



## Description

Printable RAIN RFID tag with temperature resistance against automotive paint shop cycle process



## Electrical specifications

### Device type

RAIN RFID / EPCglobal Gen2v2

### Operational frequency

Global 865 – 928 MHz

### IC options and memory configurations

Impinj® M730

• EPC 128 bit; TID 96 bit

Impinj® M780

• EPC 496 bit; User 128 bit; TID 96 bit

### Read range (2W ERP)\*

On metal up to 4 m / 13 ft

On liquid up to 3m / 10 ft

On plastic up to 1,5 m / 5 ft

On cardboard up to 1,2 m / 4 ft

### Applicable surface materials\*

All surfaces, optimized for metal

### Attachment on curved surface\*

Label can be attached on a slightly curved surface.

\* Read ranges are theoretical values that are calculated for non-reflective environment. Different surface materials may have an effect on performance.



## Mechanical specifications

### Label surface

Printable white PET, resin ribbon recommended.

### Background adhesive

Acrylic adhesive optimized for metallic and painted metal surfaces.

### Weight

0,25 g

### Delivery format

800 pcs good labels on reel, bad ones marked with "XXX" printing.

### Pitch on reel

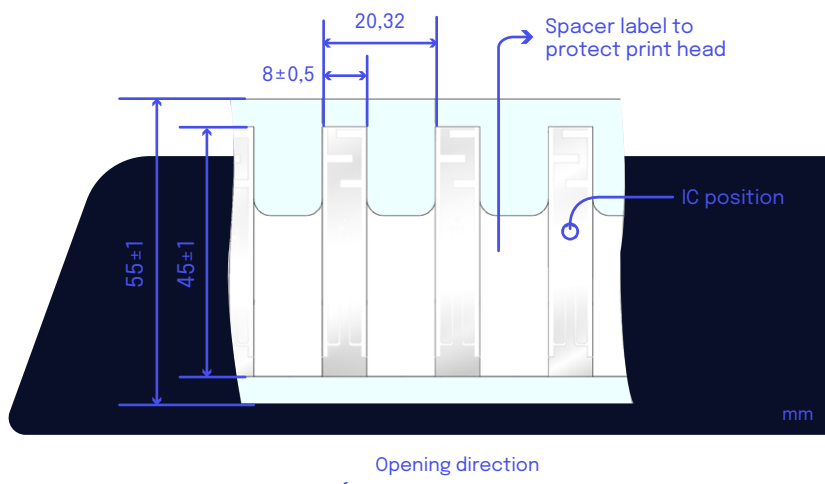
20,32 mm / 0.8"

### Reel core inner diameter

76 mm / 3"

### Tag dimensions

45 x 8 x 1,5mm / 1.77 x 0.31 x 0.06"





## Environmental resistance

### Operating temperature

-35°C to +85°C / -31°F to +185°F

### Ambient temperature

-35°C to +85°C / -31°F to +185°F

### IP classification

IP68, tested 5 hours in 1m deep water

### Washing resistance

Tolerates industrial washing processes

### Chemical resistance

No physical or performance changes in:

- 168h Salt water (salinity 10%) exposure
- 168h NaOH (10%, pH 13) exposure
- 168h Motor oil exposure
- 168h Sulfuric acid (10%, pH 2) exposure

### Storage condition

1 year in +20°C / 50% RH (shelf life for adhesive)

### Expected lifetime

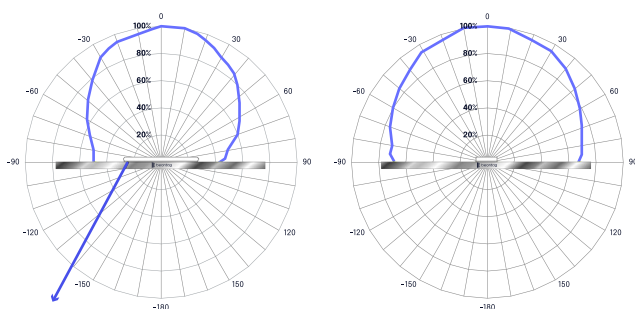
Years in normal operating conditions

Values in the table are the best recommendations; resistance against environmental conditions depends on the combination of all influencing factors, exposure duration and chemical concentrations. Thus, product's final suitability for certain environmental conditions is recommended to be tested. Contact Beontag for more specific information.



## Radiation pattern

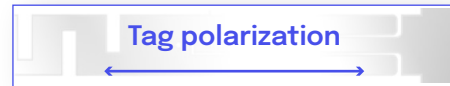
Radiation pattern is heavily impacted by the shape and material of the tagged asset. Below pattern is measured on metallic plate. It is recommended to test the optimal positioning on an actual asset.



This end has more white material on the backside



## Installation instructions



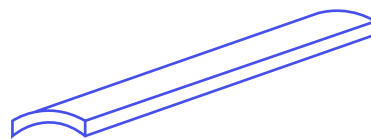
### When attaching the label ensure the following

- Select a smooth surface without uneven areas below tag.
- Avoid touching the background adhesive and IC location.

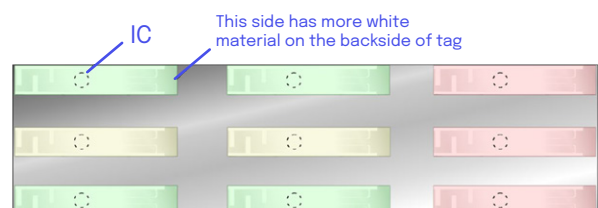
When mounting the label with its adhesive, clean and dry the surface for obtaining the maximum bond strength. Typical cleaning solvents are heptane or acetone for oily surfaces or isopropyl alcohol for plastics. Do not use household cleaning solvents that contain oils. Carefully read and follow the manufacturer's precautions and directions for use when working with solvents.

Ideal application temperature is from +21°C to +38°C (+70°F to +100°F). Bond strength can be improved with firm application pressure and moderate heating up to +54°C (+130°F). Application at temperatures below 10°C (50°F) is not recommended.

Attachment on curved surface is highly recommended to be done along the asset, as shown in below drawing. This orientation would ensure better performance and adhesion.



For optimal read range below positioning on a metal item is recommended. Ferrowave Micro works in all positions and has the specified read range also on the yellow marked locations, but the read range can be enhanced using green positions.



# BEONTAG FERROWAVE MICRO



## Order information

Product number: **3003658**

Product Name: **Beontag Ferrowave Micro M730**

Product number: **3004218**

Product Name: **Beontag Ferrowave Micro M780**

For other versions, additional information and technical support please contact Beontag.

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From the science of graphic and label materials, RFID and wireless IoT enablers, we create solutions across the value chain to deliver digital transformation for businesses around the world.

Sustainability is at the core of what we do and we strongly believe that by substituting non-renewable materials and innovating through more sustainable and renewable products, we act as an ESG enabler for our customers' value chain.

Beontag is one of the world's leading providers of RFID and wireless IoT solutions, being present in more than 40 countries with 7 R&D centers and 2,000 employees, in constant development of technological and sustainable solutions designed to connect items, and gain efficiency and end-to-end traceability

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