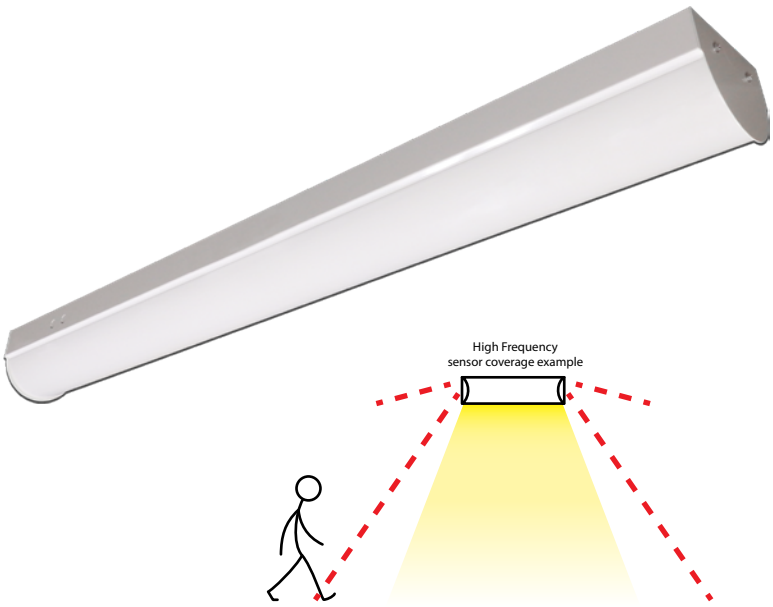
LAMARLED

occu-smart® S³ simple sensor solutions

The Titan series is part of our Occu-Smart® S³ product line. Equipped with a concealed high frequency motion sensor, the Titan HF features bi-level operation with adjustable standby light levels, time delay and daylight hold-off for maximum energy savings. If all the features are just too much for your application, a simple on/off version is available too!

TTH titan series | high frequency motion sensor | adjustable standby or on/off



High frequency motion sensors can detect motion through many materials including glass, sheet rock walls, wood doors and the lens of the fixture, enabling the sensor to be hidden from view - consult factory to see if an HF sensor is the right fit for your application

Features and Specifications:

Construction:

- Housings are die-formed of code gauge steel for long-term dependable service
- Knockouts are provided for convenient mounting with recessed or surface power feeds
- Toolless removal of board gear tray allow for easy installation and field maintenance
- Frosted ribbed polycarbonate diffuser retained by injection molded end caps

Sensor Options:

- High Frequency motion sensor, internally mounted (on/off)
- High Frequency motion sensor with adjustable standby light level

Size Options:

- Available in 2' and 4' lengths (nominal)

Listing & Ratings:

- Fixtures are U.L. Certiÿed and Union made in the USA
- Electrical components are U.L. listed or recognized

Mounting Options:

- Stem mount or surface mount on ceiling or wall

Driver:

- Universal voltage 120-277V standard
- Custom driver tuning available for specific lumen requirements
- Optional emergency backup available including "UL924" approved

Warranty:

- 5 years - part replacement only (see our terms & conditions page at www.lamarled.com for details)

See page 2 for lumen chart & dimensions
See page 3 for sensor details

Ordering Guide / Example

TTHA48M-50

TTH					
Series	Standby Options	Size	Power	CCT	General Options
TTH = Titan high frequency	**F** = High frequency occupancy sensor on/off (internal) **A** = High frequency occupancy sensor adjustable standby 10, 20, 30 or 50%	**24** = 2' nominal **48** = 4' nominal	**L** = Low **M** = Medium **H** = High	**30** = 3000K **35** = 3500K **40** = 4000K **50** = 5000K	**EM** = Emergency pack >90 min., >500 lumens **EMB** = BABA Compliant Emergency Pack 90 min., min 500 lumens **EMH** = Emergency pack >90 min., >1400 lumens (4ft only) **ESRU** = 120V/277V emergency shunt relay

Consult factory for additional options not shown or listed

Correlated Color Temperatures (CCTs) fall within the nominal range as per ANSI C78.377A

Accessories (order separately)

HRC = HF sensor remote control

Project Information:

Job Name: _____ Fixture Type: _____

Catalog #: _____ Date: _____

Comments: _____

Certification & Listings:

5 YEAR WARRANTY · UL CERTIFIED · 120-277V Universal · UNION MADE IN THE USA · RoHS COMPLIANT · CRI 80+

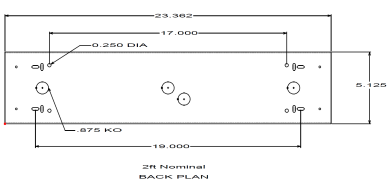
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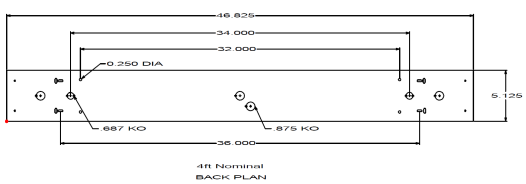
Specifications subject to change without notice - Rev 0623

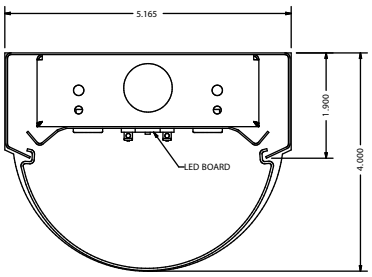
TTH titan series | high frequency motion sensor | adjustable standby or on/off

BEFORE INSTALLATION, PLEASE CONSULT YOUR LOCAL ORDINANCES AND BUILDING CODES FOR COMPLIANCE

Dimensions







When used in draft prone areas, fixtures with high frequency sensors should be rigidly mounted

LED Lumen/Wattage Chart - 4000K

High Mode

	Low (L)	Medium (M)	High (H)
2′ (1 Board)	11.7W - 1370 lu	17.3W - 1618 lu	26W - 3045 lu
4′ (2 Boards)	19.6W - 2716 lu	29.4W - 3462 lu	50.5W - 5920 lu

Low Mode Wattage

	Low (L)	Medium (M)	High (H)
2′ (1 Board)	10% - 4.8W 20% - 5.3W 30% - 5.8W 50% - 7.3W	10% - 4.7W 20% - 6.0W 30% - 7.4W 50% - 10.3W	10% - 4.6W 20% - 7.7W 30% - 9.5W 50% - 14.5W
4′ (2 Boards)	10% - 4.8W 20% - 6.3W 30% - 9.1W 50% - 11.4W	10% - 4.8W 20% - 8.2W 30% - 13.5W 50% - 29.4W	10% - 7.3W 20% - 14.2W 30% - 20.5W 50% - 27.7W

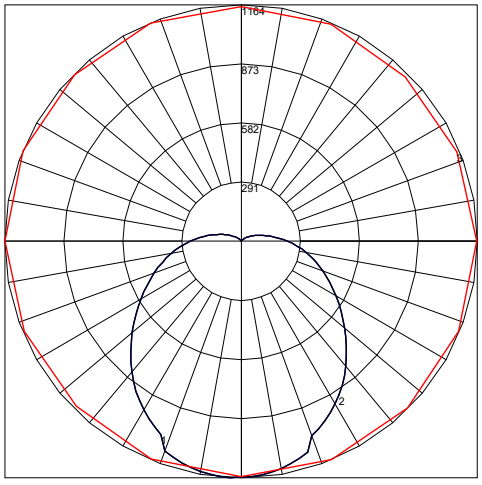
Photometrics TT(H,U)48M-4

Luminaire Lumens 3,462 / Luminaire Efficacy Rating (LER) 111 / Total Luminaire Watts 31.1
Spacing Criterion (0-180) 1.20 Spacing Criterion (90-270) 1.10

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	93
1	105	100	95	91	102	97	92	88	91	88	84	86	83	80	81	79	77	74
2	95	87	79	73	92	84	77	72	79	74	69	75	70	66	71	67	64	61
3	87	76	67	61	84	74	66	60	70	63	58	66	60	56	62	58	54	51
4	80	67	58	51	77	65	57	51	62	55	49	59	53	48	56	50	46	44
5	73	60	51	44	71	59	50	44	56	48	42	53	46	41	50	45	40	38
6	68	54	45	39	65	53	44	38	50	43	37	48	41	36	46	40	35	33
7	63	49	40	34	61	48	40	34	46	38	33	44	37	32	42	36	32	29
8	59	45	36	31	57	44	36	30	42	35	30	40	34	29	38	33	28	26
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	34	28	24	33	27	23	22



ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	109.41
10-20	306.89
20-30	442.76
30-40	518.19
40-50	517.31
50-60	458.30
60-70	372.82
70-80	281.74
80-90	196.15
90-100	125.36
100-110	72.21
110-120	36.66
120-130	16.00
130-140	5.90
140-150	1.48
150-160	0.41
160-170	0.37
170-180	0.15

Maximum Candela = 1163.582 Located at Horizonal Angle = 180, Vertical Angle = 2.5
#1 - Vertical Plane Through Horizontal Angels (180-0) (Through Max. Cd.)
#2 - Vertical Plane Through Horizontal Angels (0-180)
#3 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Specifications subject to change without notice - Rev 0623

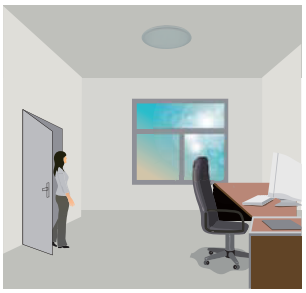
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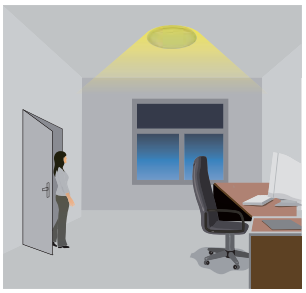
Sensor Features/Details

Tri-level dimming control (corridor function)

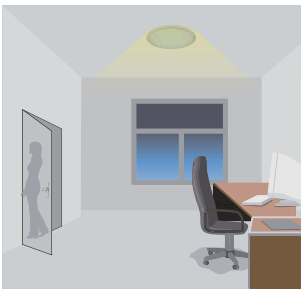
Tri-level dimming control sensors offer 3 levels of light: 100% -->dimmed light (10%, 20%, 30% or 50% optional) -->off; And 2 periods of selectable waiting time: Motion hold-time and stand-by period; selectable daylight threshold and freedom of detection area



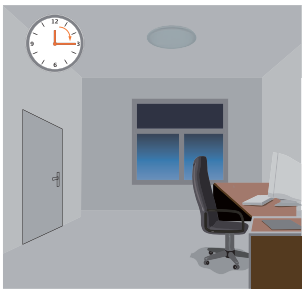
With sufficient natural light, the light does not switch on when presence is detected



With insufficient natural light, the sensor switches the light on automatically when a person enters the room



After hold-time, the light dims to stand-by level or turns off completely if surrounding natural light is above the daylight threshold



Light switches off automatically after the stand-by period elapses

Features:

- Adjustable detection area
- Hold-time
- Daylight threshold
- Stand-by period
- Stand-by dimming level
- Sensor antenna interface

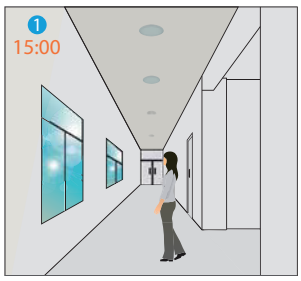
Factory set for bi-level operation 100%/10%

Tri-level dimming default factory setting = 10% bi-level
Off function = disabled

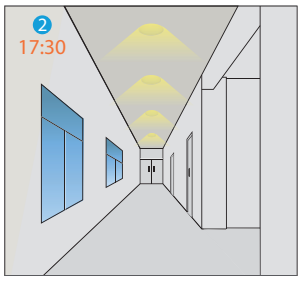
Daylight monitoring function default factory setting = disabled

Daylight monitoring function

1) With sufficient natural light, the light will not turn on when motion is detected
2) After hold-time, the light turns off completely if surrounding natural light is sufficient
3) When stand-by period is preset at "+∞", the light will turn off completely when surrounding natural light is sufficient during stand-by period and turn on at dimming level automatically when natural light is below daylight threshold



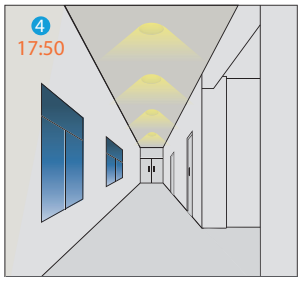
With sufficient natural light, the light does not switch on even when there is motion detected



At dusk, as the natural light drops below threshold value, the sensor turns the light on at the dimmed level



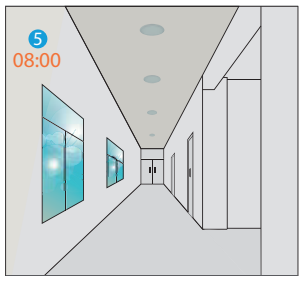
The light switches on at 100% when there is motion detected



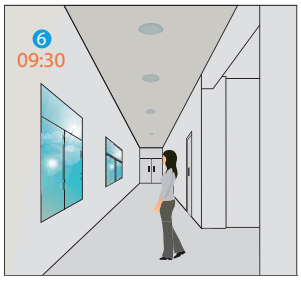
Light dims to stand-by level after the hold-time



100% on when motion is detected and dims to 10% in long absence



At dawn, light turns off completely when natural light reaches above daylight threshold



Light does not swtich on even when motion is detected during the daytime

Settings on this demonstration:
Hold-time = 10min
Daylight threshold = 50lux
Stand-by period +°
Stand-by dimming level = 10%

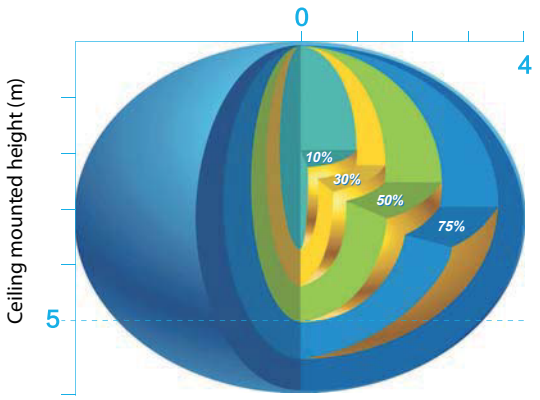
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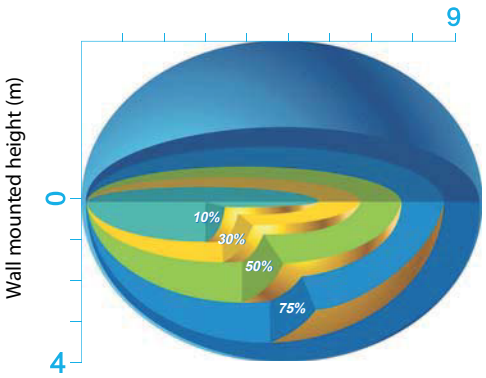
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Sensor Features/Details Continued

Detection pattern



Ceiling mounted detection pattern (m)



Wall mounted detection pattern (m)

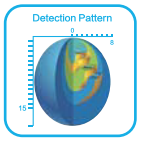












Sensor Accessories



HRC = High frequency sensor remote control

For applications with backup generators requiring that connected bi-level lighting to be switched to full light output during power outages regardless of occupancy, we recommend our TTH series with emergency shunt relay (ESRU)

LAMAR LED assumes no responsibility for misapplication of fixtures
Due to the rapid advancements in LED technology, please consult our website for the most current technical data.

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