TEX 50x12

Technical Specifications

- **RF protocol** EPC global Class 1 Gen 2; ISO18000-63
- **Frequency** 860-960 MHz (Global)

NXP

- **IC type** (chip)[1] NXP UCODE 9xe
- **Chip memory**[2] 128 bits EPC; 96 bits TID
- **Write cycles** 100,000 times
- **Data retention** 20 years
- **Read range** fixed[3] Up to 16.40 ft (5 m)
- **Read range** handheld[3] Up to 13.12 ft (4 m)

Impinj

- **IC type**(chip)[1] Impinj M830
- **Chip memory**[2] 128 bits EPC; 96 bits TID
- **Write cycles** 10,000 times
- **Data retention** 10 years
- **Read range** fixed[3] Up to 19.69 ft (6 m)
- **Read range** handheld[3] Up to 26.25 ft (4.80 m)
- **Polarization** Linear

Key Features

+ **Textile:** flexible and washable
+ **200+:** industrial washing cycles
+ **EECC certified:** quality assurance
+ **Cost-effective:** for high volume
+ **Printable:** texts, patterns and barcodes

Applications

- **Medical scrubs**
- **Hospital linens**
- **Hotel linens**
- **Uniforms**
- **Rental costumes**

Environmental Specifications

Temperatures

- Operational -40°C to +85°C
  -40°F to +185°F
- Washing: 90°C (194° F), 15 minutes
- Pre-drying: 180°C (356°F), 30 minutes
- Ironing: 185°C (365°F), 10 seconds
- Heat-sealing: 210°C (410°F), 20 seconds
- Sterilization process: 135°C (275°F), 20 minutes

Chemicals[4]

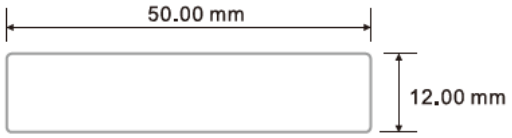
- Standard detergents, fabric softeners, bleach, oxygen/chlorine compounds, alkali substances, acetic and peracetic acid

- **Storage humidity** 8% - 95% RH
- **Mechanical resistance** 60 bars
- **Vibration** MIL-STD-810G
- **Warranty** 200 washing cycles or 3 years

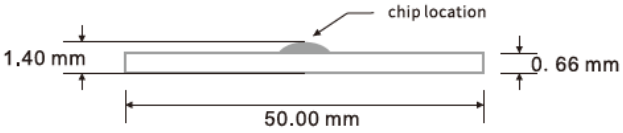
[1] The chip data retention is based on the chip operating under general environment conditions.
[2] EPC can be re-programmed, password protected, or permanently locked. TID is locked and unique at the point of manufacturing.
[3] Off metal, actual read range may vary based upon use case and antenna power.
[4] The chemical resistance is based on the concentration of solutions and application environment. Please contact Xerafy for further details on chemical resistance.

Physical Specifications

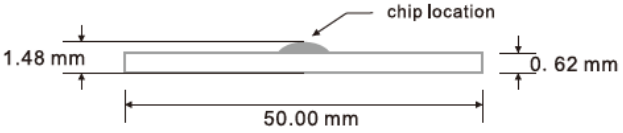
- **Material** Textile
- **Dimensions (in)**[1] 1.97 x 0.47
- **Dimensions (mm)**[1] 50 x 12
- **Thickness (in)**[1] 0.03 in, sew
  0.02 in, heat-seal
  0.06 in on chip location
- **Thickness (mm)**[1]
  0.66 mm, 1.40 mm on chip location, sew
  0.62 mm, 1.48mm on chip location, heat-seal
- **Color** White
- **Weight** 0.30 g
- **Washing method** Laundry, dry cleaning



Sew:



Heat-seal:



Mounting Systems

Sew or heat-seal based on specific requirements, with different product P/N selections

Installation Instructions

1. Install the tag by sewing:

Sew into a hem or inside a pocket of fabric

2. Install the tag by heat-sealing:

Seal the tag onto the textile at 210°C and 0.6-0.8 MPa for 20 seconds

[1] Tolerance: +/- 0.02; +/- 0.50
[2] Tolerance: H: +/- 0.004; H: +/- 0.100

Industry Compliance

Order Information

NXP

TEX 50x12 (Sew): X5012-GL010-U9xe	TEX 50x12 (Heat-seal): X5012-GL011-U9xe

Impinj

TEX 50x12 (Sew): X5012-GL010-M830	TEX 50x12 (Heat-seal): X5012-GL011-M830

Customization Options

Encoding	Laser Marking[1]

[1] Since the barcode reading rate isn't 100% reliable, we do not recommend laser engraving barcodes on the heat-seal version. Please select the sew version instead.