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

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

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

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
### TECHNICAL SPECIFICATIONS

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

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

### MICROSCOPE ACCESSORIES

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

### MAGNIFICATION AND WORKING DISTANCE OPTIONS

<table>
<thead>
<tr>
<th>Eyepiece Lenses</th>
<th>Auxiliary Lenses</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>10X</td>
<td>4.0 - 25.0X</td>
</tr>
<tr>
<td>15X</td>
<td>6.0 - 37.5X</td>
</tr>
<tr>
<td>20X</td>
<td>8.0 - 50.0X</td>
</tr>
<tr>
<td>30X</td>
<td>12.0 - 75.0X</td>
</tr>
</tbody>
</table>

**Focal length (working distance)**

- 8.3 in (21.1 cm) without microscope
- 23 in x 10 in x 16 in with optional microscope

### WEIGHT & DIMENSIONS

<table>
<thead>
<tr>
<th>Dimensions (L x W x H)</th>
<th>Without microscope</th>
<th>With optional microscope</th>
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<tr>
<td></td>
<td>17.5 in x 10 in x 16 in (444.5 mm x 254.0 mm x 406.4 mm)</td>
<td>23 in x 10 in x 16 in (584.2 mm x 254.0 mm x 406.4 mm)</td>
</tr>
<tr>
<td>Weight</td>
<td>6 lb (2.7 kg)</td>
<td>25 lb (11.4 kg)</td>
</tr>
</tbody>
</table>

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