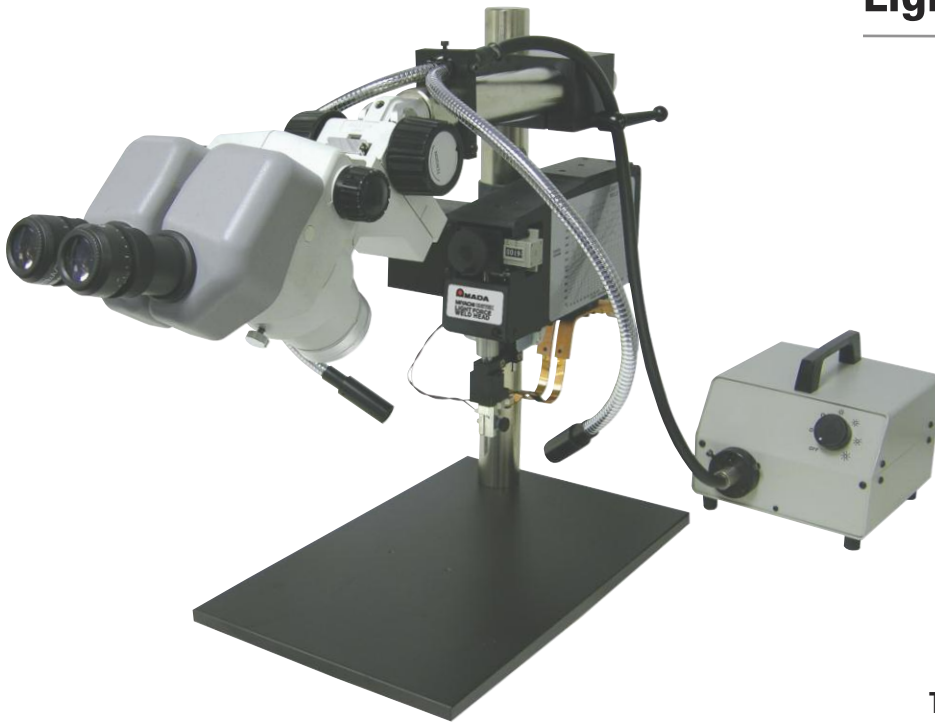


# 50 Series

## Light Force Weld Heads



- Extremely light force (to 40 g) for **micro welding** fine wires and ribbons
- Viewing microscope (optional) for precise part positioning
- Precise force adjustment
- No electrode deflection

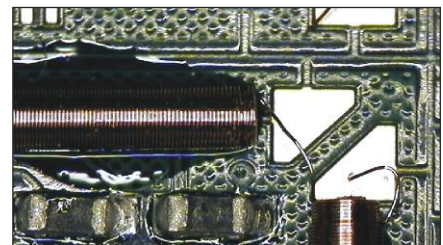
### KEY FEATURES

- 40 – 1000 gf designed to join fine wires and ribbons between 0.0003 in – 0.01 in thickness
- Numeric force adjustment set with 3-digit numeric counter
- No deflection through stroke ensures consistent electrode contact and avoids welding blowouts or inconsistencies
- Configurable design accommodates a wide variety of applications
- Manual foot or air actuation
- May be fitted with an optional microscope for manual parts positioning

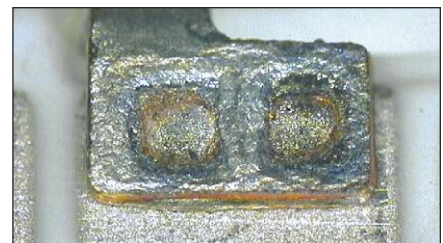
### TYPICAL APPLICATIONS



*Wire to chip*



*Fine magnet wire*

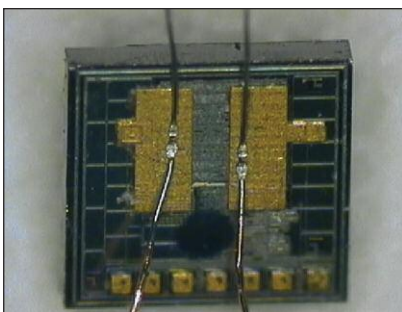


*Reflow contact to pad*



### MODEL 50F OR 50A/24 ELECTRODE HOLDER WITH UNITIP ELECTRODE

- Single-sided parallel gap welding
- Accessibility into electronic packages
- Ribbon and wire thickness from 0.0003 in to 0.005 in
- Best suited for conductive materials



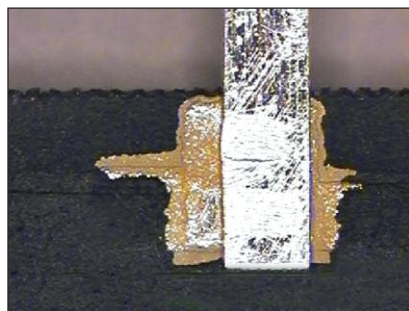
*0.001 in gold coated copper wire to gold pad*



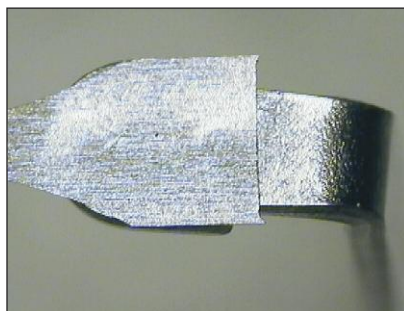
*0.005 in gold ribbon to gold pad*

### MODEL 50UB ELECTRODE HOLDER WITH UNIBOND ELECTRODES

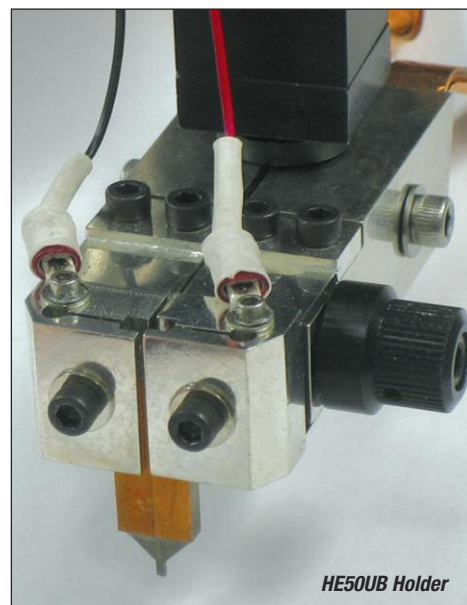
- Single-sided parallel gap welding (adjustable gap)
- Electrode footprint size promotes electrode lifetime
- Ribbon and wire thickness from 0.0005 in to 0.005 in
- UTA adapter available for Unitips
- Welds both resistive and conductive materials



*0.005 in silver tab to metalized pad*

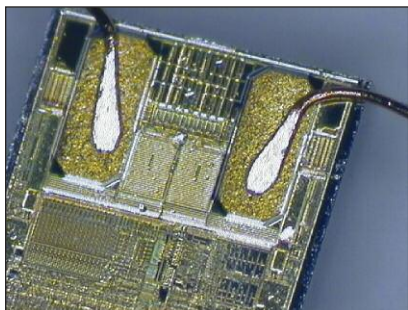


*0.002 in nickel strip to block*



## MODEL 50RF – 17BM STYLE BLADE THERMODE MODEL 50LRF – 17P STYLE THERMODE

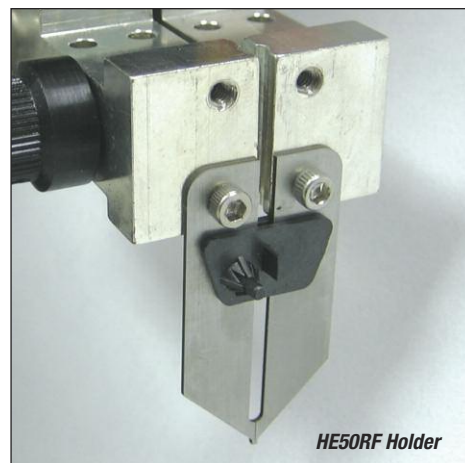
- Blade or single point thermode heating element according to part accessibility



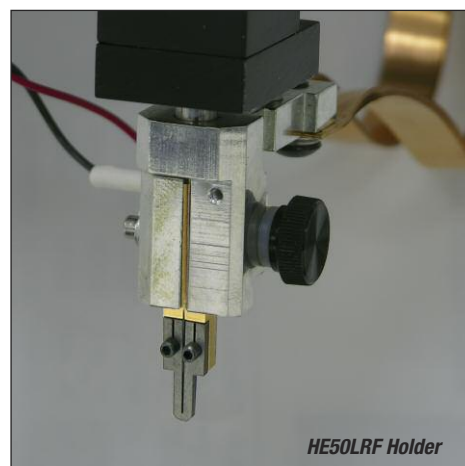
*0.002 in diameter magnet wire to gold pad*



*0.005 in diameter magnet wire to gold pad*



*HE50RF Holder*



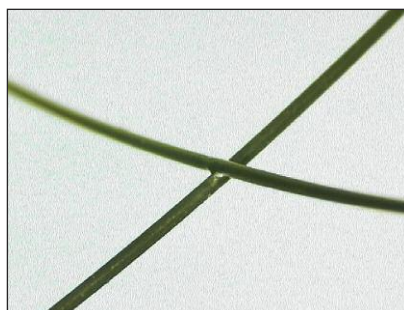
*HE50LRF Holder*

## MODEL 50F OR 50A/24 OPPOSED

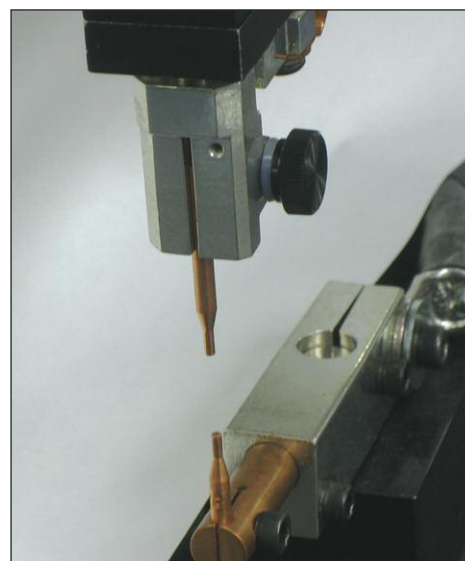
- Light force opposed configuration enables the welding of a wide range of both conductive and resistive materials
- Uses standard ES0400 series electrodes



*0.002 in thick platinum strip to platinum tube*



*0.01 in diameter tungsten cross wire weld*



*HE50 with HE1200S lower electrode holder*

## TECHNICAL SPECIFICATIONS

Stroke	.75 in (1.9 cm)
Throat depth	4.66 in (11.8 cm)
Power rating	125 watt-seconds or 2 KVA at 8% duty cycle

Model (all models)	Electrode holder	Electrode type	Force range (gmf)	Force range (Newtons)	Actuation	Application
50F	HE50	Unitip	40 - 1000	.39 - 9.8	Foot	Welding
50F opposed	HE50	1/8 in diameter	40 - 1000	.39 - 9.8	Foot	Welding
50A	HE50	Unitip	40 - 1000	.39 - 9.8	Air, 115 VAC	Welding
50A/24	HE50	Unitip	40 - 1000	.39 - 9.8	Air, 24 VAC	Welding
50F/UB	HE50UB	Unibond	125 - 1000	1.22 - 9.8	Foot	Welding
50A/UB	HE50UB	Unibond	125 - 1000	1.22 - 9.8	Air, 115 VAC	Welding
50A/UB/24	HE50UB	Unibond	125 - 1000	1.22 - 9.8	Air, 24 VAC	Welding
50F/RF	HE50RF	Thermode	125 - 1000	1.22 - 9.8	Foot	Reflow Soldering
50A/RF	HE50RF	Thermode	125 - 1000	1.22 - 9.8	Air, 115 VAC	Reflow Soldering
50A/RF/24	HE50RF	Thermode	125 - 1000	1.22 - 9.8	Air, 24 VAC	Reflow Soldering
50F/LRF	HE50LRF	Thermode	40 - 1000	.39 - 9.8	Foot	Thermocompression Bonding
50A/LRF	HE50LRF	Thermode	40 - 1000	.39 - 9.8	Air, 115 VAC	Thermocompression Bonding
50A/LRF/24	HE50LRF	Thermode	40 - 1000	.39 - 9.8	Air, 24 VAC	Thermocompression Bonding

All 50 heads come with baseplate and optical mount assembly. Manual 50F models include CP footpedal, 50A EZair models require either FS1L or FS2L foot switch.

## MICROSCOPE ACCESSORIES

BLFOI fiber optic illuminator system, PN 10-276-01
Nikon microscope, PN 10-376-01

## MAGNIFICATION AND WORKING DISTANCE OPTIONS

Eyepiece Lenses	Auxiliary Lenses				
	0.5	0.7	1	1.5	2
10X	4.0 - 25.0X	5.6 - 35.0X	8.0 - 50.0X	12.0 - 75.0X	16.0 - 100.0X
15X	6.0 - 37.5X	8.4 - 52.5X	12.0 - 75.0X	18.0 - 112.5X	24.0 - 150.0X
20X	8.0 - 50.0X	11.2 - 70.0X	16.0 - 100.0X	24.0 - 150.0X	32.0 - 200.0X
30X	12.0 - 75.0X	16.8 - 105.0X	24.0 - 150.0X	36.0 - 225.0X	48.0 - 300.0X
Focal length (working distance)	8.3 in (21.1 cm)	5.9 in (15 cm)	4.5 in (11.4 cm)	2.4 in (6.1 cm)	1.7 in (4.3 cm)

## WEIGHT &amp; DIMENSIONS

	Without microscope	With optional microscope
Dimensions (L x W x H)	17.5 in x 10 in x 16 in (444.5 mm x 254.0 mm x 406.4 mm)	23 in x 10 in x 16 in (584.2 mm x 254.0 mm x 406.4 mm)
Weight	6 lb (2.7 kg)	25 lb (11.4 kg)



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