



Description

RFID tag with extreme temperature resistance combined with robust enclosure.



Electrical specifications

Device type

UHF RFID / EPCglobal Gen2v2

Operational frequency

Global 865-928MHz
FCC: 902-928 MHz

IC type

NXP UCODE 7xm+™

Memory configuration

EPC 448-bit; User memory 2048-bit; TID 96-bit

EPC memory content

Unique number encoded

Read range (2W ERP)*

Up to 10 m / 33 ft

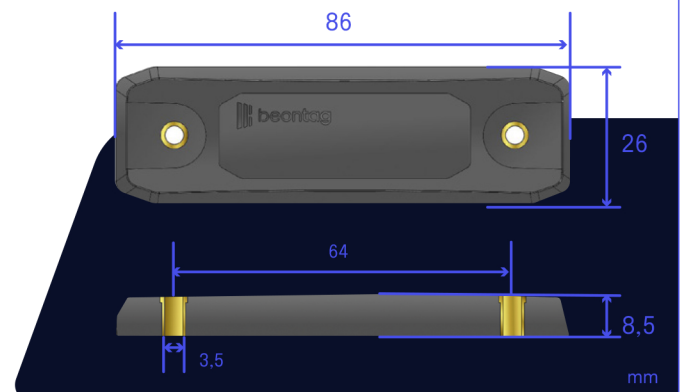
Applicable surface materials*

Optimized for metallic surfaces

* Read ranges are theoretical values that are calculated for non-reflective environment, in where antennas with optimum directivity are used with maximum allowed operating power according to ETSI EN 302 208 (2W ERP). Different surface materials may have an effect on performance.



Mechanical specifications



Tag materials

Special high-performance thermoplastic designed for extreme temperatures.

Delivery format

Single

Amount in box

50 pcs

Dimensions

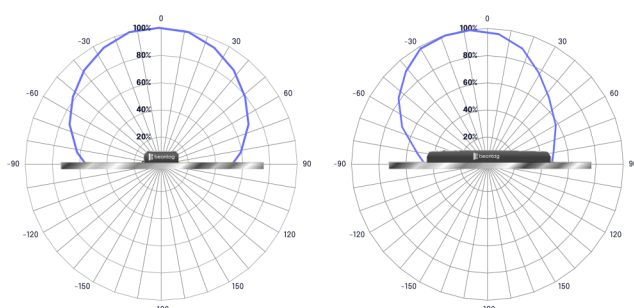
86 x 26 x 8,5 mm / 3.4 x 1 x 0.33 in

Weight

29g



Radiation pattern



Personalization options

Pre-encoding

Customer-specific encoding of EPC with or without locking.

Visual marking

Laser engraving is possible depending on the needed layout. Reach out to Beontag for more information.



Environmental resistance

Operating temperature

-35°C to +85°C / -31°F to +185°F

Peak temperature

235°C / 455°F, tested 50 x 5h cycles

220°C / 428°F, tested 150 x 2h cycles

Autoclave sterilization

Tested in 125°C / 0,141MPa / 30min

IP classification

IP68

Chemical resistance

No physical or performance changes in:

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

Expected lifetime

Product is designed to be used multiple times in high temperature cycles. The cycle time and quantity will affect the total lifetime of the product.

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.



Installation instructions

Beontag Heatwave Ultra can be attached with structural adhesives or mechanically.

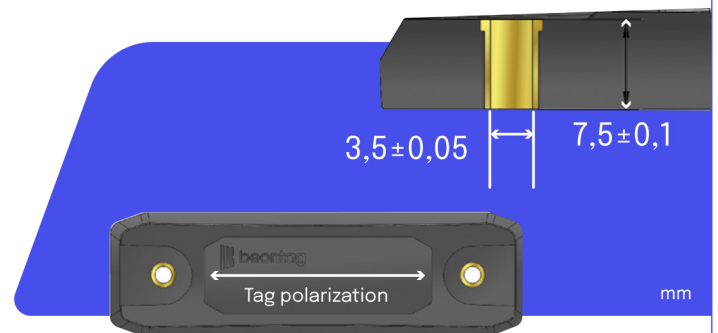
1. Adhesive fixings

- Polyurethane adhesives
- Epoxies
- Silicone sealants

There are several high temperature resistant structural adhesives available. We recommend contacting adhesive suppliers for recommendations and exact fixing instructions. Adhesive type and thickness may influence tag performance. In general, more than 1mm layer of adhesive under the tag should be avoided.

2. Mechanical fixing

Mechanical fixing is recommended to be used in applications that include risk for high mechanical stress or low temperature during tag fixing. During fixing make sure there is no air gap left in between the



metal surface and tag. DIN 7985 M3 screws can be used as a reference.

To achieve the optimal performance locate the tag on metal in a way that there is metal on both ends of the tag. Ideally the tag is placed on large even metal surface with direct metal contact underneath the whole tag. Tag polarization is along the longest dimension. This should be taken into account when using linear polarized reader antennas.

**Order information**Product number: **3003703**Product name: **Beontag Heatwave Ultra 7xm+ ETSI**Product number: **3003702**Product name: **Beontag Heatwave Ultra 7xm+ FCC**

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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