

## Sine Wave Home UPS

### SHINY SERIES



**SHINY SERIES - 250VA/12V, 450VA/12V**



**Smart Graphics Alerts**



Shiny Sine-Wave HUPS is based on a revolutionary new technology that will make you expect more from your power back up system. It not only offers non-stop protection for all your valuable appliances, it does it so silently, that you'll forget you have a HUPS.

Being a Sine Wave UPS, it offers non-stop protection for your appliances and more efficiency enabling reduced power consumption. And there's more. It is a silent HUPS with an automatic overload sensor and fuzzy logic that is designed to put your comfort first. The modern looks of course, is a bonus. All this and more. Just to ensure that you live life without a pause.

**Principle :** Su-Kam HUPS are highly innovative two in one products which eliminate the need to have separate power backup systems for home equipment & computers.

#### Product features

- ▶ Pure Sine Wave output- runs all your appliances efficiently and noiselessly.
- ▶ Smart SMPS based fast battery charger to save 40% electricity bills from that incurred by a normal HUPS.
- ▶ Intelligent thermal management system.
- ▶ Solar Compatibility.
- ▶ Manual static by-pass switch.

#### Displays

- ▶ Multifunction Graphical LED display.
- ▶ Power Switch active indication.
- ▶ 5 LEDs display following states - operation mode, state of charge, fault message.

#### Operation

- ▶ Single operation master switch.
- ▶ Automatic cooling fan operation.
- ▶ Automatic circuit breaker recovery.

#### Approvals & Certifications

- ▶ Certified by ETDC & CE
- ▶ Technology & Design Patent.
- ▶ Copyrights & Trademark.
- ▶ Manufactured according to ISO 9001 and ISO 14001.
- ▶ R&D Approved by Govt. of Science & Technology.

#### LOAD CHART, APPLICATIONS & BACK-UP TIME

SHINY 250VA/12V				SHINY 450VA/12V		
Load Options	A	B	C	A	B	C
Computer 150W	1	-	-	1	-	-
TV 19-21"	-	-	1	-	-	1
Tube Light 40W	-	1	1	-	-	2
Fan 48 MM	-	1	-	-	2	1
CFL 11W	-	2	2	2	2	2
Back-Up Time in Hrs.(below back-up time is calculated on above load options A, B, C)						
50 AH	2.0	1.4	1.4	-	-	-
100 AH	5.0	4.0	3.4	4.0	3.0	1.48
135 AH	-	-	-	6.0	4.24	2.4

\* Recommended battery 25AH for 150VA/ 50AH for 250VA

# Sine Wave Home UPS

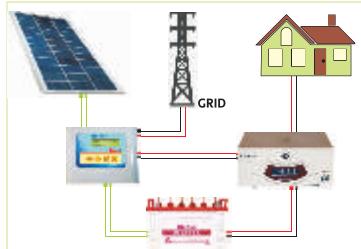
## SHINY SERIES

### Technical Specifications

Model	SHINY SERIES		
Capacity	250VA/12V	450VA/12V	
<b>VOLTAGE RANGE NW-UPS MODE</b>			
Mains A.C. Low cut	185 ± 10V		
Mains A.C. Low cut Recovery	190 ± 10V		
Mains A.C. High cut	265 ± 10V		
Mains A.C. High cut Recovery	260 ± 10V		
<b>VOLTAGE RANGE WW-UPS MODE</b>			
Mains A.C. Low cut	105 ± 10V		
Mains A.C. Low cut Recovery	120 ± 10V		
Mains A.C. High cut	285 ± 10V		
Mains A.C. High cut Recovery	275 ± 10V		
<b>OUTPUT PARAMETER</b>			
Mains Output Frequency	Same as Input (45 Hz-55Hz)		
Output Frequency	50.0 Hz. ± 0.1 Hz		
Output Voltage with Full Load	180V-230V		
Overload	Above 100%		
Short Circuit protection	>300% Load (Few msec)		
<b>BATTERY CHARGING</b>			
FLC based SMPS charger with Automatic Power Factor Correction			
	SMF	TUBULAR	LEAD ACID
Charging Current	6 Amp (250VA)	8 Amp (450VA)	10 A ± 0.2 A
Charging Boost Voltage each Battery		14.4V + 0.2 V	13.9 V + 0.2 V
Charging Float Voltage each Battery		13.7V + 0.2 V	
Battery Lower Volt. Cut each Battery		10.5 V ± 0.2 V (Depending on Load)	
Recommended Battery Capacity	50AH - 100AH		100AH - 135AH
Dimension (W XDX H) in mm		245x254x123	
Weight(Kg)	5.40		6.16

Note: Specifications are subject to change without any prior Notice

### POWER ACCESSORIES



Panel Range : 250VA-450VA HUPS up to 160Wp.

#### Solar Conversion Kit

Solarcon hybrid solar charge controller solution overcomes the challenges in the existing system. It can be connected with any existing HUPS/inverter and convert it into a solar powered system. It controls the mains supply to the inverter so that when the battery is fully charged and solar power is still available to charge the battery, it automatically disconnects the mains from the inverter so that the inverter starts working in backup mode now since the power is supplied from battery and solar. This helps in optimum utilization of generated solar power.

When the battery is discharged below the pre-defined user settable limit and mains is present, it is connected to the inverter so that the load is bypassed to mains and the battery charging can take place.

#### Water Topping Kit

- ▶ Single Point multi cell water topping.
- ▶ Safely fill batteries without removing vent covers.
- ▶ Extends battery life & increases performance.
- ▶ No chance of acid spillage on floor.
- ▶ Saves battery from under topping and over topping



#### Matching Trolley

- ▶ **X-tra durable:** Made from tough, long lasting PPCP compound material which does not get destroyed ever if there is leakage / spillage from batteries.
- ▶ **X-tra convenient:** In built ribs for smooth in and out movement of battery without getting stuck.
- ▶ **X-tra ease of movement:** Sturdy yet smooth wheels enabling extra ease of movement while carrying the bulky battery.
- ▶ **X-tra space saving:** Stacks up with Inverter / UPS neatly in a corner, thus taking less space. Aesthetically designed to match
- ▶ **X-tra safe:** Provides good ventilation for battery.

# Approval & Certificates

## SHINY SERIES

13

	TEST REPORT	
	ON	
	<i>Off Line UPS - 500VA</i>	
	Name : UPS	
ELECTRONICS TEST AND DEVELOPMENT CENTRE		
A-1 ROAD, NEAR I.C.C. DEPOT, AVADLA GANTRY - 123 001 PUNE (MAHARASHTRA)		
PHONE: 021-22121704, 22124325, TELEFAX: 22124325		
CONTROLLED		

Test Report Certificate - Page 1

ELECTRONICS TEST & DEVELOPMENT CENTRE G.T. ROAD, NEAR I.C.C. DEPOT, AVADLA GANTRY - 123021		
TEST REPORT		
TEST REPORT NUMBER	DATE	PAGE NO.
TEST REPORT NUMBER: 2004	DATE: 26-07-07	PAGE NO.: 1/04
1. Name & Address of the organization issuing Test Report (Client):		
SU 500VA OFF LINE UPS, TEL: 021-22121704, 22124325, FAX: 22124325, C.GANTRY - 123021		
2. Reference Number:		
3. Description and identification of the item(s) provided by the Client:		
I. Name/Code:	OFF LINE UPS 500 VA 12 V DC	
II. Model/Type:	EXIDE UPS	
III. Value/Quantity:	1	
IV. Item No.:	10007001010	
V. Manufacturer:	EXIDE	
VI. Year of Manufacture:	2007	
VII. Test Work:	S.I.C.M	
VIII. Number of Samples Submitted:	ONE ONLY	
Tested by  Checked by  Issued by  Head (TP&C)		
Electronics Test & Development Centre G.T. Road, Near I.C.C. Depot, Avadla Gantry - 123021		

Test Report Certificate - Page 2

ELECTRONICS TEST & DEVELOPMENT CENTRE G.T. ROAD, NEAR I.C.C. DEPOT, AVADLA GANTRY - 123021				
TEST REPORT				
TEST REPORT NUMBER	DATE	PAGE NO.		
TEST REPORT NUMBER: 2004	DATE: 26-07-07	PAGE NO.: 2/04		
1. TEST REPORT IS				
II. PARALLEL	NON-MIL. VALUE	MEASURED VALUE		
NO.	REQUIREMENT	REMARKS		
<b>A. MAINS MODE:</b>				
11	Main Low Cut-off Voltage	180 V AC +/- 5%	Incompliant	Safe
12	Main Low Cut-Off Recovery	190 V AC +/- 5%	Incompliant	Safe
13	Main High Cut Voltage	250 V AC +/- 5%	Incompliant	Safe
14	Mains High Cut Recovery	250 V AC +/- 5%	Incompliant	Safe
15	Output Voltage and Frequency	Should be 50 Hz <+/- 1% Voltage & Frequency stability	Incompliant	Safe
<b>B. BATTERY MODE:</b>				
16	Output Voltage	90 V DC	Incompliant	Safe
17	Output Voltage Range	170 V AC & 120-240 V AC	Incompliant	Safe
18	Output Frequency	50.0 Hz <+/- 1%	Incompliant	Safe
<b>C. CHANGE OVER:</b>				
19	Change Over from Mains Mode to Battery Mode and vice versa	Parameter Complies with standard without any disturbance during change over	Incompliant	Safe
<b>D. LOAD CAPACITY:</b>				
20	Start up with no load and with 100% load	Parameter Complies	Incompliant	Safe
Tested by  Checked by  Issued by  Head (TP&C)				
Electronics Test & Development Centre G.T. Road, Near I.C.C. Depot, Avadla Gantry - 123021				

Test Report Certificate - Page 3

ELECTRONICS TEST & DEVELOPMENT CENTRE G.T. ROAD, NEAR I.C.C. DEPOT, AVADLA GANTRY - 123021		
TEST REPORT		
TEST REPORT NUMBER	DATE	PAGE NO.
TEST REPORT NUMBER: 2004	DATE: 26-07-07	PAGE NO.: 3/04
1. TEST REPORT IS		
II. PARALLEL	NON-MIL. VALUE	MEASURED VALUE
NO.	REQUIREMENT	REMARKS
<b>C. Remote Monitoring:</b>		
21	The output performance only to the parameters mentioned in the test result	
22	The UPS System has been tested as per Indian specification	
Tested by  Checked by  Issued by  Head (TP&C)		
Electronics Test & Development Centre G.T. Road, Near I.C.C. Depot, Avadla Gantry - 123021		

Test Report Certificate - Page 4

## Approval & Certificates

### SHINY SERIES



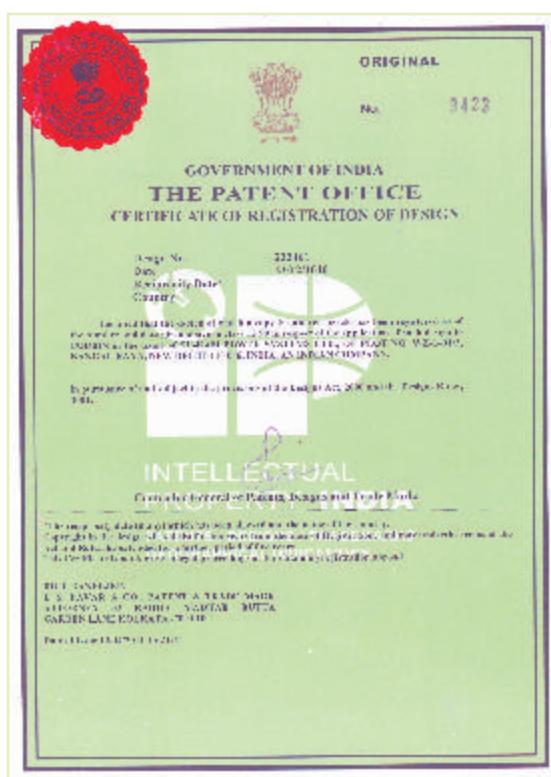
Certificate - A 93545/2013



Certificate



Patent - 236650



Patent - 233461

# Sine Wave Home UPS

## SHINY SERIES



**SHINY SERIES - 650VA/12V, 850VA/12V**



### Smart Graphics Alerts



Shiny Sine-Wave HUPS is based on a revolutionary new technology that will make you expect more from your power back up system. It not only offers non-stop protection for all your valuable appliances, it does it so silently, that you'll forget you have a HUPS.

Being a Sine Wave UPS, it offers non-stop protection for your appliances and more efficiency enabling reduced power consumption. And there's more. It is a silent HUPS with an automatic overload sensor and fuzzy logic that is designed to put your comfort first. The modern looks of course, is a bonus. All this and more. Just to ensure that you live life without a pause.

**Principle :** Su-Kam HUPS are highly innovative two in one products which eliminate the need to have separate power backup systems for home equipment & computers.

#### Product features

- ▶ Pure Sine Wave output- runs all your appliances efficiently and noiselessly.
- ▶ Smart SMPS based fast battery charger to save 40% electricity bills from that incurred by a normal HUPS.
- ▶ Intelligent thermal management system.
- ▶ Solar Compatibility.
- ▶ Manual static by-pass switch.

#### Displays

- ▶ Multifunction Graphical LED display.
- ▶ Power Switch active indication.
- ▶ 5 LEDs display following states - operation mode, state of charge, fault message.

#### Operation

- ▶ Single operation master switch.
- ▶ Automatic cooling fan operation.
- ▶ Automatic circuit breaker recovery.

#### Approvals & Certifications

- ▶ Certified by ETDC & CE
- ▶ Technology & Design Patent.
- ▶ Copyrights & Trademark.
- ▶ Manufactured according to ISO 9001 and ISO 14001.
- ▶ R&D Approved by Govt. of Science & Technology.

#### LOAD CHART, APPLICATIONS & BACK-UP TIME

SHINY 650VA/12V					SHINY 850VA/12V				
Load Options	A	B	C	D	A	B	C	D	
Computer 150W	1	-	-	-	1	-	-	-	
TV 19-21"	-	-	1	-	-	1	-	-	
Room Cooler	-	-	-	1	-	-	-	1	
Tube Light 40W	2	4	2	1	3	3	4	1	
Fan 48 MM	2	3	3	-	3	3	4	1	
CFL 11W	2	2	2	2	2	4	-	2	
Back-Up Time in Hrs. (below back-up time is calculated on above load options A, B, C, D)									
135 AH	1.4	1.24	1.2	2.3	1.1	1.1	1.15	2.0	
150 AH	2.0	1.42	1.4	3.01	1.2	1.18	1.24	2.12	
200 AH	2.54	2.3	2.2	4.0	2.0	2.05	2.12	3.1	

\* Recommended battery 100AH-200AH

# Sine Wave Home UPS SHINY SERIES

## Technical Specifications

Model	SHINY SERIES		
	650VA/12V	850/12V	
<b>VOLTAGE RANGE NW-UPS MODE</b>			
Mains A.C. Low cut	185 ± 10V		
Mains A.C. Low cut Recovery	190 ± 10V		
Mains A.C. High cut	265 ± 10V		
Mains A.C. High cut Recovery	260 ± 10V		
<b>VOLTAGE RANGE WW-UPS MODE</b>			
Mains A.C. Low cut	105 ± 10V		
Mains A.C. Low cut Recovery	120 ± 10V		
Mains A.C. High cut	285 ± 10V		
Mains A.C. High cut Recovery	275 ± 10V		
<b>OUTPUT PARAMETER</b>			
Mains Output Frequency	Same as Input (45 Hz-55Hz)		
Output Frequency	50.0 Hz. ± 0.1 Hz		
Output Voltage with Full Load	180V-245V		
Overload	Above 100%		
Short Circuit protection	>300% Load (Few msec)		
<b>BATTERY CHARGING</b>			
FLC based SMPS charger with Automatic Power Factor Correction			
	SMF	TUBULAR	LEAD ACID
Charging Current	13 ± 2.0 Amp	13 ± 2.0 Amp	10 ± 2.0 Amp
Charging Boost Voltage each Battery	14.4V + 0.2 V		13.9 V + 0.2 V
Charging Float Voltage each Battery		13.7V + 0.2 V	
Battery Lower Volt. Cut each Battery		10.5 V ± 0.2 V (Depending on Load)	
Recommended Battery Capacity		100AH-200AH	
Dimension (W XDX H) in mm		280x 276 x 124	
Weight(Kg)	9.25		9.75

Note: Specifications are subject to change without any prior Notice

## POWER ACCESSORIES



Panel Range : 650VA-850VA HUPS up to 240Wp.

### Solar Conversion Kit

Solarcon hybrid solar charge controller solution overcomes the challenges in the existing system. It can be connected with any existing HUPS/inverter and convert it into a solar powered system. It controls the mains supply to the inverter so that when the battery is fully charged and solar power is still available to charge the battery, it automatically disconnects the mains from the inverter so that the inverter starts working in backup mode now since the power is supplied from battery and solar. This helps in optimum utilization of generated solar power.

When the battery is discharged below the pre-defined user settable limit and mains is present, it is connected to the inverter so that the load is bypassed to mains and the battery charging can take place.

### Water Topping Kit

- ▶ Single Point multi cell water topping.
- ▶ Safely fill batteries without removing vent covers.
- ▶ Extends battery life & increases performance.
- ▶ No chance of acid spillage on floor.
- ▶ Saves battery from under topping and over topping



### Matching Trolley

- ▶ **X-tra durable:** Made from tough, long lasting PPCP compound material which does not get destroyed ever if there is leakage / spillage from batteries.
- ▶ **X-tra convenient:** In built ribs for smooth in and out movement of battery without getting stuck.
- ▶ **X-tra ease of movement:** Sturdy yet smooth wheels enabling extra ease of movement while carrying the bulky battery.
- ▶ **X-tra space saving:** Stacks up with Inverter / UPS neatly in a corner, thus taking less space. Aesthetically designed to match
- ▶ **X-tra safe:** Provides good ventilation for battery.

# Approval & Certificates

## SHINY SERIES

13

	TEST REPORT	
	ON	
	<i>Off Line UPS - 500VA</i>	
	Name : UPS	
ELECTRONICS TEST AND DEVELOPMENT CENTRE		
A-1 ROAD, NEAR I.C.C. DEPOT, AVADLA GANTRY - 123 001 PUNE (MAHARASHTRA)		
PHONE: 021-22121764, 2014493, TELEFAX: 201443		
CONTROLLED		

Test Report Certificate - Page 1

ELECTRONICS TEST & DEVELOPMENT CENTRE G.T. ROAD, NEAR I.C.C. DEPOT, AVADLA GANTRY - 123021		
TEST REPORT		
TEST REPORT NUMBER	DATE	PAGE NO.
STC/AVADLA/001	26-06-07	1/04
1. Name & Address of the organization issuing Test Report (Client): SU-KAM ELECRIC SYSTEMS LTD., 106, 1, J.D.Y. 90, V.P.H.A. 1, P.O. M. BKT. 27, CHENNAI - 600074		
2. Reference Number: STC/AVADLA/00 Date: 27-06-2007		
3. Description and identification of the item(s) provided by the Client: i. Name/Model: OFF-LINE UPS 500 VA 12V DC ii. Model/Type: ECSE UPS iii. Value/Quantity: iv. Part No.: ECSE/UTR/130 v. Manufacturer: AG-ABOVE vi. Year of Mfg./Accred.: 2007 vii. Test Work: UPS viii. Number of Samples Submitted: ONE ONLY		
 Tested by		
 Checked by		
 Issued by Head (TP&C)		
<small>ELECTRONICS TEST &amp; DEVELOPMENT CENTRE G.T. ROAD, NEAR I.C.C. DEPOT, AVADLA GANTRY - 123021</small>		

Test Report Certificate - Page 2

ELECTRONICS TEST & DEVELOPMENT CENTRE G.T. ROAD, NEAR I.C.C. DEPOT, AVADLA GANTRY - 123021		
TEST REPORT		
TEST REPORT NUMBER	DATE	PAGE NO.
STC/AVADLA/001	26-06-07	1/04
1. TEST REPORT IS FOR: a) PARALLEL b) NO		
2. REQUIREMENT: MEETING, VIOLATION, UNCOMPLIANT REQUIREMENT VALUE REMARKS		
<b>A. MAINS MODE:</b> 1. Mains Low Cut-off Voltage: 180 V AC +/- 5% Incompliant Safe 2. Mains Low Cut-Off Recovery: 190 V AC +/- 5% Incompliant Safe 3. Mains High Cut-off Voltage: 250 V AC +/- 5% Incompliant Safe 4. Mains High Cut-off Recovery: 250 V AC +/- 5% Incompliant Safe 5. Output Voltage and Frequency: Shall be 50 Hz +/- 0.1% Interference Safe Voltage & Frequency		
<b>B. BATTERY MODE:</b> 1. Output Voltage: 90 V AC Incompliant Safe 2. Output Voltage Range: 170 V AC to 240 V AC Incompliant Safe 3. Output Frequency: 50.0 Hz +/- 0.1% Incompliant Safe		
<b>C. CHANGE OVER:</b> 1. Change Over from Mains Mode to Battery Mode and vice versa: Parameter Compliant shall not exceed during change over		
<b>D. LOAD CAPACITY:</b> Shall be able to withstand 100% of 1 Computer + STL and 2 Fans		
 Tested by		
 Checked by		
 Issued by Head (TP&C)		
<small>ELECTRONICS TEST &amp; DEVELOPMENT CENTRE G.T. ROAD, NEAR I.C.C. DEPOT, AVADLA GANTRY - 123021</small>		

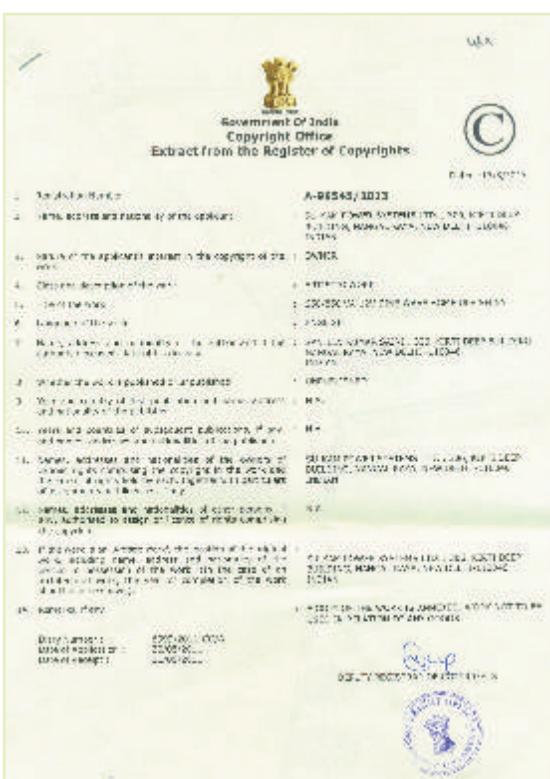
Test Report Certificate - Page 3

ELECTRONICS TEST & DEVELOPMENT CENTRE G.T. ROAD, NEAR I.C.C. DEPOT, AVADLA GANTRY - 123021		
TEST REPORT		
TEST REPORT NUMBER	DATE	PAGE NO.
STC/AVADLA/001	26-06-07	1/04
1. TEST REPORT IS FOR: a) PARALLEL b) NO		
2. SPECIFICATIONS: a) The report pertains only to the parameters mentioned in the test result. b) The UPS System has been tested as per Indian Specification.		
 Tested by		
 Checked by		
 Issued by Head (TP&C)		
<small>ELECTRONICS TEST &amp; DEVELOPMENT CENTRE G.T. ROAD, NEAR I.C.C. DEPOT, AVADLA GANTRY - 123021</small>		

Test Report Certificate - Page 4

## Approval & Certificates

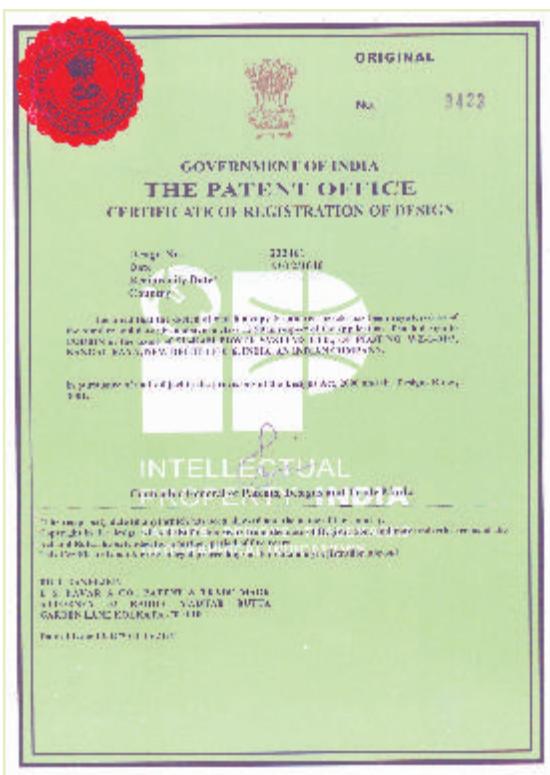
### SHINY SERIES



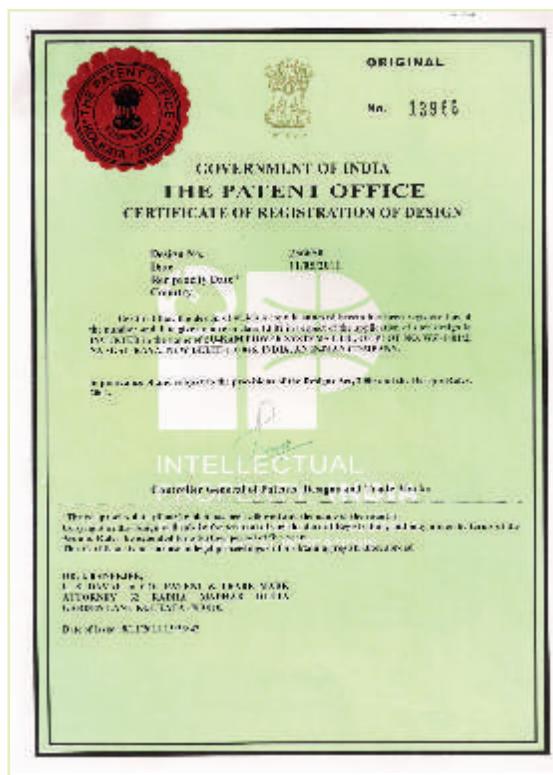
Certificate - A 93545/2013



Certificate



Patent - 233461



Patent - 236650

## Sine Wave Home UPS SHINY SERIES



**SHINY SERIES - 1500VA/24V**

### Smart Graphics Alerts



Shiny Sine-Wave HUPS is based on a revolutionary new technology that will make you expect more from your power back up system. It not only offers non-stop protection for all your valuable appliances, it does it so silently, that you'll forget you have a HUPS.

Being a Sine Wave UPS, it offers non-stop protection for your appliances and more efficiency enabling reduced power consumption. And there's more. It is a silent HUPS with an automatic overload sensor and fuzzy logic that is designed to put your comfort first. The modern looks of course, is a bonus. All this and more. Just to ensure that you live life without a pause.

**Principle :** Su-Kam HUPS are highly innovative two in one products which eliminate the need to have separate power backup systems for home equipment & computers.

#### Product features

- ▶ Pure Sine Wave output- runs all your appliances efficiently and noiselessly.
- ▶ Smart SMPS based fast battery charger to save 40% electricity bills from that incurred by a normal HUPS.
- ▶ Intelligent thermal management system.
- ▶ Solar Compatibility.
- ▶ Manual static by-pass switch.

#### Electronic Protection updates

- ▶ Battery reversal pole protection.
- ▶ Battery deep discharge & overcharge protection.
- ▶ High surge load handling capability.
- ▶ Inbuilt wrong wire connection protection.
- ▶ Smart overload and short circuit protection with 8 times auto retry.
- ▶ Reverse current flow protection.

#### Displays

- ▶ Multifunction Graphical LED display.
- ▶ Power Switch active indication.
- ▶ 5 LEDs display following states - operation mode, state of charge, fault message.

#### Operation

- ▶ Single operation master switch.
- ▶ Automatic cooling fan operation.
- ▶ Automatic circuit breaker recovery.

#### Approvals & Certifications

- ▶ Certified by ETDC & CE
- ▶ Technology & Design Patent.
- ▶ Copyrights & Trademark.
- ▶ Manufactured according to ISO 9001 and ISO 14001.
- ▶ R&D Approved by Govt. of Science & Technology.

#### LOAD CHART, APPLICATIONS & BACK-UP TIME

SHINY 1500VA/24V				
Load Options	A	B	C	D
Computer 150W	1	-	-	-
TV 19-21"	-	2	2	1
Room Cooler	-	-	-	1
Tube Light 40W	5	4	5	3
Fan 48 MM	6	5	5	3
CFL 11W -	5	6	-	4
Back-Up Time in Hrs.(below back-up time is calculated on above load options A, B, C, D)				
135 AH	1.2	1.36	1.42	2.0
150 AH	1.42	1.48	1.54	2.18
200 AH	2.3	2.42	2.48	3.18

\* Recommended battery 100AH - 200AH

# Sine Wave Home UPS

## SHINY SERIES

### Technical Specifications

Model	SHINY SERIES		
Capacity	1500VA/24V		
<b>VOLTAGE RANGE NW-UPS MODE</b>			
Mains A.C. Low cut	185 ± 10V		
Mains A.C. Low cut Recovery	190 ± 10V		
Mains A.C. High cut	265 ± 10V		
Mains A.C. High cut Recovery	260 ± 10V		
<b>VOLTAGE RANGE WW-UPS MODE</b>			
Mains A.C. Low cut	105 ± 10V		
Mains A.C. Low cut Recovery	120 ± 10V		
Mains A.C. High cut	285 ± 10V		
Mains A.C. High cut Recovery	275 ± 10V		
<b>OUTPUT PARAMETER</b>			
Mains Output Frequency	Same as Input (45 Hz-55Hz)		
Output Frequency	50.0 Hz. ± 0.1 Hz		
Output Voltage with Full Load	180V-245V		
Overload	Above 100%		
Short Circuit protection	>300% Load (Few msec)		
<b>BATTERY CHARGING</b>			
FLC based SMPS charger with Automatic Power Factor Correction			
	SMF	TUBULAR	LEAD ACID
Charging Current	13 ± 2.0 Amp		10 ± 2.0 Amp
Charging Boost Voltage each Battery	14.4V + 0.2 V		13.9 V + 0.2 V
Charging Float Voltage each Battery	13.7V + 0.2 V		
Battery Lower Volt. Cut each Battery	10.5 V ± 0.2 V (Depending on Load)		
Recommended Battery Capacity	100AH-200AH		
Dimension (W XDX H) in mm	400x310x168		
Weight(Kg)	16.6		

Note: Specifications are subject to change without any prior Notice

### POWER ACCESSORIES



#### Matching Trolley

- ▶ **X-tra durable:** Made from tough, long lasting PPCP compound material which does not get destroyed ever if there is leakage / spillage from batteries.
- ▶ **X-tra convenient:** In built ribs for smooth in and out movement of battery without getting stuck.
- ▶ **X-tra ease of movement:** Sturdy yet smooth wheels enabling extra ease of movement while carrying the bulky battery.
- ▶ **X-tra space saving:** Stacks up with Inverter / UPS neatly in a corner, thus taking less space. Aesthetically designed to match
- ▶ **X-tra safe:** Provides good ventilation for battery.

#### Water Topping Kit

- ▶ Single Point multi cell water topping.
- ▶ Safely fill batteries without removing vent covers.
- ▶ Extends battery life & increases performance.
- ▶ No chance of acid spillage on floor.
- ▶ Saves battery from under topping and over topping



#### Battery Equalizer

Battery equalizer is a unique product that equalizes two or more batteries in a battery bank connected in series, thereby eradicating imbalance in the form of unequal voltages. Battery equalizer enhances the battery life by preventing under charge and over charge of the batteries. Battery equalizer helps you save money by delaying the replacement of your batteries, as you get optimum life from your batteries.

# Approval & Certificates

## SHINY SERIES

24

**hartron**

Ref: 2700 (AMBI 985)  
21/08/2007

**TEST REPORT**

ON  
Off Line UPS - Model A  
Home UPS - Smiley

**ELECTRONICS TEST AND DEVELOPMENT CENTRE**  
A. Test Report Document No. HTR-001  
G.T. ROAD, NEAR ITC DEPOT, AMBALA CANTT - 133011  
PHONE: (011) 2617295, 2616444, 2616445, 2616446  
E-mail: [info@etdc.com.in](mailto:info@etdc.com.in)

Test Report Certificate - Page 1

**ELDC TRONICS TEST & DEVELOPMENT CENTRE**  
G.T. ROAD, NEAR ITC DEPOT, AMBALA CANTT - 133011

**TEST REPORT**

TEST REPORT NUMBER	DATE	TESTER	TESTER'S SIGNATURE
HTR-001	25-8-07	2007	AG-4

1. **Customer:**  
Name & Address:  
Mr. Suresh Kumar  
Owner of Smiley  
Date of Birth: 01-01-1970  
2. **Product Reference:**  
Model No.: 13229408  
Dated: 22-07-2007

3. **Specification and Compliances:**  
Satisfactory

4. **Manufacture:** GTE IN UPS 400 VA (24V DC)

5. **Model / Spec:** HOME UPS - SMILEY

6. **Other Information:**

7. **Supplier:** 13229408

8. **Manufacturer:** AG-4

9. **Test of Manufacture:** 2007

10. **Test Date:** 2007

11. **Comments:** Satisfactory

*(Handwritten signatures and initials)*

**Tested By:** *[Signature]* **Checked By:** *[Signature]* **Issued By:** *[Signature]*

Electronics Test & Development Centre  
G.T. Road, Near ITC Depot,  
Ambala Cantt - 133011

Test Report Certificate - Page 2

**ELDC TRONICS TEST & DEVELOPMENT CENTRE**  
G.T. ROAD, NEAR ITC DEPOT, AMBALA CANTT - 133011

**TEST REPORT**

TEST REPORT NUMBER	DATE	TESTER	TESTER'S SIGNATURE
HTR-001	25-8-07	2007	AG-4

1. **Customer:** Mr. Suresh Kumar  
Owner of Smiley  
Date of Birth: 01-01-1970

2. **Product Reference:** Model No.: 13229408  
Date of Birth: 22-07-2007

3. **Specification and Compliances:**  
Satisfactory

4. **MANUFACTURE:**  
**A. MAINS MODE:**

- 1. Mains Low Cut Off Voltage: 185 VAC ± 5% Incompliant Safe
- 2. Mains Low Cut Off Recovery: 185 VAC ± 5% Incompliant Safe
- 3. Mains High Cut Off Voltage: 205 VAC ± 5% Incompliant Safe
- 4. Mains High Cut Off Recovery: 205 VAC ± 5% Incompliant Safe
- 5. Output Overload and Short Circuit Protection: Shall be no more than 1.5 times the rated output voltage.
- 6. Output Frequency: Shall be ± 5% of rated frequency.

**B. BATTERY MODE:**

- 1. Output Voltage: 8.8Vdc Incompliant Safe
- 2. Output Voltage Range: 175 VAC to 240 VAC Incompliant Safe
- 3. Output Frequency: 55.5 Hz to 60.1 Hz Incompliant Safe

**C. CHANGE OVER:**

- 1. Change Over from Mains to Battery Mode: Shall be no more than 0.1 ms.
- 2. Change Over from Battery Mode to Mains: Shall be no more than 0.1 ms.

**D. LOAD CAPACITY:**

- 1. Output Power: 400 Wdc Incompliant Safe
- 2. Output Current: 18A Incompliant Safe
- 3. Output Power: 400 Wdc Incompliant Safe

*(Handwritten signatures and initials)*

**Tested By:** *[Signature]* **Checked By:** *[Signature]* **Issued By:** *[Signature]*

Electronics Test & Development Centre  
G.T. Road, Near ITC Depot,  
Ambala Cantt - 133011

Test Report Certificate - Page 3

**ELDC TRONICS TEST & DEVELOPMENT CENTRE**  
G.T. ROAD, NEAR ITC DEPOT, AMBALA CANTT - 133011

**TEST REPORT**

TEST REPORT NUMBER	DATE	TESTER	TESTER'S SIGNATURE
HTR-001	25-8-07	2007	AG-4

1. **Customer:** Mr. Suresh Kumar  
Owner of Smiley  
Date of Birth: 01-01-1970

2. **Product Reference:** Model No.: 13229408  
Dated: 22-07-2007

3. **Specification and Compliances:**  
Satisfactory

4. **Manufacture:** GTE IN UPS 400 VA (24V DC)

5. **Model / Spec:** HOME UPS - SMILEY

6. **Other Information:**

7. **Supplier:** 13229408

8. **Manufacturer:** AG-4

9. **Test of Manufacture:** 2007

10. **Test Date:** 2007

11. **Comments:** Satisfactory

*(Handwritten signatures and initials)*

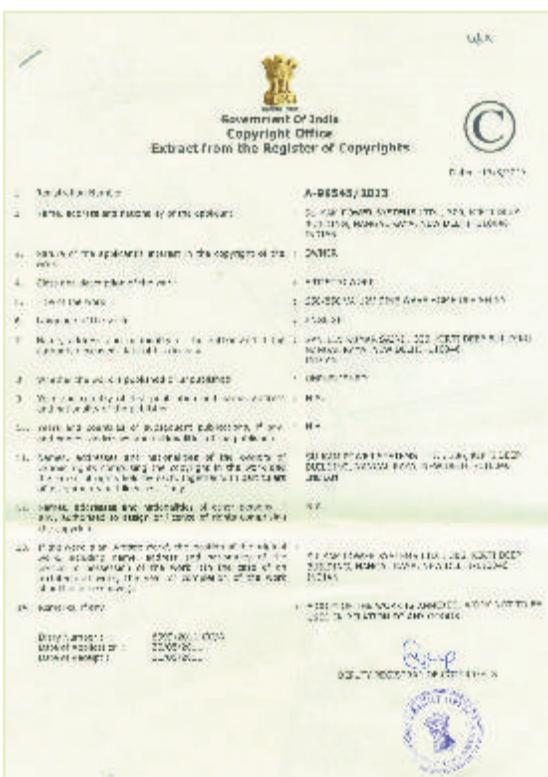
**Tested By:** *[Signature]* **Checked By:** *[Signature]* **Issued By:** *[Signature]*

Electronics Test & Development Centre  
G.T. Road, Near ITC Depot,  
Ambala Cantt - 133011

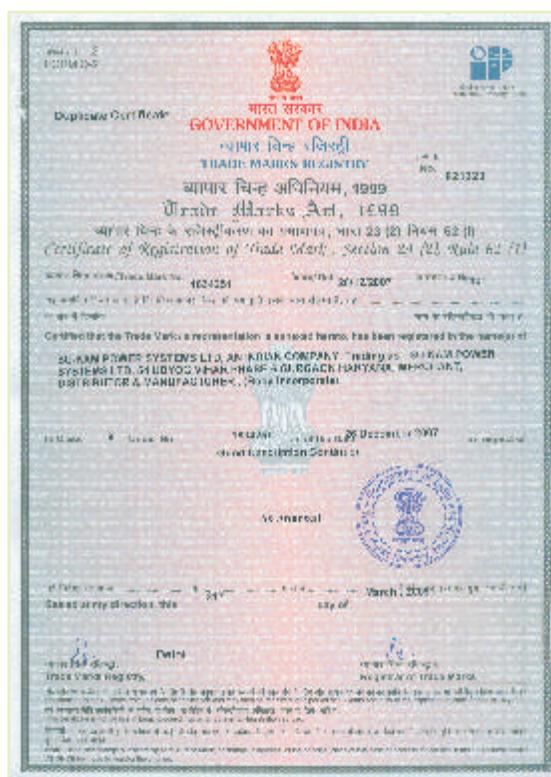
Test Report Certificate - Page 4

# Approval & Certificates

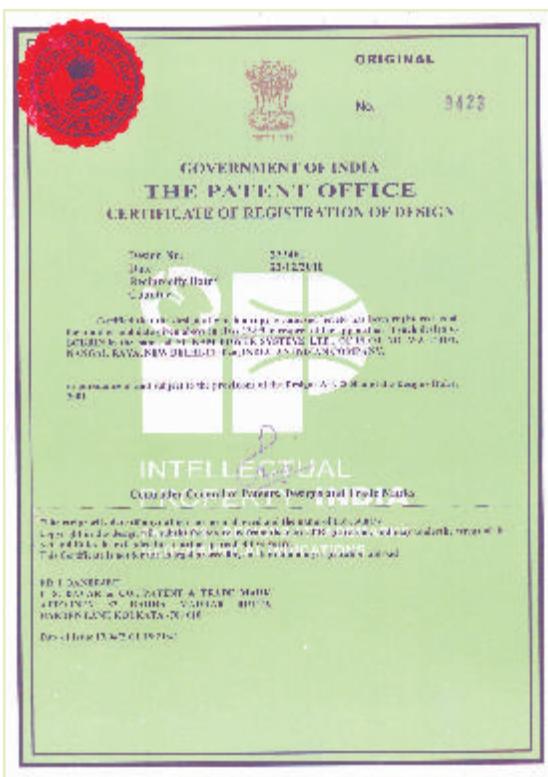
## SHINY SERIES



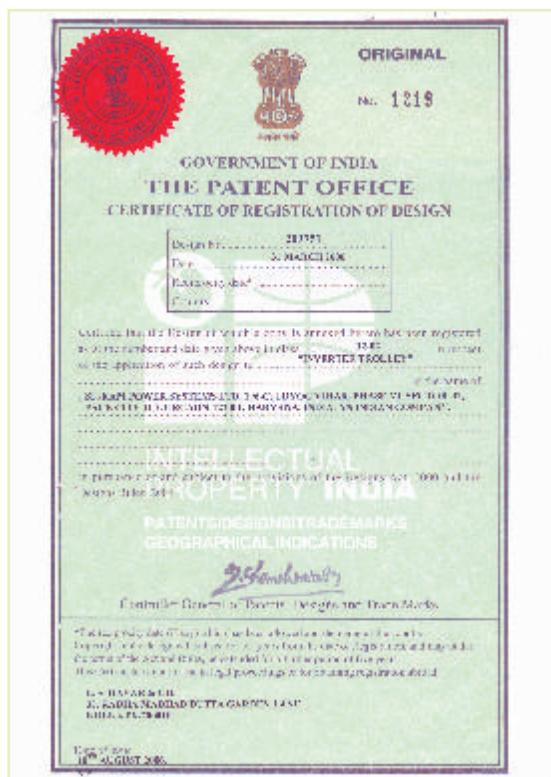
Certificate - A 93545/2013



## Certificate



Patent - 233461



Patent - 203751