ALS®
Advantage Lighting Solutions

TREA SERIES SELECTABLE LED TROFFER

Client:
Project:
Type:
Quantity:

CONSTRUCTION

22-gauge metal frame, 95% reflective white polyester powder coat bonded to phosphate-free multi-stage pretreated metal. All parts painted after fabrication to facilitate installation, increase efficiency and inhibit corrosion. All corners are rounded for safe handling. Multiple wiring entrances on driver enclosure for easy access. Integral T-bar clips for installation into T-grid ceilings.

OPTICS

Backlit design provides exceptional lighting distribution. Frosted polycarbonate lens offers edge to edge smooth illumination for maximum visual comfort.

ELECTRICAL

Long-life LEDs, coupled with a high-efficiency driver, provide superior illumination for extended service life. Greater than 70% LED lumen maintenance at 60,000 hours (L70>60,000).
Selectable lumen and CCT technology allows easy field-adjustable capability, luminaire ships with maximum output and 4000K CCT setting.
All CCTs are within 3 MacAdam ellipses.
Driver operates at 120-277V input, 0-10V dimmable driver, down to 10%.

SENSORS (OPTIONAL)

SENSOR-IFS06R "Plug-N-Play" Integral Daylight Harvesting Sensor (DC Power - Wireless Remote Control)
SENSOR-BLE-15P Integral PIR sensor ALS CONTROL bluetooth/on/off/dimming/photosensing.
SENSOR-ANT-15P Integral PIR on/off/dimming/photosensing.
CONTROL-LVFA AVI-ON Bluetooth Mesh Controller

MOUNTING

Designed to accommodate lay-in ceilings, Slot T, and T-bar suspension system for 5/8" and 3/8" width.
Built-in earthquake clips come standard.
Surface/cable mount applications, use surface mount accessories.
Plaster or sheetrock installations, select flange kit.

STANDARD FINISH

High Reflective White finish.

CERTIFICATION

Damp location label standard.
Option for "Assembled in America" upon request.
Option for "BABA" compliance upon request.
All luminaires are built to UL1598 standards and bear appropriate cULus labels.
For Emergency application, equipment with UL924 certified battery packs.
DLC® Premium (DesignLights Consortium Qualified)

WARRANTY

5 year warranty, see Limited Warranty for additional information.

TREA-4

Integral Daylight Harvesting Sensor

SHIPPING DATA

Product	Measurement	Weight
TREA-1 (2-pack)	48"L x 12"W x 3"H	16 lb
TREA-2 (2-pack)	24"L x 24"W x 3"H	15 lb
TREA-4 (2-pack)	48"L x 24"W x 3"H	24 lb

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TREA SERIES SELECTABLE LED TROFFER

ORDER INFORMATION				EXAMPLE: TREA 2
Fixture	Series	Model	Finish	Input
	TREA		**blank**	**blank**
Mounting				
Accessories				
Options				

A SERIES

TREA	Selectable Lumen and CCT LED Troffer

B MODEL

Code	Size	Power	CCT	Output
1	1x4	20W / 25W / 30W	3500K / 4000K / 5000K	up to 3750lm
2	2x2	25W / 30W / 35W	3500K / 4000K / 5000K	up to 4375lm
4	2x4	34W / 42W / 50W	3500K / 4000K / 5000K	up to 6250lm

C FINISH

blank	White

D INPUT

blank	120-277V, 0-10V Dimming

G MOUNTING

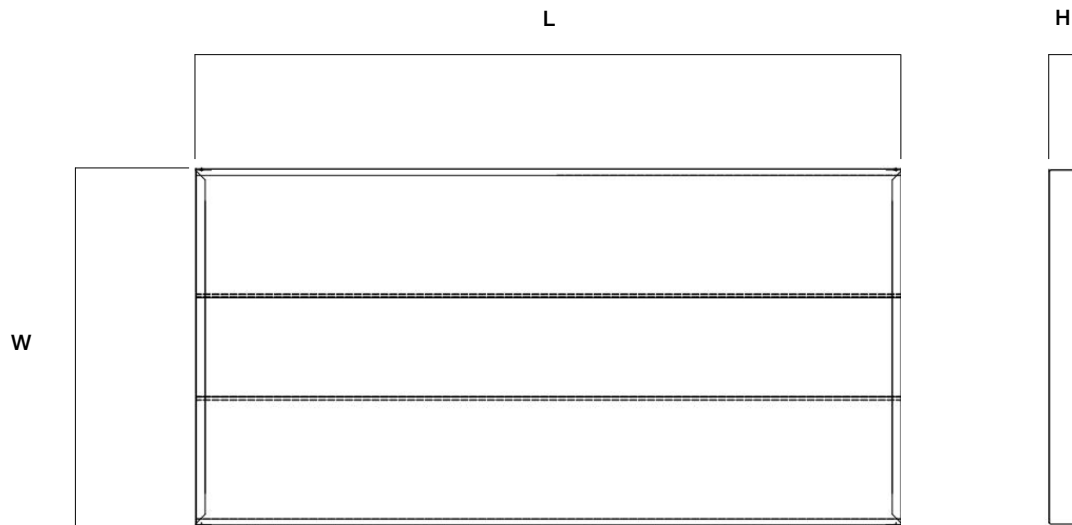| blank	Standard lay-in
MOUNT-LP-14-FGK	1x4 Flange Kit (Plaster, Sheetrock or Drywall)
MOUNT-LP-22-FGK	2x2 Flange Kit (Plaster, Sheetrock or Drywall)
MOUNT-LP-24-FGK	2x4 Flange Kit (Plaster, Sheetrock or Drywall)
MOUNT-LP-14-SMK	2" Tall 1x4 Surface Mount Kit
MOUNT-LP-22-SMK	2" Tall 2x2 Surface Mount Kit
MOUNT-LP-24-SMK	2" Tall 2x4 Surface Mount Kit

H ACCESSORIES/OPTIONS

AIA	Assembled in America, compliant with BAA (COTS)
BABA	Build America, Buy America Act (BABA) Copm
SENSOR-IFS06R*	"Plug-N-Play" Integral Daylight Harvesting Sensor (DC Power - Wireless Remote Control)
SENSOR-BLE-15P*	"Plug-N-Play" Integral Daylight Harvesting Sensor (DC Power - Bluetooth App Control)
SENSOR-ANT-15P*	Integral PIR on/off/dimming/photosensing (14V DC Power by Driver)
REMOTE-RM51	RM51 Remote Commissioning Tool for SENSOR-IFS06R
REMOTE-RC100	Handheld Remote Commissioning Tool for SENSOR-ANT
EMB-H08170**	External emergency battery 8W (120-277V)
EMB-H18170**	External emergency battery 18W (120-277V)
EMB-H40170**	External emergency battery 40W (120-277V)
-C	6-Foot Flex

*see page 5 for sensor and emb spec

DIMENSIONS

Model	W	L	H
TREA-1	11.70" (298mm)	47.80" (1213mm)	2.0" (50mm)
TREA-2	23.76" (603mm)	23.76" (603mm)	2.1" (54mm)
TREA-4	23.76" (603mm)	47.80" (1213mm)	2.1" (54mm)

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PERFORMANCE DATA

SYSTEM WATTS	SIZE	VOLTAGE	LUMEN	LPW	QTY ON PALLET
20W	1x4	120-277V	2500	125	100
25W	1x4	120-277V	3125	125	100
30W	1x4	120-277V	3750	125	100
25W	2x2	120-277V	3125	125	120
30W	2x2	120-277V	3750	125	120
35W	2x2	120-277V	4375	125	120
34W	2x4	120-277V	4250	125	60
42W	2x4	120-277V	5250	125	60
50W	2x4	120-277V	6250	125	60

DLC CODE

Part Number	DLC Part Nnumber	DLC Class
TREA-1	S-SPVG2B	Premium
TREA-2	S-VQ2AI1	Premium
TREA-4	S-8MCVZA	Premium

SENSOR SPEC

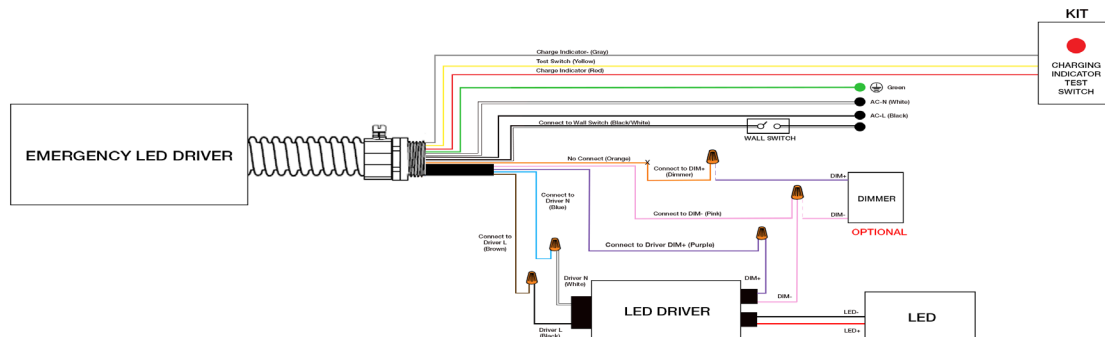| Model	Type	Mounting	Coverage	Input	Function	Programmable
SENSOR-IFS06R	PIR	15FT 20FT	40FT radius 48FT radius	12V DC	Daylight Harvesting	REMOTE-RM51
SENSOR-BLE-15P (see page 6 for detail)	PIR	Up to 13FT	15FT radius	14V DC	Bluetooth Mesh On/Off/Dimming Daylight Harvesting	ALS Control Bluetooth Mobile App
SENSOR-ANT-15P	PIR	Up to 12FT	15FT radius	14V DC	On/Off/Dimming Daylight Harvesting	REMOTE-RC100
CONTROL-LVFA (see page 7 for detail)	-	-	-	12V DC	Bluetooth Mesh On/Off/Dimming Scheduling	AVI-ON Bluetooth Mobile App

SENSOR-IFS06R

SENSOR-BLE-15P
SENSOR-ANT-15P

CONTROL-LVFA

EMB SPEC

Model	Battery Capacity	Input	Output	Output Power	Operating Temp	Installation
EMB-H08170	90mins	100-347VAC	170VDC	8W	0°C ~ 50°C 32°F ~ 122°F	Factory or Field Install
EMB-H18170	90mins	100-347VAC	170VDC	18W	0°C ~ 50°C 32°F ~ 122°F	Factory or Field Install
EMB-H40170	90mins	100-347VAC	170VDC	40W	0°C ~ 50°C 32°F ~ 122°F	Factory or Field Install

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CONTROL-LVFA SPEC
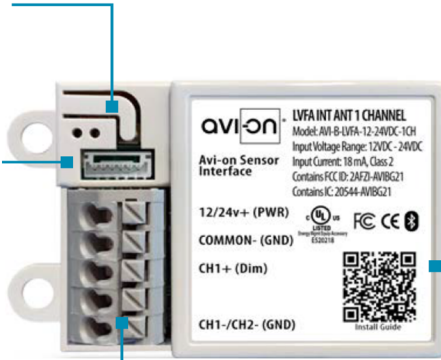
Status LEDs & Config Button
Quick and easy validation of wiring and network

Direct Connect™ Sensor Port
Simple and cost-effective addition to Avi-on sensors

Terminal Blocks & Mounting Tabs
Faster, easier and lower cost installation eliminating connectors

Internal Antenna
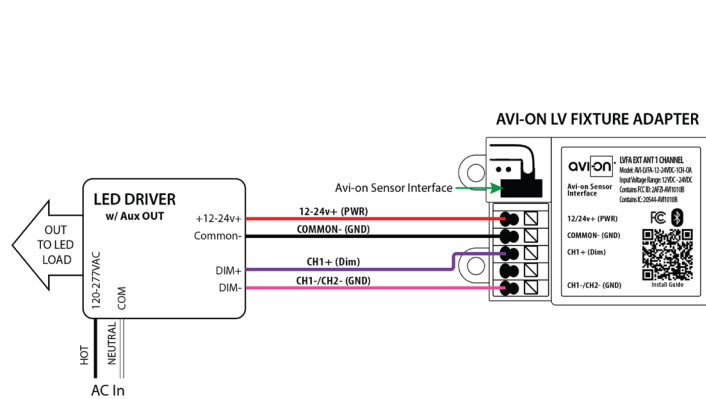Improved performance and eliminates risk of accidentally cutting a hanging wire

LVFA INT ANT 1 CHANNEL
Model: AVI-B-LVFA-12-24VDC-1CH
Input Voltage Range: 12VDC - 24VDC
Input Current: 18 mA, Class 2
Contains FCC ID: 2AFZI-AVIBG21
Contains IC: 20544-AVIBG21

Avi-on Sensor Interface

12/24v+ (PWR)
COMMON- (GND)
CH1+ (Dim)
CH1-/CH2- (GND)

SPECIFICATIONS

INPUT VOLTAGE:	12-24VDC
CURRENT:	15mA without a Sensor
	19mA with a DC PIR Sensor
	48mA with a DC Microwave Sensor
0-10V DIMMING:	12-24VDC
SIZE:	2.30in x 1.43in x 0.75in
	(58.2mm x 36.4mm x 19mm)
MOUNTING:	Removable mounting tabs
WEIGHT:	0.45 oz (16g)
OPERATING TEMP:	-22°F to +158°F (-30°C to + 70°C)

RADIO FREQUENCY:	2.4GHz
WIRELESS STANDARD:	BLE 4.2 with Mesh
POINT TO POINT RANGE*:	80ft with obstructions
	350ft unobstructed
SECURITY:	AES 128-bit encryption for device to device communication
	AES 256-bit encryption for device to cloud communication
WARRANTY:	5 years; 10 years optional
REGULATORY:	FCC: 2AFZI-AVI1010 B
	IC: 20544-AVI1010 B
	BQB: D031801, DID: 86303
	UL 916, 2043 (Plenum Rated)

*When communicating through the mesh, range is essentially unlimited (5000ft+)

WIRING DIAGRAM

AVI-ON LV FIXTURE ADAPTER

LED DRIVER w/ Aux OUT

OUT TO LED LOAD

120-277VAC

+12-24v+
Common-

DIM+
DIM-

12-24v+ (PWR)
COMMON- (GND)
CH1+ (Dim)
CH1-/CH2- (GND)

Avi-on Sensor Interface

LVFA EXT ANT 1 CHANNEL
Model: AVI-B-LVFA-12-24VDC-1CH-DX
Input Voltage Range: 12VDC - 24VDC
Contains FCC ID: 2AFZI-AVI1010B
Contains IC: 20544-AVI1010B

12/24v+ (PWR)
COMMON- (GND)
CH1+ (Dim)
CH1-/CH2- (GND)

HOT
NEUTRAL
AC In

Fixture adapter powered by LED driver auxiliary output

LOW VOLTAGE FIXTURE ADAPTER

12 VDC Power Supply

120-277VAC
COM

+12-24v+
Common-

12-24v+ (PWR)
COMMON- (GND)

Avi-on Sensor Interface

EXT ANT 1 CHANNEL
Model: AVI-LVFA-12-24VDC-1CH-DX
Input Voltage Range: 12VDC - 24VDC
Contains FCC ID: 2AFZI-AVI1010B
Contains IC: 20544-AVI1010B

12/24v+ (PWR)
COMMON- (GND)
CH1+ (Dim)
CH1-/CH2- (GND)

CH1+ (Dim)
CH1- (GND)

LED Driver

DIM+
DIM-

OUT TO LED LOAD

120-277VAC
COM

BLACK (typically)
WHITE (typically)

HOT
NEUTRAL
AC In

Fixture adapter connected to LED driver and using power supply

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ALS CONTROL

SENSOR-BLE-15P BLUETOOTH PIR SENSOR

Client:
Project:
Type:
Quantity:

FEATURE

- **Installation:** Plug-N-Play to attached fixture with quick connector
- **Commissioning:** Wirelessly through ALS Control Mobile App (iOS / Android)
- **Certification:** DLC 5.1 Networked Lighting Control System
- **Control:** Hold time, High-Low setting, continuous Bi-level dimming, Code-compliant manual-on or auto-off capability
- **Sensor:** Motion (Occupancy/Vacancy/Manual) and Daylight Harvesting
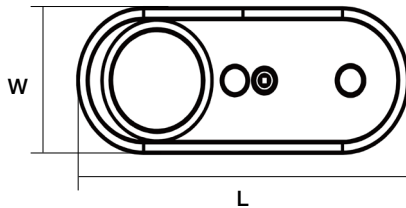- **Room and Zone Control:** Zoning and Grouping control, Scheduling

SPECIFICATIONS

SENSOR TYPE:	Passive Infrared Sensor (PIR)	**COMMISSIONING RANGE:**	50FT
WIRELESS STANDARDS:	Bluetooth SIG Mesh	**BLUETOOTH RANGE:**	Integral antenna up to 100FT
INPUT VOLTAGE:	10-14VDC, >50mA	**DETECTION ANGLE:**	360°
CONTROL OUTPUT:	0-10V	**MOUNTING HEIGHT:**	Up to 13FT
OPERATING TEMP:	-4°F ~ +140°F (-20°C ~ +60°C)	**WARRANTY:**	5 years
		IP RATING:	IP20

DIMENSIONS

L	W
2.4" (61.5mm)	1" (24.5mm)

COVERAGE PATTERNS

SIDE VIEW
(in feet)

TOP VIEW
(in feet)

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