



UF-4000A standard version



UF-R4000A remote version

UF Series

Hot Bar Soldering Control

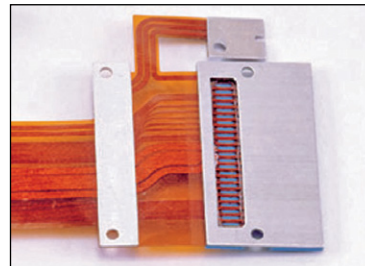
The UF Series provides targeted heating and precision temperature control for **hot bar soldering** applications such as the connection of flexible circuits, ribbon cables, wires, SMT components, single or dual sided edge connectors and thermocompression bonding of gold ribbon.

UF-4000A is available as a standard reflow soldering unit with a built-in transformer, or as a remote unit (UF-R4000A) with a smaller control unit and separate remote transformer— an ideal option for many automation installations.

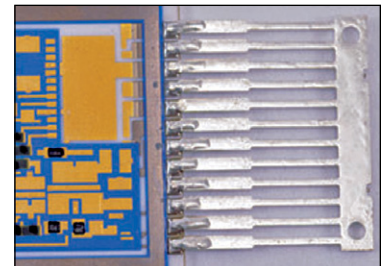
KEY FEATURES

- Closed-loop temperature and time control
- Stores 63 heating profiles
- Remote programming via RS-232/485
- Two thermocouples for process control and auxiliary monitoring
- Comprehensive and informative user interface:
 - Graphic and numeric process data
 - Status and alarm messages
 - Heat profile settings and envelope limits
 - Temperature error indicators
 - User scalable time axis
 - Real time temperature plot

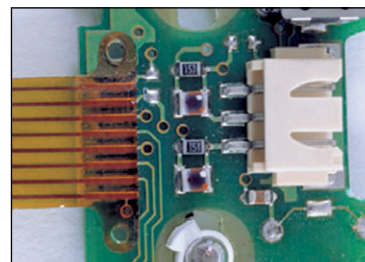
TYPICAL APPLICATIONS



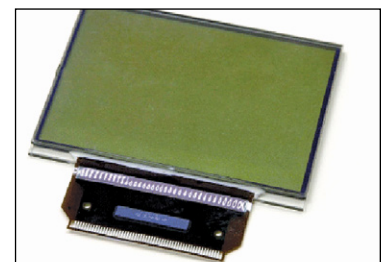
Open-windowed flex attachment



Lead frame to substrate pads



Flex to PCB



Flex to LCD

TECHNICAL SPECIFICATIONS

Temperature profile specifications		
Temperature range	Idle	25 to 300° C
	Base heat	25 to 300° C
	Preheat	60 to 500° C
	Heat	60 to 600° C
	Heat extended range	60 to 999° C
Time periods (in 0.1 sec. increments)	Postheat	25 to 999° C
	Base heat	0 to 99.9 seconds
	Rise to preheat time	0 to 9.9 seconds
	Preheat	0 to 99.9 seconds
	Rise to heat time	0 to 9.9 seconds
Temperature Control	Heat	0.1 to 99.9 seconds
	Postheat	0 to 99.9 seconds
	Accuracy	±2% of reading or ±6° C, whichever is greater
	Repeatability	±1% of reading
Thermocouple input		Type E, J or K
Heating rate control		Three integrated user-set parameters optimize temperature profile
Programmable heat profiles		Sixty three (63) non-volatile memory

Optional Equipment Ordering Guide		
Suggested basic system: power supply, reflow head, thermode, footswitch, auxiliary thermocouple		
Reflow heads	Force range lbf (Newtons)	Application guideline
LT-050B-F/LRF	0.08 - 2.2 (0.4 - 9.8)	Light force pinpoint soldering
LT-050B-F/RF	0.275 - 2.2 (1.22 - 9.8)	Light force pinpoint soldering
TL-087B-EZ	0.5 - 20 (2.2 - 89)	Small/medium soldering
TL-087B-F	0.25 - 20 (1.1 - 89)	Small/medium soldering
TL-087B-SA/REFLOW	2 - 20 (8.9 - 88.9)	Flex soldering/bonding
TL-084B-SA/REFLOW	5 - 40 (22.2 - 177.9)	Flex soldering/ACF/heat staking
TL-180B-SA	7 - 100 (31.1 - 444.0)	Flex soldering/ACF/heat staking
SH80	1.8 - 18 (8 - 80)	Flex soldering/ACF/heat staking
SH500	6.7 - 112.4 (30 - 500)	Flex soldering/ACF/heat staking
System solutions:		
Desktop bonders	1.8 - 112.4 (8 - 500)	Small to large soldering, flex soldering & ACF bonding; request/see datasheet #991-006
Auxiliary thermocouples		
AUXTC/E	Auxiliary thermocouple, type E, 5 ft. long	
AUXTC/K	Auxiliary thermocouple, type K, 5 ft. long	
AUXTC/J	Auxiliary thermocouple, type J, 5 ft. long	

Switched Input electrical specifications	
Operator initiation	1 or 2 level footswitch
Dedicated relays	24 VAC/24 VDC 0.3 A
Air head	ON/OFF for head actuation
Head cool	ON/OFF for cooling thermode holder
Solder cool	ON@COOL, OFF@PREHEAT
Programmable relays	7 each, electromechanical (24 VAC or +24 DC)
Contact rating	24 VAC/24DC, 0.3 A
Communication ports	RS-232, RS-485
Programmable relay functions –	Reflow, preheat, baseheat, idle on, alarm, out of limits, clean thermode, replace thermode, end reflow, heat on, head valve active, system ready
Operating temperatures	59° F (15° C) – 104° F (40° C)
Relative humidity, max.	93% @ 104° F (40° C)

Power Supply Ordering Guide		
Power Supplies	Description	Electrical
UF-4000A/240	UF-4000A power supply, 240 VAC, 4 kVA transformer	15 A, single phase 50 or 60 Hz
UF-4000A/240/EAPRO	UF-4000A power supply, 240 VAC, 4 kVA transformer	15 A, single phase 50 or 60 Hz
UF-R4000A/240	UF-4000A power supply, 240 VAC, no transformer	15 A, single phase 50 or 60 Hz
UF-R4000A/240/EAPRO	UF-4000A power supply, 240 VAC, no transformer	15 A, single phase 50 or 60 Hz

Remote Transformer Ordering Guide

(select one for use with UF-R4000A)

Remote Transformer	Description
MT-L040A2	4 kVA transformer secondary voltage range 0.95 - 3.81 V
MT-M040A2	4 kVA transformer secondary voltage range 1.90 - 7.62 V
MT-J020A2	2 kVA transformer secondary voltage range 0.95 - 3.81 V
MT-K020A2	2 kVA transformer secondary voltage range 1.90 - 7.62 V

Pulse Heated Thermodes	Description	Application/Size*: Inches (mm)
17P	Peg tip - (circular probe tip)	Thermocompression bonding-single point soldering / weld face diameter .020 - .093 (0.5 - 2.4)
17T	"T" tip - (rectangular probe tip)	Thermocompression bonding-single point soldering / weld face .008 x .010 (0.2 x 0.25)
17BM	Blade	Multiple contacts / 0.030 - 1.0 (0.76 - 25.4)
17F	Nichrome fold-up	Multiple contacts / 0.250 - 1.0 (6.45 - 25.4)
17TD	Three dimensional	Multiple contacts / 1.0 - 3.0 (25.4 - 76.2)

*NOTE: Standard size ranges are listed, consult AMADA WELD TECH for custom requirements and application advice.

WEIGHT & DIMENSIONS

	UF-4000A	UF-R4000A	MT-J020A2	MT-L040A2
Dimensions (W x D x H)	10.0 in x 18.33 in x 12.6 in (254 mm x 466 mm x 319 mm)	11.21 in x 11.12 in x 5.18 (285 mm x 282 mm x 132 mm)	7.04 in x 11.91 in x 7.81 in (179 mm x 303 mm x 198 mm)	7.04 in x 14.55 in x 7.81 in (179 mm x 370 mm x 198 mm)
Weight	2 kVA: 48 lb (21.8 kg) 4 kVA: 60 lb (27.2 kg)	19 lb (8.6 kg)	31 lb (14.1 kg)	48 lb (21.8 kg)



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