Product Datasheet
BEONTAG IRONSIDE PLATE

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ⓘ Description

Robust RAIN RFID tag with durable visual marking and excellent performance for challenging environments

Electrical specifications

Device type
Class 1 Generation 2 passive UHF RFID transponder

Air interface protocol
EPCGlobal Class1 Gen2 ISO 18000-6C

Operational frequency
Global 865 - 928 MHz

IC type
NXP UCODE 8

Memory configuration
EPC 128 bit; TID 96 bit

EPC memory content
Unique 96bit EPC in every tag

Read range (2W ERP)*
On metal up to 10 m / 33 ft
On plastic up to 7 m / 23 ft

Applicable surface materials*
Optimized for metal but works on any surface

Attachment on curved surface
Label can be attached on a curved surface. Check installation instructions for more details.

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

Mechanical specifications

Tag surface
Top: Aluminum with anti-corrosion coating
Backside: Stainless steel

Background adhesive
Standard product comes without adhesive. When background adhesive is ordered tag is delivered with high quality 3M VHB adhesive attached on the product.
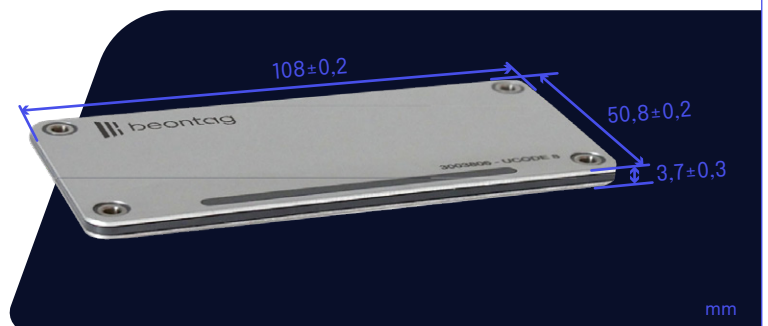
Weight
68 g

Delivery format
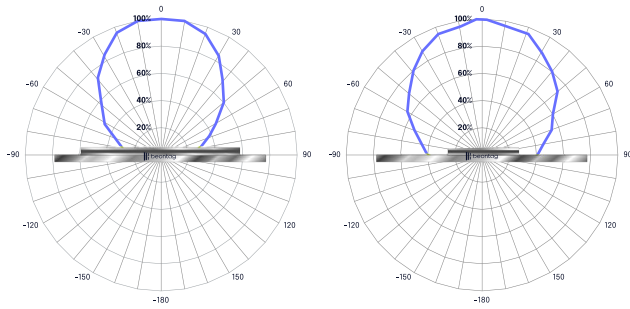80 pcs tags in a box

Tag dimensions
108 x 50.8 x 3.7 mm / 4.25 x 2 x 0.15"

Thickness with adhesive: 4.5 ± 0.3 mm / 0.18 ± 0.01"

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Radiation pattern

Below radiation pattern is measured on metal. Pattern may be affected by the shape of the tagged item.

Personalization options

Pre-encoding
Customer specific encoding of EPC. Locking permanently or with password.

Laser engraving
Customer specific layout including logo, text, numbers.

Backside adhesive
High quality 3M VHB adhesive attached on the product.

Environmental resistance

Operating temperature
-35°C to +85°C / -31°F to +185°F

Peak temperature
+130°C / 266°F for 10min

Ambient temperature
-35°C to +85°C /-31°F to +185°F

Water resistance
IP68, tested for 5 hours in 1m deep water*

Washing resistance
Tolerates industrial washing with standard solvents.

Washing process should be tested in final application.

Chemical resistance
No physical or performance changes in:
• 168h Motor oil exposure
• 24h Salt water (salinity 10%) exposure
• 10min Sulfuric acid (10%, pH 2)
• 10min NaOH (10%, pH 13)
Acetone should be avoided.

Storage condition
1 year in +20°C / 50% RH

*Vertical attachment is recommended to enable any possible water getting out faster. Performance may be slightly reduced right after prolonged water immersion for short period of time.

Environmental values are the best recommendations; resistance against different 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.

Installation instructions

When attaching the tag ensure the following
· Select a smooth surface without uneven areas below tag
· Avoid touching the background adhesive

Installation using background adhesive

When mounting the tag 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 (>15 psi) and moderate heating up to +66°C (+150°F). Application at

Tag polarization

3003806 - UCODE 8

temperatures below 10°C (50°F) is not recommended. At room temperature, approximately 50% of the final strength is achieved in 20 minutes. Final bond strength is achieved in 72 hours.

Installation using mechanical attachment

Mechanical attachment is recommended for the harshest of environments. Ironside Plate hole is designed for M3 screws and rivets. Hole is protected with metallic limiter for better tolerance against installation torque.

It is important that the screw/rivet head diameter does not exceed 7,1mm. Bigger head diameter would affect the performance of the tag.

Maximum screw head Ø7,1

Hole diameter Ø3, 3±0.05

3,66±0.05

Leave metal here

Leave metal here

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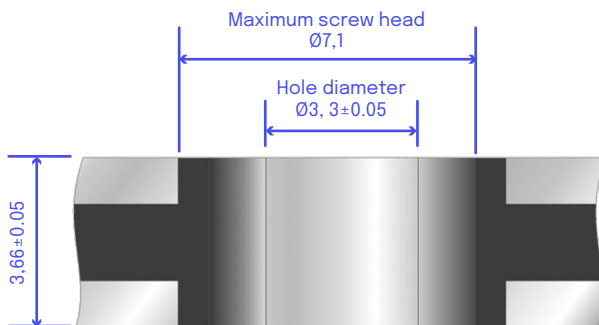
Order information

Product number: **3003806**
Product Name: **Beontag Ironside Plate U8**

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

About Beontag

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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