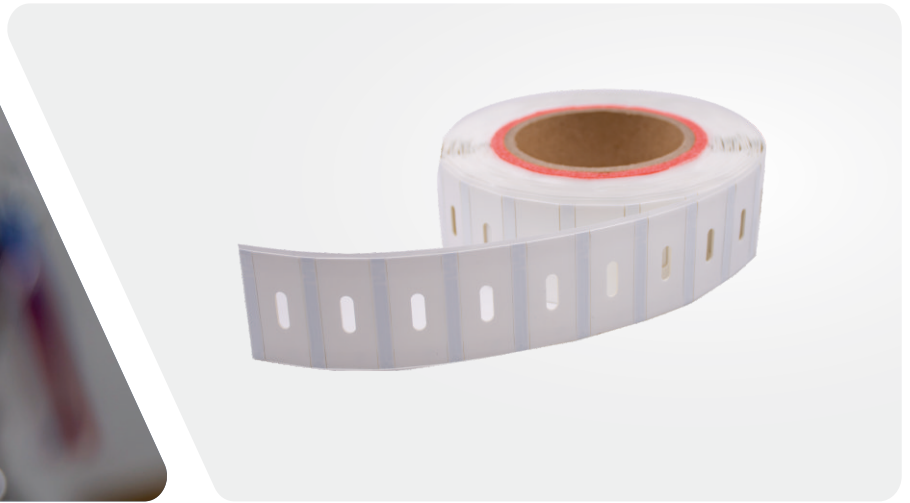




Flmeta-Slim Needle

45 x 8 mm U8

Because metal surfaces reflect UHF radio waves while liquids absorb them, standard RFID labels often suffer from signal detuning or blockage, resulting in poor performance on metal surfaces or liquid-filled containers.

Through specialized antenna design and advanced materials, RICHRFID Flmeta-Fit anti-metal and liquid labels operate reliably on metal surfaces and liquid-filled containers, while maintaining solid performance on standard non-metal and non-liquid substrates.

Fully compliant with the EPCglobal Class 1 Gen 2 (ISO/IEC 18000-6C) protocol and operating across the 860–960 MHz frequency range, the Flmeta-Fit series offers a data retention period exceeding 10 years and supports up to 100,000 write cycles. Constructed from PET, aluminum foil, and foam, they deliver exceptional tear resistance and structural durability, providing effective protection against physical damage and rupture.

Their slim profile and availability in roll form ensure seamless compatibility with RFID printers, enabling simultaneous printing and encoding.

The self-adhesive backing and inherent flexibility further enhance their versatility, allowing for reliable application on both flat and curved surfaces. Typical use cases include asset tracking for IT equipment, electronic devices, cosmetics, beverages (both alcoholic and soft drinks), industrial components, pharmaceuticals, and ESD containers, etc.

Highlights & Benefits

- ✓ **Superior performance on diverse surfaces:** Optimized for metal, liquid-filled containers, plastic, and more.
- ✓ **Ready for RFID printing:** Fully printable and programmable with standard RFID encoders/printers.
- ✓ **Flexible and conformable:** Self-adhesive, thin, and flexible design ensures reliable adhesion on curved surfaces.
- ✓ **Durable construction:** Features a waterproof PET face material for enhanced longevity.
- ✓ **Global frequency options:** Available in ETSI (865–868 MHz) and FCC (902–928 MHz) standards.
- ✓ **Fully customizable:** Supports bespoke design, on-demand printing, and encoding services.

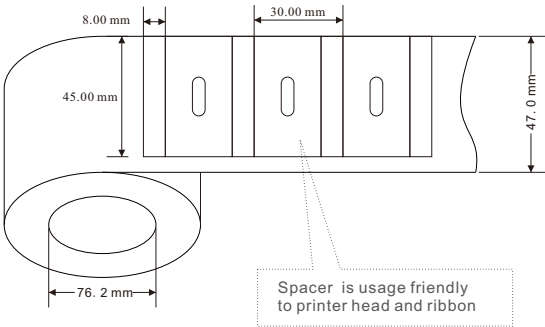
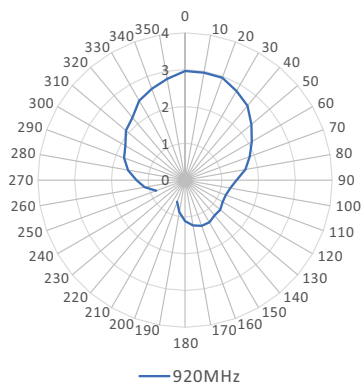
Applications

- ✓ Facility & equipment
- ✓ Fixed asset
- ✓ Electronics
- ✓ Liquid container
- ✓ Metal parts

Technical Features

Model	RCO7053
RFID Features	
Air Interface Protocol	EPC Class 1 Gen 2 / ISO 18000-63 Type C
Frequency	860-960 MHz
Chip Type	NXP Ucode 8
Memory	User - N/A; EPC - 128 bits; TID - 96 bits
Data Storage	> 10 years
Re-write	100,000 times
Read Range(2W ERP)	FCC: > 3.0 m(9.8 ft), on metal
Physical Features	
Dimension	45 x 8 x 1 mm / 1.77 x 0.32 x 0.04 in
Face Material	White PET
Operating Temperature	-40°C to 85°C / -40°F to 185°F
Survival Temperature	-40°C to 120°C / -40°F to 248°F
Storage Condition	20±5°C, 50±10% RH, Store away from sunlight
IP Rate	IP68, test for 5 hours at 1m deep water
Other Features	
Installation	Adhesive on clean & dry surface
Customization	Printing, Encoding, Designing, etc.
Support Printer	SATO CL4NX, Zebra ZT410 RFID Silverline and ZT411 On Metal, TSC Printronix T6000e, etc.
Recommended Ribbon	Resin-based
Package	500 pcs / roll, 8 rolls / box

Radiation Pattern



PS: The performance is theoretical values in the lab and the actual effect depends on the specific applications.



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Shenzhen | Hong Kong | Singapore | Seoul | Tokyo | Paris



DISCLAIMER

All specifications are indicative and results may vary. Each user bears full responsibility for making its own determination as to the suitability of RICH RFID products, materials, services, recommendations, or advice for its own particular use.

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