE**
Die-cast removable baffle features 72° cutoff. Minimizes aperture glare and conceals view into housing; includes silicone gasket. Transitional baffle transitions from square aperture at ceiling plane to round aperture at light source.

DIMENSIONS / DRAWINGS



NOTE: Square housing shown, housing will feature round aperture for round fixtures.



FRAXION4 HIGH FLUX FIXED

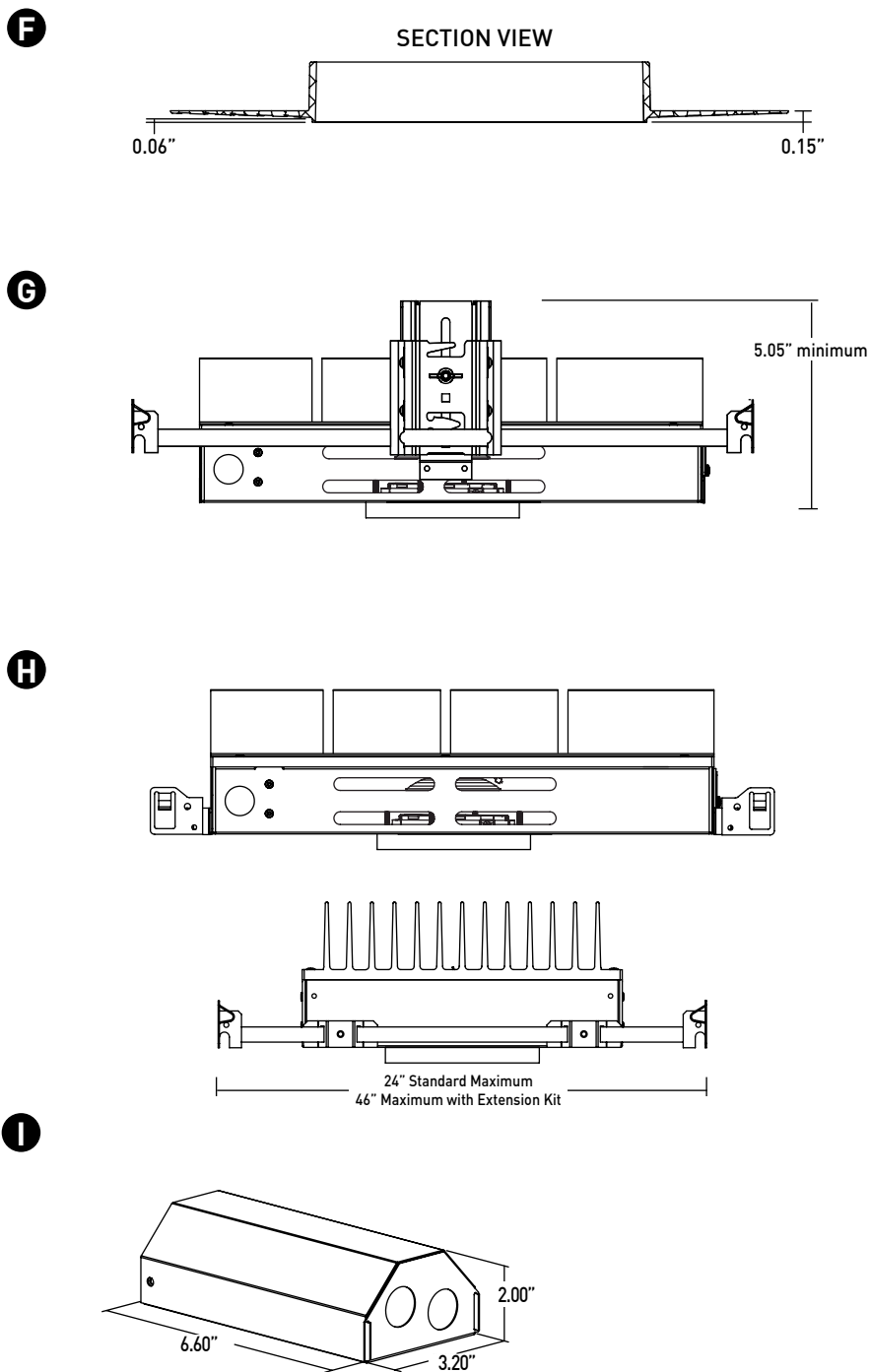
DOWNLIGHT / HOUSING

- F TRIMLESS APPLIQUÉ DETAIL**
Integrated appliqué for plaster floating directly to baffle.
- G TG BRACKET ASSEMBLY**
Adjustable height bracket assembly provided with ceiling thickness "T" and recommended for installations in T-Grid and with furring channel. Hanger bars are installed to adjustable bracket. Allows housing to be raised and lowered; ceiling thickness remains 0.5" to 1.0" max.
- H NIC HOUSING**
 - Minimum 0.50" setback from combustible and non-combustible materials on all sides and top of housing.
 - Minimum 3.00" setback from insulation material having max R-Value 30 on all sides and top of housing.
 - Minimum 6.00" setback from polycell spray foam insulation having max R-Value 60.
- I REMOTE POWER SUPPLY**
Provided with install Type "W". Remote power supply provides additional driver options. Consult installation guide for maximum allowable secondary run lengths between PSF4-RMT and fixture. Must be installed in an accessible location. See page 6 for maximum allowable wiring distances.

HOUSING NOTES

- 90W19E: Do not install in environments where ambient temperatures exceed 40°C (104°F).
- 80C58B, 90C50B, and 90W31F: Do not install in environments where ambient temperatures exceed 35°C (95°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; extend from 14.0" to 24.0", but may be field cut to accommodate narrow stud spacing. Can be extended up to 46" maximum with FRX-HBE-46 kit.
- Hanger bars and brackets add 4.00" to the overall dimension, but are excluded from the setback requirements.
- Housings for round trims feature a round aperture housing collar, and for square trims, a square housing collar, accommodating ceiling thicknesses between 0.50" and 1.00".

DIMENSIONS / DRAWINGS



FRAXION4 HIGH FLUX FIXED

TECHNICAL

CONSTRUCTION

Downlight: Painted finishes are granulated powder coat.

Housing: Aluminum and 22 Gauge galvanized steel. Extruded aluminum housing panel to act as heat-sink.

Remote Power Supply: 22 Gauge galvanized steel.

Appliqué: Zinc Alloy

STATIC WHITE LED

2-step MacAdam ellipse LED module available in 80+ and 90+ CRI configurations in color temperatures of 2700K, 3000K, 3500K and 4000K. 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. 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.

POWER SUPPLY PERFORMANCE AND DIMMING INFORMATION

	ELV	ECO	0-10V				DALI	
Power Supply	L23	LH1	AN4	LN2	EA2	LA2	ED1	LD1
Minimum °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
Dimming %	1.0%	1.0%	1.0%	1.0%	0.1%	0.1%	0.1%	0.1%

Note: For L23, LH1, AN4, EA2 and LA2 drivers consult chart on page 7 to confirm appropriate dimming curve for compatibility with selected control.

MAXIMUM ALLOWABLE REMOTE DRIVER WIRING DISTANCES

DRIVER	WIRE AWG				
	12	14	16	18	20
AN4, LN2	285'	180'	113'	71'	45'
L23, LH1	60'	40'	25'	15'	-
EA2, LA2, ED1, LD1	-	-	118'	72'	46'

LISTING

cTUVus listed to UL1598 standard for Dry / Damp and Wet locations.

U.S. Patent: 10,317,066

BUY AMERICAN ACT

All Fraxion4 High Flux fixed configurations are Buy American Act compliant.

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.

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DIMMING COMPATIBILITY

PHILIPS DRIVER COMPATIBILITY

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 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 Homeworks QS control unit	QSN-2ECO-S
GRAFIK Eye QS control unit 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 myRoom Plus power module	LQSE-2ECO-D

eldoLED DRIVER COMPATIBILITY

Power supply EA2 Manufacturer	Family/Model #
Busch-Jaeger	2112U-101
Jung	240-10
Leviton Lighting Controls	IP710-DLX
Lightolier Controls	ZP600FAM120
Merten	5729
Pass & Seymour	CD4FB-W
The Watt Stopper	DCLV1
Synergy	ISD BC
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
Power supply LA2 Manufacturer	Family/Model #
Lutron Electronics	Nova T® - NTFTV
Lutron Electronics	Diva® - DVTV
Lutron Electronics	Nova® - NFTV
Lutron Electronics	GrafixEye® GRX-TVI w GRX3503
Lutron Electronics	Energy Savr Node™ - QSN-4T16-S
Lutron Electronics	TVM2 Module
Sensor Switch	nIO EZ
ABB	SD/S 2.16.1

