TOSHIBA

Ink recirculating type inkjet head

**CF1B / CF1BL / CF1BXL**

300npi

**Ink recirculation through all channels**
Ensures high jetting reliability

- Suitable for jetting ink with larger particle size and higher gravity
- Controlling ink temperature by ink recirculating system enables stable print quality
- Stable start-up after long downtime
- Less necessity of maintenance reducing downtime and ink waste resulting in low running cost and eco-friendliness

**Mechanism of ink recirculating through all channels**

[Image Chart]

- Inlet hole
- Ink flow
- Air bubbles
- Pressure chamber (channel)
- Nozzle
- Ink recirculation path
- Normal jetting
- Ink flow
- Jetting of ink

**Feature of ink recirculation through all channels**

Stable jetting of easily sedimenting ink with higher viscosity and gravity

- Without ink recirculation
  - Particle sedimentation
  - Pigments - Particles
- Typical ink recirculation
  - Partial sedimentation
- TOSHIBA TEC ink recirculation
  - Ink is recirculated through all channels, preventing sedimentation and reducing nozzle blockages drastically.
  - Because the ink path is simple, it is excellent at carrying away air bubbles or unwanted particles.
### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>CF1B</th>
<th>CF1BL</th>
<th>CF1BXL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Print method</strong></td>
<td>On-Demand piezo technology</td>
<td></td>
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<tr>
<td><strong>Ink recirculation structure</strong></td>
<td>Ink recirculation through all channels</td>
<td></td>
<td></td>
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<tr>
<td><strong>Print width</strong></td>
<td>53.7 mm</td>
<td></td>
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<tr>
<td><strong>Nozzles</strong></td>
<td>636</td>
<td></td>
<td></td>
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<tr>
<td><strong>Nozzle resolution</strong></td>
<td>300 dpi</td>
<td></td>
<td></td>
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<tr>
<td><strong>Number of rows</strong></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nozzle spacing (Row to row distance)</strong></td>
<td>4.64 mm</td>
<td></td>
<td></td>
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<tr>
<td><strong>Greyscale levels</strong></td>
<td>8 levels/0~7 drops</td>
<td>4 levels/0,5,6,7 drops</td>
<td>7 levels/0~6 drops</td>
</tr>
<tr>
<td><strong>Drop volume</strong></td>
<td>6~42 pL</td>
<td>57~80 pL</td>
<td>36~180 pL</td>
</tr>
<tr>
<td><strong>Frequency</strong></td>
<td>4.97 kHz/7 drops</td>
<td>4.8 kHz/7 drops</td>
<td>4.8 kHz/6 drops</td>
</tr>
<tr>
<td><strong>Ink type</strong></td>
<td>UV-curing &amp; oil-based (consult us for compatibility assurance)</td>
<td></td>
<td></td>
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<tr>
<td><strong>Built-in temperature sensor</strong></td>
<td>Included</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Head cooling method</strong></td>
<td>Air-cooling</td>
<td></td>
<td></td>
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<tr>
<td><strong>Size, Weight</strong></td>
<td>94.1 mm(W)× 26 mm(D)× 79 mm(H), 161 g</td>
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</tbody>
</table>

※Gradation levels and drop volumes depend upon the type of ink used. Maximum printing speed and linear frequency can be increased by reducing the number of drops per dot (dpd).
※Four different types of power supplies (5V, 39V and two units of 14-31V) are required in order to drive head.
※The specifications above may be modified due to certain circumstances.

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**External dimensions (mm)**

![External Dimensions](image1)

**With optional positioning plate**

![With Optional Positioning Plate](image2)

※A factory-fitted option enables easy and accurate head positioning with a precision of 10µm to the 1st nozzle.

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