

# RICOH DIRECT THERMAL MEDICAL & LAB APPLICATIONS

*INDUSTRY LEADERS IN THERMAL IMAGE SOLUTIONS*



## Product Benefits

Medical, pharmaceutical, and laboratory applications present unique labeling challenges. Products must maintain crisp, clear images for optimal scannability even when exposed to harsh environmental conditions. Medical wristbands, for example, must be gentle enough for delicate skin and able to endure exposure to medical solvents while keeping patient information secure with excellent image preservation. In addition to contact with disinfectant, hand soap, fluids, and frequent handling, labels may also require heat resistance. Ricoh's array of product options delivers customized solutions for our customers.



## Industry Applications

- Test Tube & Pathology Slide Labels
- Prescription Labels
- Wristbands
- Blood Bags & Patient Charts

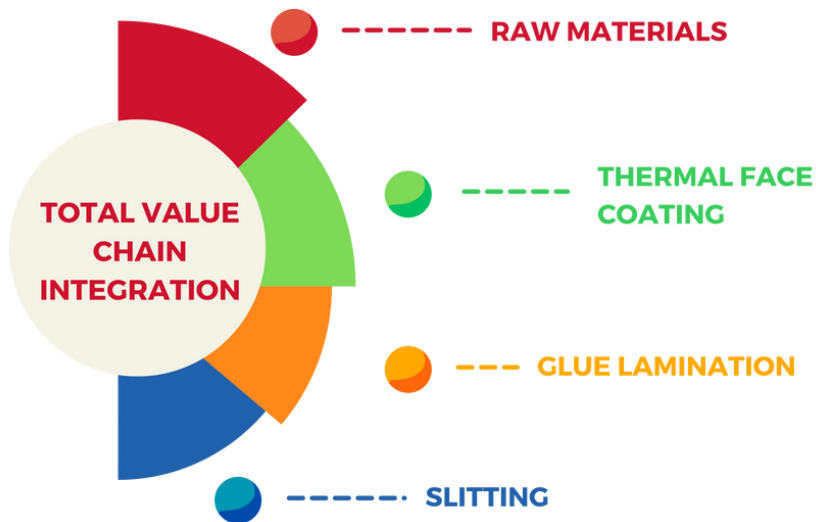


## Suitability Specifics

Labeling solutions for medical, pharmaceutical, and laboratory applications must adhere well to a variety of surfaces, even those that are curved or irregularly shaped. Ricoh's top-coated thermal paper products designed for these applications are resistant to heat, moisture, and sunlight, as well as hand soaps, sanitizers, and other frequently used solvents. Medical wristbands and durable label options are tear resistant as well. Medium and high-sensitivity products both offer excellent image preservation and scannability.

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- Paper, film, and chemicals are sourced from raw material manufacturers
- Unlike our competitors, face coating is developed by our R&D team and manufactured on-site at Ricoh facilities
- DT face, adhesive, and liner undergo glue lamination process on-site, monitored for optimal quality control
- The master roll slitting process allows us to provide usable finished rolls for commercial printing companies, delivering end-to-end labeling solutions

## Total Value Chain Integration

At Ricoh Electronics Inc., our in-house R&D team innovates custom solutions designed around the unique needs of our customers. Our *Total Value Chain Integration* sets us apart from competitors. From raw materials to finished rolls, we take pride in complete ownership of the manufacturing process, allowing for rigorous end-to-end quality control.

## Direct Thermal - How It Prints

Direct Thermal printing produces an image by selectively heating thermal paper as it passes over the thermal print head. Specialized coating on the thermal paper turns black where heat has been applied, creating a high-quality and smudge-resistant image. Direct Thermal printing is ideal for fast-paced, on-demand use.

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## Direct Thermal Product Solutions

Grade	Product	Performance Characteristics	Caliper
Paper Base	<u>150PRx</u>	<ul style="list-style-type: none"> <li>• Medium-high sensitivity and superb head-matching performance</li> <li>• Premium top-coated DT paper</li> <li>• Strong resistance to medical solutions</li> <li>• Ideal for healthcare/medical applications</li> </ul>	3.1 mil (78.5µm)
Paper Base	<u>150PRx PF</u>	<ul style="list-style-type: none"> <li>• Medium-high sensitivity and superb head-matching performance</li> <li>• Phenol-free premium top-coated DT paper</li> <li>• Strong resistance to medical solutions</li> <li>• Ideal for healthcare/medical applications</li> </ul>	3.1 mil (78.5µm)
Film Base	<u>140LDS</u>	<ul style="list-style-type: none"> <li>• High image sensitivity and preservation properties</li> <li>• Durable polypropylene direct thermal base film</li> <li>• Highly tear and water resistant</li> <li>• Ideal for multiple applications</li> </ul>	2.3 mil (59µm)
Film Base	<u>135WRx-60</u>	<ul style="list-style-type: none"> <li>• Medium sensitivity and image preservation properties</li> <li>• Durable polypropylene direct thermal base film</li> <li>• Resistant to medical solutions, tearing, and water</li> <li>• Ideal for multiple applications</li> </ul>	2.6 mil (65µm)
Film Base	<u>140LES</u>	<ul style="list-style-type: none"> <li>• High image sensitivity and preservation properties</li> <li>• Durable polypropylene direct thermal base film</li> <li>• Highly tear and water resistant</li> <li>• Ideal for multiple applications</li> </ul>	3.9 mil (99µm)

Ricoh's labeling products lead the industry in quality and reliability. Contact your Ricoh sales representative to discuss custom solutions for your unique business needs. Scan the QR code to learn more about [Ricoh's Healthcare & Laboratory Direct Thermal products](#).

