

B110C

(For Flat Head Printers)

RICOH
imagine. change.

Thermal Transfer Ribbon Product Information

Last update:
Aug. 2016
Ref: PS-1102 (Rev. 1)

RESIN SUPER SMEARLESS

RIBBON PROPERTY

- Base Material Polyester film
- Base Thickness (μm) 4.5 ± 0.4

INK PROPERTY

- Ink Color Black
- Transmission Density Min. 0.65

IMAGE PROPERTY

- Scratch Resistance (times) Min. 1850
- Light Resistance (ANSI) Min. 3.5 A
- Water Resistance (ANSI) Min. 3.5 A
- Chemical Resistance (times)

	<WHITE PET>	<SILVER PET>
Ethanol	Min. 150	Min. 1000
Kerosene	Min. 100	Min. 2000
Engine Oil	Min. 2000	Min. 2000
Gasoline	Min. 160	Min. 1000
Hexane	Min. 1500	Min. 2000

* All tests specifications are based on Ricoh's standard test results.

USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

GUARANTEE PERIOD:

- *Finished rolls: 2 years after manufacturing
- *Master rolls: 1 year after coating

FEATURES:

- High sensitivity for high-speed printing (~4 inches/sec.) with high printing quality assured
- Super smear resistance at temperatures up to 100°C (212°F)
- Superior resistance to solvents (alcohol, petrol, kerosene, brake fluid, engine oil, car wax, etc.)
- Special back coating for reliable and superior matching with thermal print head
- UL recognized with various printers and films

The above data represents product averages, allowing for industry accepted variances. Specifications may change without notice.

RICOH ELECTRONICS, INC. DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THE CUSTOMER'S PURCHASE OF OUR PRODUCTS. IT IS CUSTOMER'S SOLE AND EXCLUSIVE RESPONSIBILITY TO TEST AND ENSURE SUITABILITY OF OUR PRODUCTS FOR ITS CUSTOMERS' OR END-USER'S APPLICATION.

B120EC

(For Near Edge & Flat Head Printers)

RICOH
imagine. change.

Thermal Transfer Ribbon Product Information

Last update:
Aug. 2016
Ref: PS-1256 (Rev. 2)

RESIN

RIBBON PROPERTY

- Base Material Polyester film
- Base Thickness (μm) 4.5 ± 0.4

INK PROPERTY

- Ink Color Black
- Ink Transparency Min. 0.65

PRINTING PROPERTY

- Image Density Min. 1.25
- Image Resolution Min. ANSI C on horizontal bar, tone within +3

IMAGE PROPERTY

- Smear Resistance Image remains readable after scratching 50 times
- Light Resistance Min. ANSI A on vertical barcode
- Water Resistance Min. ANSI A on vertical barcode
- Ethanol Resistance Image and barcode remains readable after rubbing 350 times
- Kerosene Resistance Image and barcode remains readable after rubbing 600 times

** All tests specifications are based on Ricoh's standard test methods.*

USAGE ENVIRONMENT:

5 to 40°C (41 ~ 104°F), 10 to 95%RH

STORAGE CONDITIONS:

Keep indoors. Avoid high temperatures, high humidity and direct sunlight.

*Finished rolls: -20-40°C, 10-90%RH

*Master rolls: 35°C, 85% RH or less

GUARANTEE PERIOD:

* Finished rolls: 2 years after manufacturing

* Master rolls: 1 year after coating

FEATURES:

- Universal resin ribbon for both flat and near-edge head
- Prints on both paper and film
- High preservation
- Reliable, sharp-edge print quality
- Maximizes barcode scanning rates
- Prints on a wide variety of synthetic media such as PET, PVC, PE and other coated papers

The above data represents product averages, allowing for industry accepted variances. These products should be tested in the end-use conditions to ensure that they meet the requirements of the specific application. Specifications may change without notice.

RICOH ELECTRONICS, INC. DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THE CUSTOMER'S PURCHASE OF OUR PRODUCTS. IT IS CUSTOMER'S SOLE AND EXCLUSIVE RESPONSIBILITY TO TEST AND ENSURE SUITABILITY OF OUR PRODUCTS FOR ITS CUSTOMERS' OR END-USER'S APPLICATION.

B110CU

(For Flat Head Printers)

RICOH
imagine. change.

Thermal Transfer Ribbon Product Information

RESIN SUPER SMEARLESS

Last update:
Aug. 2016
Ref: PS-1384 (Rev. 1)

RIBBON PROPERTY

- Base Material
- Base Thickness (μm)

Polyester film
4.5 \pm 0.4

INK PROPERTY

- Ink Color

Black

IMAGE PROPERTY

- Image Density
- Image Resolution
- Scratch Resistance (scratched x 100 by sharp edge at 40°)
- Resistance to smear and heat (rubbed x 100 in 100°C)
- Chemical Resistance (wiped x 100 with cotton cloth at 100gf/cm²)
 - Ethanol, Methanol
 - IPA (Isopropyl Alcohol)
 - MEK (Methyl Ethyl Ketone)
 - Thinner
 - Xylene
 - Brake Fluid
 - Water

1.5 minimum
Excellent
Excellent
Excellent
Excellent
Excellent
Excellent
Excellent
Excellent
Excellent

** All tests specifications are based on Ricoh's standard test results.*

USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

GUARANTEE PERIOD:

- *Finished rolls: 2 years after manufacturing
- *Master rolls: 1 year after coating

FEATURES:

- Ideal for Automotive, Serial No. Plates, Circuit Board Labels and Pharmaceutical Applications
- Produces very high resolution even when printing using a 600dpi thermal head
- Excellent resistance to heat, chemicals, solvents and scratches
- UL recognized

The above data represents product averages, allowing for industry accepted variances. These products should be tested in the end-use conditions to ensure that they meet the requirements of the specific application. Specifications may change without notice.

RICOH ELECTRONICS, INC. DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THE CUSTOMER'S PURCHASE OF OUR PRODUCTS. IT IS CUSTOMER'S SOLE AND EXCLUSIVE RESPONSIBILITY TO TEST AND ENSURE SUITABILITY OF OUR PRODUCTS FOR ITS CUSTOMERS' OR END-USER'S APPLICATION.

B120HS

(For Flat Head Printers)

Thermal Transfer Ribbon Product Information

RESIN SPECIALTY

RICOH
imagine. change.

Last update:
Aug. 2016
Ref: PS-1385 (Rev. 1)

RIBBON PROPERTY

- Base Material Polyester film
- Base Thickness (μm) 4.5 ± 0.4

INK PROPERTY

- Ink Color Black
- Ink Transparency Min. 1.2

PRINTING PROPERTY

- Image Density Min. 1.5
- Thermo Sensitivity Min. 0.38mj/dot
- Image Resolution Readable without ink smearing

IMAGE PROPERTY

- Scratch Resistance (Times) Min. 25
- Oil Resistance Min. ANSI 2.0 C
- Water Resistance Min. ANSI 2.0 C
- Preservability in cold storage Min. ANSI 2.0 C

** All tests specifications are based on Ricoh's standard test methods.*

USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

GUARANTEE PERIOD:

- *Finished rolls: 2 years after manufacturing
- *Master rolls: 1 year after coating

FEATURES:

- Excellent when printing on general wrapping polypropylene
- Superior resistance to oils and water and preservability in cold storage environments
- High sensitivity which can be used for high-speed printers
- Excellent image quality

The above data represents product averages, allowing for industry accepted variances. These products should be tested in the end-use conditions to ensure that they meet the requirements of the specific application. Specifications may change without notice.

RICOH ELECTRONICS, INC. DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THE CUSTOMER'S PURCHASE OF OUR PRODUCTS. IT IS CUSTOMER'S SOLE AND EXCLUSIVE RESPONSIBILITY TO TEST AND ENSURE SUITABILITY OF OUR PRODUCTS FOR ITS CUSTOMERS' OR END-USER'S APPLICATION.

B110CR

(For Flat Head Printers)

RICOH
imagine. change.

Thermal Transfer Ribbon Product Information

RESIN SUPER SMEARLESS

Last update:
Aug. 2016
Ref: PS-1659 (Rev. 1)

RIBBON PROPERTY

- Base Material
- Base Thickness (μm)

Polyester film
4.5 \pm 0.4

INK PROPERTY

- Ink Color

Black

IMAGE PROPERTY

- Image Density
- Image Resolution
- Scratch Resistance
- Chemical Resistance
- Ethanol, Methanol
- IPA (Isopropyl Alcohol)
- Windshield Washer
- Gasoline, Diesel Fuel, Gasohol
- Engine Oil, Mission Fluid
- Power Steering Fluid
- Brake Fluid
- Engine Coolant

1.5 minimum
Excellent
Excellent
Excellent
Excellent
Excellent
Excellent
Excellent
Excellent
Excellent
Excellent
Excellent

** All tests specifications are based on Ricoh's standard test results.*

USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

GUARANTEE PERIOD:

- *Finished rolls: 2 years after manufacturing
- *Master rolls: 1 year after coating

FEATURES:

- Ideal for Automotive, Serial No. Plates, Circuit Board Labels and Pharmaceutical Applications
- Produces very high resolution even when printing using a 600dpi thermal head
- Excellent resistance to heat, chemicals, solvents and scratches
- UL recognized with various printers and films

The above data represents product averages, allowing for industry accepted variances. These products should be tested in the end-use conditions to ensure that they meet the requirements of the specific application. Specifications may change without notice.

RICOH ELECTRONICS, INC. DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THE CUSTOMER'S PURCHASE OF OUR PRODUCTS. IT IS CUSTOMER'S SOLE AND EXCLUSIVE RESPONSIBILITY TO TEST AND ENSURE SUITABILITY OF OUR PRODUCTS FOR ITS CUSTOMERS' OR END-USER'S APPLICATION.

B110A

(For Flat Head Printers)

RICOH
imagine. change.

Thermal Transfer Ribbon Product Information

WAX-RESIN SMEARLESS

Last update:
Aug. 2016
Ref: PS-1698 (Rev. 1)

RIBBON PROPERTY

- Base Material Polyester film
- Base Thickness (μm) 4.5 ± 0.4

INK PROPERTY

- Ink Color Black
- Ink Transparency Min. 1.2

PRINTING PROPERTY

- Image Density (check w/ X-Rite) Min. 1.25
- ANSI Grade Min. Vertical Bar ANSI 2.0 C

IMAGE PROPERTY

- Scratch Resistance (Times) Min. 100
- Light Resistance Min. ANSI 2.0 C
- Water Resistance Min. ANSI 2.0 C

* All tests specifications are based on Ricoh's standard test methods.

USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

GUARANTEE PERIOD:

2 years after manufacturing.

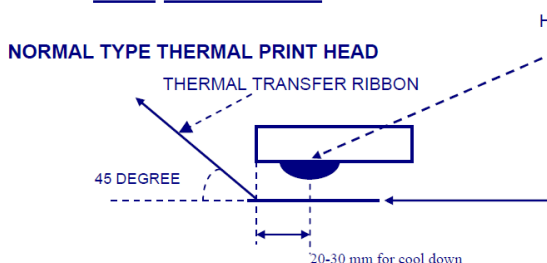
FEATURES:

- All purpose wax/resin TTR
- Prints on wide variety of media
- High resistance to smearing & chemicals
- Reliable, sharp-edge print quality
- Maximizes barcode scanning rates
- Minimizes static electricity & ink flaking problems

Ribbon Selection Tips

For Flat type thermal print head

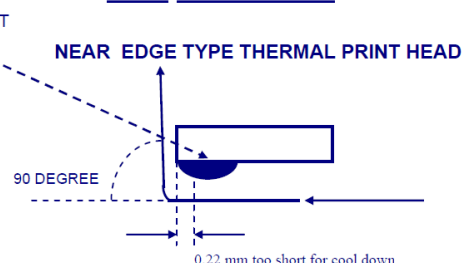
B110A is recommended



Ink from Ribbon has adequate cooling time before ribbon is peeled from substrate.

For Near edge type thermal print head

B120E is recommended



Near-Edge Head technology requires a different type of ribbon that can transfer ink before cooling down.

The above data represents product averages, allowing for industry accepted variances. These products should be tested in the end-use conditions to ensure that they meet the requirements of the specific application. Specifications may change without notice.

RICOH ELECTRONICS, INC. DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THE CUSTOMER'S PURCHASE OF OUR PRODUCTS. IT IS CUSTOMER'S SOLE AND EXCLUSIVE RESPONSIBILITY TO TEST AND ENSURE SUITABILITY OF OUR PRODUCTS FOR ITS CUSTOMERS' OR END-USER'S APPLICATION.

Ricoh Electronics, Inc. • 1125 Hurricane Shoals Road • Lawrenceville, GA 30043 • www.RicohThermalProducts.com

Customer Service: 1.800.843.7058 • Toll Free FAX: 1.888.843.7059 • email: orders@rei.ricoh.com

B120E

(For Near Edge Head Printers)

Thermal Transfer Ribbon Product Information

WAX-RESIN SMEARLESS

RICOH
imagine. change.

Last update:
Aug. 2016
Ref: PS-1773 (Rev. 1)

RIBBON PROPERTY

- Base Material Polyester film
- Base Thickness (μm) 4.5 ± 0.4

INK PROPERTY

- Ink Color Black
- Ribbon Transparency Min. 0.65

PRINTING PROPERTY

- Image Density Min. 1.5
- Image Resolution Min. Horizontal Bar ANSI B

IMAGE PROPERTY

- Friction Resistance Min. Vertical Bar ANSI A
- Scratch Resistance (Times) Min. 200 (cast coated paper, white PET)
- Light Resistance Min. Vertical Bar ANSI A
- Water Resistance Min. Vertical Bar ANSI A
- Ironing Resistance No image disorder or transfer of ink

** All tests specifications are based on Ricoh's standard test methods.*

USAGE ENVIRONMENT:

5 ~ 40°C (41 ~ 104°F), 10 ~ 95%RH

STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

GUARANTEE PERIOD:

2 years after manufacturing.

*Finished rolls: -20-40°C, 10-90%RH

*Master rolls: 35°C, 85% RH or less

GUARANTEE PERIOD:

* Finished rolls: 2 years after manufacturing

* Master rolls: 1 year after coating

FEATURES:

- All purpose wax/resin TTR
- Prints on wide variety of media
- High resistance to smearing & chemicals
- Excellent at high-speed printing as high as 10 inches/sec.
- Reliable, sharp-edge print quality
- Maximizes barcode scanning rates
- Minimizes static electricity & ink flaking problems

The above data represents product averages, allowing for industry accepted variances. These products should be tested in the end-user conditions to ensure that they meet the requirements of the specific application. Specifications may change without notice.

RICOH ELECTRONICS, INC. DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THE CUSTOMER'S PURCHASE OF OUR PRODUCTS. IT IS CUSTOMER'S SOLE AND EXCLUSIVE RESPONSIBILITY TO TEST AND ENSURE SUITABILITY OF OUR PRODUCTS FOR ITS CUSTOMERS' OR END-USER'S APPLICATION.

Thermal Transfer Ribbon Product Information

Last update:
Aug. 2016
Ref: PS-1794 (Rev. 2)

RESIN SPECIALTY (For Textile Applications)

RIBBON PROPERTY

- Base Material Polyester film
- Base Thickness (μm) 4.5 ± 0.4

INK PROPERTY

- Ink Color Black
- Ink Transparency More than 0.65 ~ 1.65

PRINTING PROPERTY

- Image Density
Min. 0.8 (polyester)
Min 1.0 (acetate)
- Image Resolution Min. ANSI B

IMAGE DURABILITY

- Ironing Resistance GD max. 0.07 (direct, covered with cloth)
- Smear Resistance (dry, wet) GD max. 0.07 (direct, covered with cloth)
- Washing Resistance (water) ID min 1.0 min. ANSI B (nylon)
ID min 0.6 (polyester)
ID min 0.7 (acetate)
- Washing Resistance (dry) ID min 1.0 min. ANSI B (nylon)
ID min 0.6 (polyester)
ID min 0.7 (acetate)
- Bleach Resistance ID min 1.0 min. ANSI B (nylon)
ID min 0.6 (polyester)
ID min 0.8 (acetate)
- Sweat Resistance ID min 1.0 min. ANSI B (nylon)
ID min 0.6 (polyester)
ID min 0.8 (acetate)

ID(GD): The differences in image (ground) density resulting from the "before test" and "after test"
**All tests specifications are based on Ricoh's standard test methods.*

USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

GUARANTEE PERIOD:

- *Finished rolls: 2 years after manufacturing
- *Master rolls: 1 year after coating

FEATURES:

- Printable on receiving cloths (nylon, polyester and acetate) and films
- Super smear resistance up to 150°C (302°F); no blurring of image occurs from ironing
- Print images are highly durable against water and dry cleaning
- Superior thermal head matching qualities using Ricoh's unique back-side coating

The above data represents product averages, allowing for industry accepted variances. These products should be tested in the end-use conditions to ensure that they meet the requirements of the specific application. Specifications may change without notice.

RICOH ELECTRONICS, INC. DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THE CUSTOMER'S PURCHASE OF OUR PRODUCTS. IT IS CUSTOMER'S SOLE AND EXCLUSIVE RESPONSIBILITY TO TEST AND ENSURE SUITABILITY OF OUR PRODUCTS FOR ITS CUSTOMERS' OR END-USER'S APPLICATION.

D110C

(For Flat Head Printers)

Thermal Transfer Ribbon Product Information

RICOH
imagine. change.

Last update:
Aug. 2016
Ref: PS-1795 (Rev. 1)

RESIN SPECIALTY (For Textile Applications)

RIBBON PROPERTY

- Base Material
- Base Thickness (μm)

Polyester film
4.5 \pm 0.4

INK PROPERTY

- Ink Color
- Ink Transparency

Black
More than 0.65 ~ 1.65

IMAGE PROPERTY

- Image Density

Min. 1.2 (nylon)
Min. 0.8 (polyester)
Min 1.0 (acetate)
Min. ANSI B

- Image Resolution

IMAGE DURABILITY

- Ironing Resistance
- Smear Resistance (wet)
- Washing Resistance (water 5 times)

- Washing Resistance (dry 5 times)

- Bleach Resistance

- Sweat Resistance

GD max. 0.07 (printing cloth ground, covered with cloth ground)
No damage of the image, does ink transfer
ID min 1.20 (nylon)
ID min 0.95 (polyester)
ID min 0.75 (acetate)
ID min 1.25 (nylon)
ID min 1.20 (polyester)
ID min 1.00 (acetate)
ID min 1.50 (nylon)
ID min 1.25 (polyester)
ID min 1.10 (acetate)
ID min 1.40 (nylon)
ID min 1.20 (polyester)
ID min 1.00 (acetate)

ID(GD): The differences in image (ground) density resulting from the "before test" and "after test"
**All tests specifications are based on Ricoh's standard test methods.*

USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

GUARANTEE PERIOD:

- *Finished rolls: 2 years after manufacturing
- *Master rolls: 1 year after coating

FEATURES:

- Printable on receiving cloths (nylon, polyester and acetate) and films
- Super smear resistance up to 150°C (302°F); no blurring of image occurs from ironing
- Print images are highly durable against water and dry cleaning
- Superior thermal head matching qualities using Ricoh's unique back-side coating

The above data represents product averages, allowing for industry accepted variances. These products should be tested in the end-use conditions to ensure that they meet the requirements of the specific application. Specifications may change without notice.

RICOH ELECTRONICS, INC. DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THE CUSTOMER'S PURCHASE OF OUR PRODUCTS. IT IS CUSTOMER'S SOLE AND EXCLUSIVE RESPONSIBILITY TO TEST AND ENSURE SUITABILITY OF OUR PRODUCTS FOR ITS CUSTOMERS' OR END-USER'S APPLICATION.

B130ED

(For Near Edge Printers)

Thermal Transfer Ribbon Product Information

WAX-RESIN SMEARLESS (For Date Coding)

Last update:
Jan. 2017
Ref: PS-2100 (Rev. 1)

RICOH
imagine. change.

RIBBON PROPERTY

- Base Material
- Base Thickness (μm)

Polyester film
4.5 \pm 0.4

INK PROPERTY

- Ink Color

Black

IMAGE PROPERTY

- Image Density (transmission)
- Receiving materials (packaging film)

Min. 1.2 (nylon)
OPP, PE, PET, Nylon

IMAGE DURABILITY

- Friction Resistance
- Scratch Resistance (times)
- Light Resistance
- Water Resistance

Readable
Min. 500
No image disorder
No image disorder

**All tests specifications are based on Ricoh's standard test methods.*

USAGE ENVIRONMENT:

10 ~ 35°C (50 ~ 95°F), 10 ~ 95%RH

STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

* Finished rolls: -20-40°C, 10-90% RH

* Master rolls: 35°C, 85% RH or less

GUARANTEE PERIOD:

*Finished rolls:

4 years after manufacturing

*Master rolls:

1 year after coating

FEATURES:

- Printing for various films, such as Polypropylene & Polyethylene
- Super high-speed printing (up to 24 inches/sec)
- High image density
- For near-edge printers

The above data represents product averages, allowing for industry accepted variances. These products should be tested in the end-use conditions to ensure that they meet the requirements of the specific application. Specifications may change without notice.

RICOH ELECTRONICS, INC. DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THE CUSTOMER'S PURCHASE OF OUR PRODUCTS. IT IS CUSTOMER'S SOLE AND EXCLUSIVE RESPONSIBILITY TO TEST AND ENSURE SUITABILITY OF OUR PRODUCTS FOR ITS CUSTOMERS' OR END-USER'S APPLICATION.

Ricoh Electronics, Inc. • 1125 Hurricane Shoals Road • Lawrenceville, GA 30043 • www.RicohThermalProducts.com

Customer Service: 1.800.843.7058 • Toll Free FAX: 1.888.843.7059 • email: orders@rei.ricoh.com