

# Si-27

27 Watt Pure Sine Wave - Self Testing  
Emergency Lighting Inverter with  
"Power Share Technology"



### Specifiers reference:

Project: \_\_\_\_\_  
Type: \_\_\_\_\_  
Model #: \_\_\_\_\_  
Comments: \_\_\_\_\_

### Product Summary

- Approvals** ..... UL Listed to UL924
- Input Voltage** ..... (Universal Input) 120 - 277 Vac, 50 or 60Hz
- Input Current** ..... 0.250 A (max)
- Output** ..... 120 - 277 Vac, 50 or 60 Hz  
Auto setting output voltage equal to input voltage
  
- Output Power and Temperature**
  - Max. 27W- Ta 0-55°C (32 to 131°F)
  - FEMA 2 Hour run time Max. 20W- Ta 0-55°C (50 to 131°F)
- Operating Time** ..... 90 Minutes minimum  
can be Prorated to 2 hours
  
- Auto Test** ..... Monthly and Annual
- Transfer Time** ..... 1 second to Power Share
- Power Share Technology** ... allows for up to 27 W emergency of max.  
110 W of normal luminaire power  
(field programmable to 30%) for max. 80W  
of normal luminaire power
- Recharge Time** ..... 24 Hours
- Remote Mounting Distance** ..... 1,000 ft (max. w/ 18ga wire)
- Battery** ..... Lithium
- Dimensions** ..... 13.54" L x 3.23" W x 1.18" D
- Weight** ..... 3.0 lbs.
- Warranty** ..... 5 years full. See website for warranty details

### Description

The Assurance Emergency Lighting Si-27 is a compact, versatile Auto-Test Sine Wave output inverter designed for designated emergency lighting fixtures and includes PST- Power Share Technology. In the event of a power failure, the inverter will automatically supply up to 27 watts of emergency power to LED or fluorescent luminaires for a minimum of 90 minutes. It can operate with a single or multiple switched, dimmed, non-switched and emergency only luminaires. It can operate as a stand alone 27 watt mini inverter or used with 0-10Vdc controlled dimmable luminaires up to 110 W (or 80W\*\*) and apply approximately 2 Vdc (or 3Vdc\*\*) to the emergency luminaire dimming driver in the emergency operation to achieve 20% (or 30%\*\*) of the luminaire power for emergency fixture(s). It can be used with single and multiple channel LED drivers and Type A, B or C TLED lamps. The emergency output will be up to 27 W at temperatures of (0-55C), 20W for 2 hours (0-55C).

### Specifications

The Assurance Emergency Lighting Si-27 is a compact Auto Test pure sine wave output inverter designed for designated emergency lighting fixtures and includes PST- Power Share Technology. For 0-10Vdc dimming applications, the Power Share Technology allows for normal dimming to pass to the normal/emergency luminaire in normal operation and applies approximately 2 Vdc ( or 3Vdc\*\*) to the emergency luminaire dimming driver leads in emergency operation. This allows the selected emergency luminaires to operate at approximately 20% (or 30%\*\*) of luminaire total power. (maximum normal operation power up to 110W and programmable to 3 Vdc up to 80W). Compatible with linear 0-10Vdc dimming drivers. Not compatible with logarithmic 0-10 vdc dimming drivers with PST operation. In the event of a power failure, the inverter will automatically supply up to 27 watts of emergency power to LED or fluorescent luminaires for a minimum of 90 minutes. It can operate with a single or multiple switched, dimmed, non-switched and emergency only luminaires. It can operate as a standalone 27 watt mini inverter. It can be used with single and multiple channel LED drivers and Type A, B or C TLED lamps. The emergency output will be up to 27 W at temperatures of 0-55°C, or 20W for 2 hours @ 0-55°C. The Si-27 Auto test function will perform a 90-minute annual test and a monthly 30-second test to ensure proper operation. The Si-27 shall be UL924 Listed for factory or field installation. It shall meet or exceed the requirements of UL924, NFPA101 Life Safety Code, NFPA 70 National Electrical Code, OSHA, California Energy Commission- Title 20 and State and Local codes. Warranty: Five years full. See Website for warranty details.



See Si-27 Power Share Chart for additional information.

All Specifications subject to change without prior notification.

\*\* See installation instructions for field programming to 3 vdc and for luminaire(s) up to 90W - greater lumen output.

# Si-27 110W @ 2 Vdc PST with Power Share Selection Chart

Note: Si-27 is programmed at 20% but can be reprogrammed by end user to 30%.



Luminaire wattage	14	15	16	17	18	19	20	21	22	23
Emergency Dim to 20% (W)	2.8	3	3.2	3.4	3.6	3.8	4	4.2	4.4	4.6
# of Emergency Luminaires	7	7	6	6	6	5	5	5	5	4
actual wattage from Si-27 used	19.6	21	19.2	20.4	21.6	19	20	21	22	18.4
lumens per fixture 140 l/w	392	420	448	476	504	532	560	588	616	644
Lumens per EM fixture **	333	357	381	405	428	452	476	500	524	547
Total System Lumens provided	2332	2499	2285	2428	2570	2261	2380	2499	2618	2190
Total fixture wattage (Max. 110 W)	98	105	96	102	108	95	100	105	110	92
Luminaire wattage	24	25	26	27	28	29	30	31	32	33
Emergency Dim to 20% (W)	4.8	5	5.2	5.4	5.6	5.8	6	6.2	6.4	6.6
# of Emergency Luminaires	4	4	4	4	3	3	3	3	3	3
actual wattage from Si-27 used	19.2	20	20.8	21.6	16.8	17.4	18	18.6	19.2	19.8
lumens per fixture 140 l/w	672	700	728	756	784	812	840	868	896	924
Lumens per EM fixture **	571	595	619	643	666	690	714	738	762	785
Total System Lumens provided	2285	2380	2475	2570	1999	2071	2142	2213	2285	2356
Total fixture wattage (Max. 110W)	96	100	104	108	84	87	90	93	96	99
Luminaire wattage	34	35	36	37	38	39	40	41	42	43
Emergency Dim to 20% (W)	6.8	7	7.2	7.4	7.6	7.8	8	8.2	8.4	8.6
# of Emergency Luminaires	3	3	3	3	2	2	2	2	2	2
actual wattage from Si-27 used	20.4	21	21.6	22.2	15.2	15.6	16	16.4	16.8	17.2
lumens per fixture 140 l/w	952	980	1008	1036	1064	1092	1120	1148	1176	1204
Lumens per EM fixture **	809	833	857	881	904	928	952	976	1000	1023
Total System Lumens provided	2428	2499	2570	2642	1809	1856	1904	1952	1999	2047
Total fixture wattage (Max. 110 W)	102	105	108	111	76	78	80	82	84	86
Luminaire wattage	44	45	46	47	48	49	50	51	52	53
Emergency Dim to 20% (W)	8.8	9	9.2	9.4	9.6	9.8	10	10.2	10.4	10.6
# of Emergency Luminaires	2	2	2	2	2	2	2	2	2	2
actual wattage from Si-27 used	17.6	18	18.4	18.8	19.2	19.6	20	20.4	20.8	21.2
lumens per fixture 140 l/w	1232	1260	1288	1316	1344	1372	1400	1428	1456	1484
Lumens per EM fixture **	1047	1071	1095	1119	1142	1166	1190	1214	1238	1261
Total System Lumens provided	2094	2142	2190	2237	2285	2332	2380	2428	2475	2523
Total fixture wattage (Max. 110 W)	88	90	92	94	96	98	100	102	104	106
Luminaire wattage	54	55	56	58	60	62-100				
Emergency Dim to 20% (W)	10.8	11	11.2	11.6	12	15-25				
# of Emergency Luminaires	2	2	1	1	1	1				
actual wattage from Si-27 used	21.6	22	11.2	11.6	12					
lumens per fixture 140 l/w	1512	1540	1568	1624	1680					
Lumens per EM fixture **	1285	1309	1333	1380	1428					
Total System Lumens provided	2570	2618	1333	1380	1428					
Total fixture wattage (Max. 110 W)	108	110	56	58	60					
								non- dim	up to 27	
								Apps	up to 27	
									1	
									140	

The Si-27 can be re-programmed to enable 3.0 Vdc in emergency from the Violet/Blk and Pink/Blk leads when using the PST feature. See instructions.

All calculations based on 10-55C

- 1- Define the wattage of the normal/emergency luminaire.
- 2- Determine from the chart how many emergency luminaires can be used with the Si-27 for 90 minutes
- 3- Use a lighting calculation program to determine spacing of emergency luminaires to meet life safety and local code requirements for egress.
- 4- Ensure that the total normal/(emergency) luminaire(s) or connected loads do not exceed 110 W.
- 5- LED Luminaires must incorporate linear 0-10Vdc dimming drivers and be wired with the Si-27 when using the PST functions. Not compatible with logarithmic dimming drivers.
- 6- \*\*All Selection Chart Calculations are based on 85% driver efficiency and 140Lm/W efficacy.

# Si-27 80W @ 3 Vdc PST with Power Share Selection Chart

Note: Si-27 is programmed at 20% but can be reprogrammed by end user to 30%.



Luminaire wattage	14	15	16	17	18	19	20	21	22	23
Emergency Dim to 30% (W)	4.2	4.5	4.8	5.1	5.4	5.7	6	6.3	6.6	6.9
# of Emergency Luminaires	5.0	5.0	5.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0
actual wattage from Si-27 used	21	22.5	24	20.4	21.6	22.8	24	18.9	19.8	20.7
lumens per fixture 140 l/w	588	630	672	714	756	798	840	882	924	966
Lumens per EM fixture **	500	536	571	607	643	678	714	750	785	821
Total System Lumens provided	2499	2678	2856	2428	2570	2713	2856	2249	2356	2463
Total fixture wattage (Max. 80 W)	70	75	80	68	72	76	80	63	66	69
Luminaire wattage	24	25	26	27	28	29	30	31	32	33
Emergency Dim to 30% (W)	7.2	7.5	7.8	8.1	8.4	8.7	9	9.3	9.6	9.9
# of Emergency Luminaires	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
actual wattage from Si-27 used	21.6	22.5	23.4	16.2	16.8	17.4	18	18.6	19.2	19.8
lumens per fixture 140 l/w	1008	1050	1092	1134	1176	1218	1260	1302	1344	1386
Lumens per EM fixture **	857	893	928	964	1000	1035	1071	1107	1142	1178
Total System Lumens provided	2570	2678	2785	1928	1999	2071	2142	2213	2285	2356
Total fixture wattage (Max. 80W)	72	75	78	54	56	58	60	62	64	66
Luminaire wattage	34	35	36	37	38	39	40	41	42	43
Emergency Dim to 30% (W)	10.2	10.5	10.8	11.1	11.4	11.7	12	12.3	12.6	12.9
# of Emergency Luminaires	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0
actual wattage from Si-27 used	20.4	21	21.6	22.2	22.8	23.4	24	12.3	12.6	12.9
lumens per fixture 140 l/w	1428	1470	1512	1554	1596	1638	1680	1722	1764	1806
Lumens per EM fixture **	1214	1250	1285	1321	1357	1392	1428	1464	1499	1535
Total System Lumens provided	2428	2499	2570	2642	2713	2785	2856	1464	1499	1535
Total fixture wattage (Max. 80 W)	68	70	72	74	76	78	80	41	42	43
Luminaire wattage	44	45	46	47	48	49	50	51	52	53
Emergency Dim to 30% (W)	13.2	13.5	13.8	14.1	14.4	14.7	15	15.3	15.6	15.9
# of Emergency Luminaires	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
actual wattage from Si-27 used	13.2	13.5	13.8	14.1	14.4	14.7	15	15.3	15.6	15.9
lumens per fixture 140 l/w	1848	1890	1932	1974	2016	2058	2100	2142	2184	2226
Lumens per EM fixture **	1571	1607	1642	1678	1714	1749	1785	1821	1856	1892
Total System Lumens provided	1571	1607	1642	1678	1714	1749	1785	1821	1856	1892
Total fixture wattage (Max. 80 W)	44	45	46	47	48	49	50	51	52	53
Luminaire wattage	54	55	56	58	60	62-80				
Emergency Dim to 30% (W)	16.2	16.5	16.8	17.4	18	18-27				
# of Emergency Luminaires	1.0	1.0	1.0	1.0	1.0	1				
actual wattage from Si-27 used	16.2	16.5	16.8	17.4	18					
lumens per fixture 140 l/w	2268	2310	2352	2436	2520					
Lumens per EM fixture **	1928	1964	1999	2071	2142					
Total System Lumens provided	1928	1964	1999	2071	2142					
Total fixture wattage (Max. 80 W)	54	55	56	58	60					
								non-dim Apps	up to 27 up to 27	

