

Alphalite

INFINITY LED LINEAR STRIP

PROJECT NAME

CATALOG NO.

TYPE

DATE

NOTE

IRT Series

Infinity Retrofit Kit Series

DESCRIPTION

The Infinity LED Troffer Retrofit Kit series combines the benefits of long life, controllability, and energy savings with elegant design and superior quality of light. The IRT retrofit solution optimizes LED optics and electronics to deliver energy savings and high performance while being extremely quick and easy to install.

APPLICATION

Indoor general/ambient illumination. Idea for offices, retail, and other architectural spaces that demand energy demand reduction and high quality light.

SPECIFICATION FEATURES

Construction

Rugged construction: solid die-formed, cold-rolled steel. Interior utilizes highly reflective powder coat finish. All surfaces coated and baked post-fabrication with high gloss powder-paint. Diffuser lens provides even and consistent light while eliminating pixelation. Tool-less removal of diffuser allows access to LED array. LED module and driver are replaceable. Easy and convenient installation utilizes existing luminaire body, reduces labor hours.

Electrical

Luminaire utilizes long life, high efficacy LEDs and a highly efficient, reliable LED driver. 120V-277V input voltage for increased versatility. 0-10V continuous dimming comes standard. Ideal when used in conjunction with controls and sensors. Comes equipped with quick disconnect for compliance with US code

Mounting

Installs within existing troffer and louvers. Utilizes existing luminaire body, eliminating the need to remove and dispose of old hardware. LED module arrays and drivers accessible from fixture during service and operation, no need to access via plenum.

Optics

Occupants can realize a productive and comfortable atmosphere through enhanced light quality and distribution. Diffuser shape, pattern, and opacity designed in conjunction with precisely-engineered reflector cavity angles to distribute LED light consistently, reducing glare and pixelation.

Finish

Highly reflective powder coat finish. Baked white matte paint, applied after fabrication.

Certifications / Regulatory

UL/cUL listed. All components used have UL approval. UL Class 2. Power supply: SCP, OTP, OVP protection, FCC Part 15 Class B, UL8750 Class 2. DLC QPL.

Warranty

7-year limited warranty. See complete warranty terms for details.



Quick Ship Product

IRT-24VL(25)/840

IRT-24L(38)/840

IRT-24H/835

IRT-24H(44)/840

IRT-24H(44)/850

IRT-22L(25)/840

IRT-22H(34)/840

ORDERING INFORMATION

Sample Number: IRT-24H(44)/840

IRT	22	H(40)	8	40	(Blank)	(Blank)
Series	Form Factor	Lumen Package	CRI	CCT	Input Voltage	Dimming
IRT - Infinity LED	22 - 2'x2'	VL - Very Low Wattage	8 - 83+ CRI	35 - 3500K	(Blank) -	(Blank) - 0-10V
Troffer Retrofit Kit	24 - 2'x4'	L - Low Wattage		40 - 4000K	120V-277V	
	14 - 1'x4'	H - High Lumen		50 - 5000K	347 - 347V	

*see energy data for details

Options

Controls

DMMS - Integrated step dimming
microwave motion sensor

MMS - Integrated step dimming
microwave motion sensor

DL - Integrated daylight harvesting

SMC - Wireless Smart Control System

Emergency Backup

EM700 - 700lm

EM1400 - 1400lm

EM2000 - 2000lm



Specifications and dimensions subject to change without notice.

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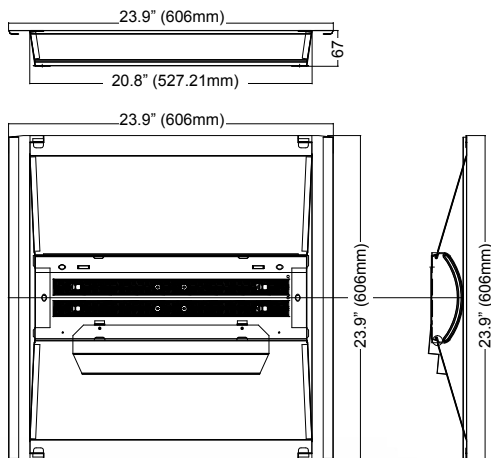
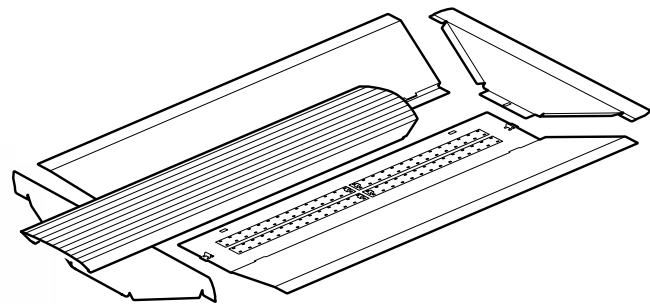
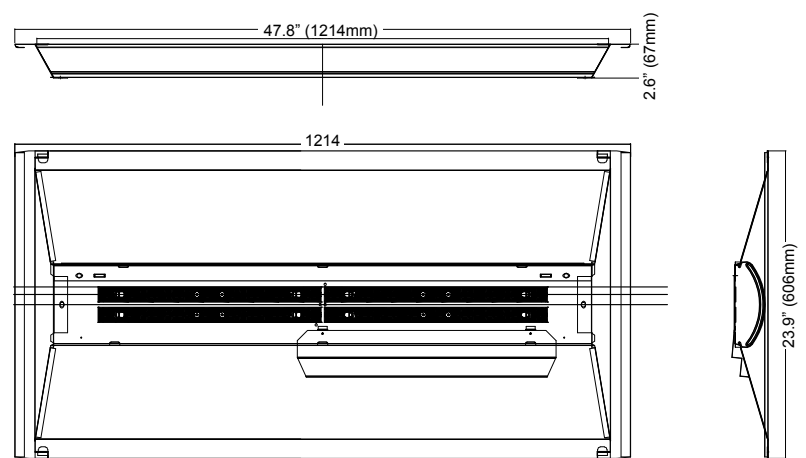
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SUMMARY

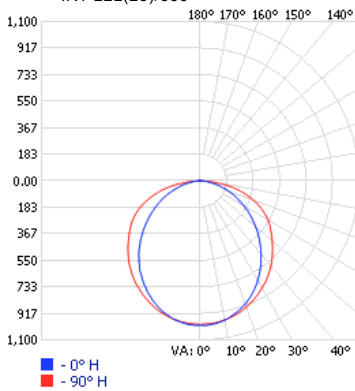
Input Voltage	120V-277V
Input Power	See energy data for details
Power Factor	> 0.95
THD (Max.)	10%
Efficacy	> 125 LPW
Delivered Lumens	See energy data for details
Controls/ Dimming	Full Range 0-10V dimming standard
Dimming Range	10-100%
CRI	> 83
CCT	3500K, 4000K, 5000K
Operating Temp.	-20 ~ +55 C
Rated Life	70,000 hours

ENERGY PERFORMANCE DATA

Form Factor	Part No.	Rated Wattage (W)	Tested Wattage (W)	Delivered Lumens (lm)	Efficacy (lm/W)
2' x 2'	IRT-22L(25)/835	25	24	3000	125
	IRT-22L(25)/840			3072	128
	IRT-22L(25)/850			3096	129
	IRT-22H(34)/835	34	33	4026	122
	IRT-22H(34)/840			4158	126
	IRT-22H(34)/850			4224	128
2' x 4'	IRT-24VL(23S)/835	23	23	2976	130
	IRT-24VL(23S)/840			3036	132
	IRT-24VL(23S)/850			3059	133
	IRT-24L(38)/835	38	36	4500	125
	IRT-24L(38)/840			4680	130
	IRT-24L(38)/850			4716	131
	IRT-24H(44)/835	44	41	5125	125
	IRT-24H(44)/840			5330	130
	IRT-24H(44)/850			5371	131
1' x 4'	IRT-14L(30)/835	30	30	3750	125
	IRT-14L(30)/840			3780	126
	IRT-14L(30)/850			3810	127

PHYSICAL PARAMETERS
DIMENSION
IRT-22

IRT-24


IRT-22L(25)/835



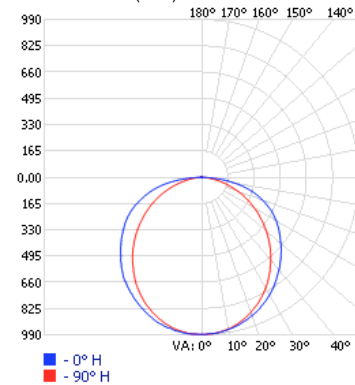
Zonal Lumen Summary

ZONE	LUMENS	% LUMINAIRE
0-30	766.2	26.50%
0-40	1,248.90	43.30%
0-60	2,203.80	76.40%
60-90	673.4	23.30%
90-120	4.6	0.20%
0-90	2,877.30	99.70%
90-180	9.1	0.30%
0-180	2,886.40	100%

Coefficients of Utilization - Zonal Cavity Method

		EFFECTIVE FLOOR CAVITY REFLECTANCE: 20%																	
RCC %:	80	70							50				30		10				0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0	
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1	
1	1.08	1.03	0.99	0.95	1.05	1.01	0.97	0.83	0.97	0.93	0.9	0.93	0.9	0.87	0.89	0.87	0.85	0.83	
2	0.98	0.9	0.82	0.77	0.95	0.88	0.81	0.7	0.84	0.79	0.74	0.81	0.76	0.72	0.78	0.74	0.7	0.68	
3	0.89	0.78	0.7	0.63	0.87	0.77	0.69	0.59	0.74	0.67	0.62	0.71	0.65	0.6	0.68	0.63	0.59	0.57	
4	0.82	0.69	0.6	0.53	0.79	0.68	0.6	0.5	0.65	0.58	0.52	0.63	0.57	0.51	0.61	0.55	0.51	0.49	
5	0.75	0.62	0.53	0.46	0.73	0.61	0.52	0.44	0.59	0.51	0.45	0.56	0.5	0.45	0.55	0.49	0.44	0.42	
6	0.69	0.56	0.47	0.4	0.67	0.55	0.46	0.38	0.53	0.45	0.39	0.51	0.44	0.39	0.49	0.43	0.39	0.37	
7	0.64	0.5	0.42	0.35	0.62	0.5	0.41	0.34	0.48	0.4	0.35	0.47	0.4	0.35	0.45	0.39	0.34	0.32	
8	0.6	0.46	0.37	0.31	0.58	0.45	0.37	0.31	0.44	0.36	0.31	0.43	0.36	0.31	0.41	0.35	0.31	0.29	
9	0.56	0.42	0.34	0.28	0.54	0.42	0.34	0.28	0.4	0.33	0.28	0.39	0.33	0.28	0.38	0.32	0.28	0.26	
10	0.52	0.39	0.31	0.26	0.51	0.38	0.31	0.25	0.37	0.3	0.25	0.36	0.3	0.25	0.36	0.3	0.25	0.23	

IRT-24VL(23S)/835



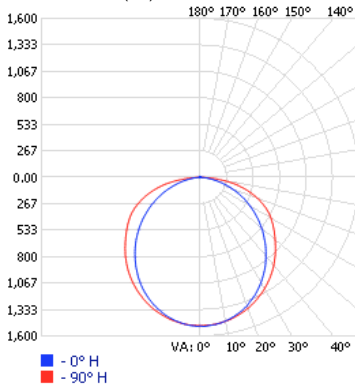
Zonal Lumen Summary

ZONE	LUMENS	% LUMINAIRE
0-30	764	25.70%
0-40	1,251.00	42%
0-60	2,232.20	75%
60-90	732.2	24.60%
70-100	344.6	11.60%
90-120	6.5	0.20%
0-90	2,964.40	99.60%
90-180	12.9	0.40%
0-180	2,977.40	100%

Coefficients of Utilization - Zonal Cavity Method

		EFFECTIVE FLOOR CAVITY REFLECTANCE: 20%																	
RCC %:	80	70				50				30				10				0	
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0	
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1	
1	1.08	1.03	0.98	0.94	1.05	1	0.96	0.83	0.96	0.93	0.89	0.92	0.89	0.87	0.88	0.86	0.84	0.82	
2	0.98	0.89	0.82	0.76	0.95	0.87	0.8	0.69	0.83	0.78	0.73	0.8	0.75	0.71	0.77	0.73	0.69	0.67	
3	0.89	0.78	0.69	0.62	0.86	0.76	0.68	0.58	0.73	0.66	0.61	0.7	0.64	0.59	0.67	0.63	0.58	0.56	
4	0.81	0.69	0.59	0.53	0.79	0.67	0.59	0.49	0.65	0.57	0.51	0.62	0.56	0.51	0.6	0.54	0.5	0.48	
5	0.74	0.61	0.52	0.45	0.72	0.6	0.51	0.43	0.58	0.5	0.44	0.56	0.49	0.44	0.54	0.48	0.43	0.41	
6	0.69	0.55	0.46	0.39	0.67	0.54	0.45	0.38	0.52	0.44	0.39	0.5	0.43	0.38	0.49	0.43	0.38	0.36	
7	0.64	0.5	0.41	0.35	0.62	0.49	0.4	0.33	0.47	0.4	0.34	0.46	0.39	0.34	0.44	0.38	0.33	0.31	
8	0.59	0.45	0.37	0.31	0.58	0.45	0.36	0.3	0.43	0.36	0.3	0.42	0.35	0.3	0.41	0.35	0.3	0.28	
9	0.55	0.42	0.33	0.28	0.54	0.41	0.33	0.27	0.4	0.32	0.27	0.39	0.32	0.27	0.38	0.31	0.27	0.25	
10	0.52	0.38	0.3	0.25	0.51	0.38	0.3	0.24	0.37	0.3	0.25	0.36	0.29	0.25	0.35	0.29	0.25	0.23	

IRT-24L(38)/835



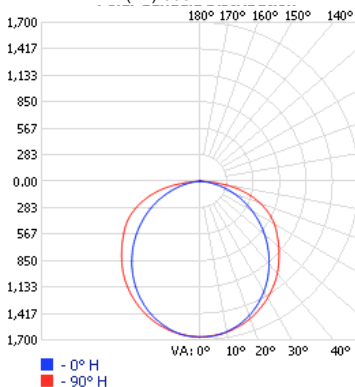
Zonal Lumen Summary

ZONE	LUMENS	% LUMINAIRE
0-30	1,158.10	25.80%
0-40	1,895.30	42.20%
0-60	3,376.10	75.10%
60-90	1,100.30	24.50%
70-100	513.8	11.40%
90-120	9.3	0.20%
0-90	4,476.50	99.60%
90-180	18.9	0.40%
0-180	4,495.30	100%

Coefficients of Utilization - Zonal Cavity Method

		EFFECTIVE FLOOR CAVITY REFLECTANCE: 20%																
RCC	80	70				50				30				10				0
%:																		
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1
1	1.08	1.03	0.98	0.94	1.05	1	0.96	0.83	0.96	0.93	0.9	0.92	0.89	0.87	0.88	0.86	0.84	0.82
2	0.98	0.89	0.82	0.76	0.95	0.87	0.8	0.69	0.83	0.78	0.73	0.8	0.75	0.71	0.77	0.73	0.7	0.67
3	0.89	0.78	0.69	0.62	0.86	0.76	0.68	0.58	0.73	0.66	0.61	0.7	0.64	0.6	0.68	0.63	0.58	0.56
4	0.81	0.69	0.6	0.53	0.79	0.67	0.59	0.5	0.65	0.57	0.51	0.62	0.56	0.51	0.6	0.54	0.5	0.48
5	0.74	0.61	0.52	0.45	0.72	0.6	0.51	0.43	0.58	0.5	0.44	0.56	0.49	0.44	0.54	0.48	0.43	0.41
6	0.69	0.55	0.46	0.39	0.67	0.54	0.45	0.38	0.52	0.44	0.39	0.5	0.44	0.38	0.49	0.43	0.38	0.36
7	0.64	0.5	0.41	0.35	0.62	0.49	0.4	0.33	0.47	0.4	0.34	0.46	0.39	0.34	0.44	0.38	0.34	0.32
8	0.59	0.45	0.37	0.31	0.58	0.45	0.36	0.3	0.43	0.36	0.3	0.42	0.35	0.3	0.41	0.35	0.3	0.28
9	0.55	0.42	0.33	0.28	0.54	0.41	0.33	0.27	0.4	0.33	0.27	0.39	0.32	0.27	0.38	0.32	0.27	0.25
10	0.52	0.38	0.3	0.25	0.51	0.38	0.3	0.25	0.37	0.3	0.25	0.36	0.29	0.25	0.35	0.29	0.25	0.23

IRT-24H(44)/835



Zonal Lumen Summary

ZONE	LUMENS	% LUMINAIRE
0-30	1,288.80	25.70%
0-40	2,109.10	42.10%
0-60	3,758.40	75.10%
60-90	1,227.10	24.50%
70-100	573.7	11.50%
90-120	10.6	0.20%
0-90	4,985.50	99.60%
90-180	21.1	0.40%
0-180	5,006.60	100%

Coefficients of Utilization - Zonal Cavity Method

		EFFECTIVE FLOOR CAVITY REFLECTANCE: 20%																
RCC	80	70				50				30				10				0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1
1	1.08	1.03	0.98	0.94	1.05	1	0.96	0.83	0.96	0.93	0.89	0.92	0.89	0.87	0.88	0.86	0.84	0.82
2	0.98	0.89	0.82	0.76	0.95	0.87	0.8	0.69	0.83	0.78	0.73	0.8	0.75	0.71	0.77	0.73	0.7	0.67
3	0.89	0.78	0.69	0.62	0.86	0.76	0.68	0.58	0.73	0.66	0.61	0.7	0.64	0.6	0.68	0.63	0.58	0.56
4	0.81	0.69	0.6	0.53	0.79	0.67	0.59	0.5	0.65	0.57	0.51	0.62	0.56	0.51	0.6	0.54	0.5	0.48
5	0.74	0.61	0.52	0.45	0.72	0.6	0.51	0.43	0.58	0.5	0.44	0.56	0.49	0.44	0.54	0.48	0.43	0.41
6	0.69	0.55	0.46	0.39	0.67	0.54	0.45	0.38	0.52	0.44	0.39	0.5	0.44	0.38	0.49	0.43	0.38	0.36
7	0.64	0.5	0.41	0.35	0.62	0.49	0.4	0.33	0.47	0.4	0.34	0.46	0.39	0.34	0.44	0.38	0.34	0.32
8	0.59	0.45	0.37	0.31	0.58	0.45	0.36	0.3	0.43	0.36	0.3	0.42	0.35	0.3	0.41	0.35	0.3	0.28
9	0.55	0.42	0.33	0.28	0.54	0.41	0.33	0.27	0.4	0.33	0.27	0.39	0.32	0.27	0.38	0.32	0.27	0.25
10	0.52	0.38	0.3	0.25	0.51	0.38	0.3	0.25	0.37	0.3	0.25	0.36	0.29	0.25	0.35	0.29	0.25	0.23

-DMMS/MMS control pre-commissioning**Sample Number: -MMS (10-5M-L3-S10M)**

10	3M	L3	S10M	(Blank)	
Detection Area 10 - 100% 7 - 75% 5 - 50% 1 - 10%	Hold Time 30M - 30 min. 20M - 20 min. 10M - 10 min. 5M - 5 min. 1M - 1 min. 30S - 30 sec. 5S - 5 sec.	Low Mode L5 - 50% L3 - 30% L2 - 20% L1 - 10%	Stand-by Period SN - ∞ S1H - 1 hr. S30M - 30 min. S10M - 10 min. S5M - 5 min. S10S - 10 sec. (Blank) - Disable	Daylight Sensor (Blank) - Disable D50 - 50 lux D10 - 10 lux D2 - 2 lux	
Detection Area: Detection area can be reduced to fit precisely each application. Hold Time: The time period the luminaire remains at 100% illumination after no motion detected. Low Mode: The selected low light level after the hold time. Stand-by Period: The time period the luminaire remains at "Low Mode" before it completely switched off in the long absence of people. When set to "∞" mode, the low light level is maintained until motion is detected. Daylight Sensor: The sensor can be set to only allow the luminaire to illuminate below a defined ambient brightness threshold. When set to "Disable" mode, the daylight sensor will switch on the luminaire when motion is detected regardless of ambient light level. **Noted that daylight sensor is active only when the luminaire switches off**					

WIRELESS SMART CONTROL SYSTEM (ASMC)

The Alphasite Wireless Smart Control System is an ideal choice to provide convenient control of lighting. The LED controller uses wireless technology to communicate with other self-powered products in the system and provides an amazingly simple solution for dimming control of LED lighting

APPLICATION

Versatile solution for general purpose applications. Ideal for multi level building, offices, school, warehouse, manufacturing facilities, and spaces that demand energy demand reduction and high quality light.

BENEFITS

- Reliable, longer indoor range wireless communication
- Easy Design-in
- License-free
- Self-powered
- Lower energy costs
- Lower installation costs
- Strength of interoperability
- Convenient access to replaceable, standard components reduces life cycle costs

