

# Si-36

36 Watt pure sine wave 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** ..... 0.335 A (max)  
**Output** ..... 120 – 277 Vac, 50 or 60 Hz  
Auto setting output voltage equal to input voltage

### Output Power and Temperature

Max. 36W- Ta 10-55°C (50 to 131°F)  
Max. 27W- Ta 0-55°C (32 to 131°F)  
FEMA 2 Hour run time Max. 20W- Ta 0-55°C (32 to 131°F)

**Operating Time** ..... 90 Minutes minimum  
**Auto Test** ..... Monthly and Annual  
**Transfer Time** ..... 1 second to Power Share  
**Power Share Technology** ..... allows for ~30% of normal luminaire power in emergency

**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-36 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 36 watts of emergency power to LED or fluorescent luminaires for ninety (90) minutes. It can operate with single or multiple switched, dimmed, non-switched and emergency only luminaires. It can operate as a standalone 36-watt mini inverter or be used with 0-10 Vdc controlled dimmable luminaires (up to 120W) and apply 3 Vdc to the emergency luminaires dimming driver in the emergency operation to achieve approximately 30% of the luminaire power for multiple emergency fixtures. It can be used with single and multiple channel LED drivers and Type A, B and C TLED lamps. When non-dimmable loads are used, the normal and emergency output will be 36 W at temperatures of (10-55° C), 27W for (0-55° C) and 20W for 2 hours (0-55° C).

### Specifications

Emergency Lighting shall be provided by the Assurance Si-36 mini inverter unit equipment designed to operate LED and fluorescent fixtures for 90 minutes in emergency operation upon a power failure regardless of wall switch position. The Assurance emergency Lighting Si-36 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 luminaires in normal operation and applies 3 Vdc to the emergency luminaires dimming driver leads in emergency operation. This allows the selected emergency luminaires to operate at approximately 30% of luminaire total power (maximum normal operation luminaire power up to 120W). **Compatible with linear 0-10Vdc dimming drivers. Not compatible with logarithmic 0-10 dimming drivers with PST operation.** For both dimmable and non-dimmable applications, the output will be limited to 36W at the ambient temperature range of 10-55°C, and 27W at temperature range of 0-55°C. For non-dimming applications for 2 hour run time, the maximum load will be 20 Watts at a temperature range of 0-55°C. The Si-36 Auto Test function will perform a 90-minute annual and a 30 second monthly test to ensure proper operation. The Si-36 inverter shall be UL924 Listed. 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.  
All Specifications subject to change without prior notification.

**See Si-36 Power Share Chart for additional information.**

# Si-36 Power Share Selection Chart



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	8	8	7	7	6	6	6	5	5	5
Lumens per EM Fixture **	500	536	571	607	643	678	714	750	785	821
Total System Lumens Provided	3998	4284	3998	4248	3856	4070	4284	3749	3927	4106
Total Fixture Wattage (Max. 120W)	112	120	112	119	108	114	120	105	110	115

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	5	4	4	4	4	4	4	3	3	3
Lumens per EM Fixture **	857	893	928	964	1000	1035	1071	1107	1142	1178
Total System Lumens Provided	4284	3570	3713	3856	3998	4141	4284	3320	3427	3534
Total Fixture Wattage (Max. 120W)	120	100	104	108	112	116	120	93	96	99

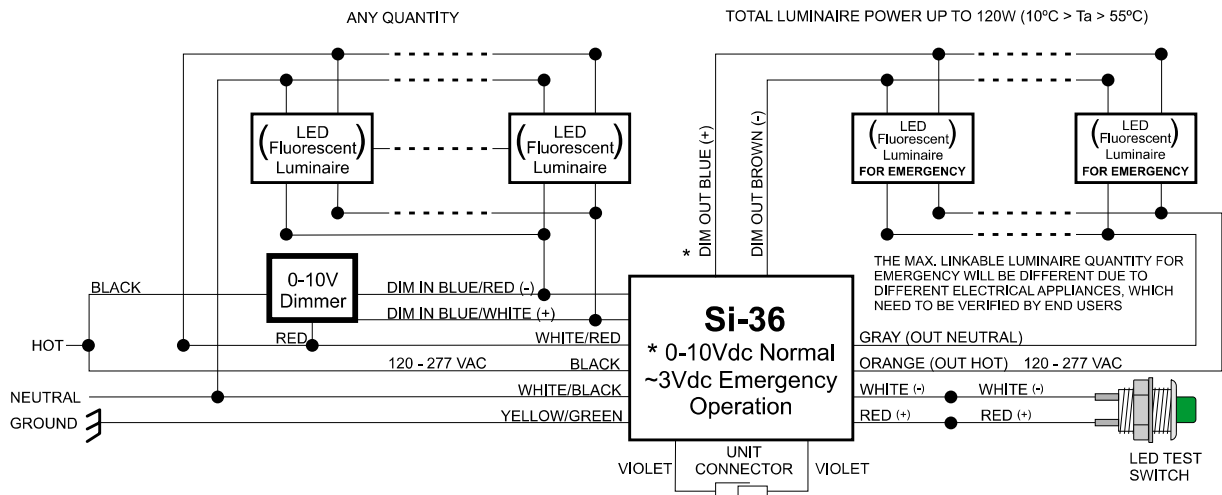
Luminaire Wattage	34	35	36	37	38	39	40	41	42	43
Emergency Dim to 30% (W)	10.2	10.5	10.8	11.1	11.4	11.7	12	12.3	12.6	12.9
# of Emergency Luminaires	3	3	3	3	3	3	3	2	2	2
Lumens per EM Fixture **	1214	1250	1285	1321	1357	1392	1428	1464	1499	1535
Total System Lumens Provided	3641	3749	3856	3963	4070	4177	4284	2927	2999	3070
Total Fixture Wattage (Max. 120W)	102	105	108	111	114	117	120	82	84	86

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	2	2	2	2	2	2	2	2	2	2
Lumens per EM Fixture **	1571	1607	1642	1678	1714	1749	1785	1821	1856	1892
Total System Lumens Provided	3142	3213	3284	3356	3427	3499	3570	3641	3713	3784
Total Fixture Wattage (Max. 120W)	88	90	92	94	96	98	100	102	104	106

Luminaire Wattage	54	55	56	58	60	61-120	Non-Dim Apps		up to 36
Emergency Dim to 30% (W)	16.2	16.5	16.8	17.4	18	18.3-36			up to 36
# of Emergency Luminaires	2	2	2	2	2	1			1
Lumens per EM Fixture **	1928	1964	1999	2071	2142	2140-4280			up to 4282
Total System Lumens Provided	3856	3927	3998	4141	4284	2140-4280			up to 4282
Total Fixture Wattage (Max. 120W)	108	110	112	116	120	61-120			up to 36

- 1 - Define the wattage of the normal/emergency luminaire.
- 2 - Determine from chart how many emergency luminaires can be used with the Si-36.
- 3 - Use lighting calculation program to determine spacing of emergency luminaires to meet life safety and local requirements for egress.
- 4 - Ensure that the total normal/emergency lighting luminaire(s) wattage does not exceed 120W.
- 5 - LED Luminaires must incorporate linear 0-10Vdc dimming driver and be wired with the Si-36 when using the PST function. Not compatible with logarithmic dimming drivers
- 6 - \*\*All Selection Chart calculations based on 85% driver efficiency and 140Lm/W efficacy.

## WIRING DIAGRAM FOR 0-10V DIMMABLE EMERGENCY LIGHTING SYSTEM - WITH PST



Assurance Emergency Lighting, a division of Assurance Engineering LLC

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