

## Dot Wedge



The Xerafy Dot Wedge offers outstanding performance in the most demanding temperature and pressure.

Its unique design makes it fully embeddable in metal, delivering a read range of up to 3.3 ft (1 m) at optimal performance.

The IP68-rated RFID Tag uses a high performance polymer for the casing to ensure exceptional dirt, chemical, UV and wear resistance, as well as excellent mechanical properties built for high temperatures environments.



Small size  
Embeddable in metal



Extreme temperatures  
and pressure



Liquids  
and corrosion



Read-range optimal  
for demanding environments



Value-to-performance  
ratio



- Onshore and Offshore pipes
- Heavy equipment and tools
- Automotive manufacturing
- Molds

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### Performance Characteristics

Read range (handheld) <sup>1</sup>	Up to 1.6 ft (0.5 m)
Read range (fixed) <sup>1</sup>	Up to 3.3 ft (1 m)
Polarization	Linear
Mounting system	Press fit, embedded

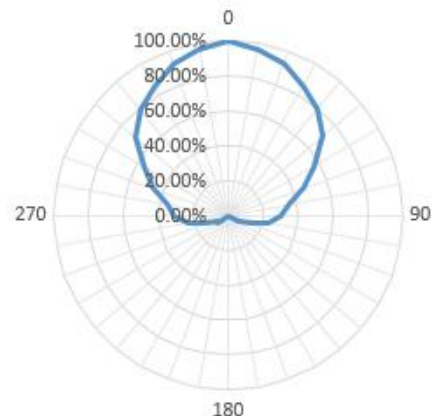
1. Embedded in metal read range (2W EPR)

### Functional Specifications

RF protocol	EPC global Class 1 Gen2
Frequency	902-928 (US) ; 865-868 (EU)
IC type (chip) <sup>1</sup>	Alien Higgs-3
Memory	96-EPC bits, extensible to 480-bit, 64-bit unique TID, 512-bit user memory
Material	High performance engineering polymer

1. The chip data retention is up to 50 years, based on chip operating under general environment conditions.

### Radiation Pattern



## Environmental Specifications

Operational temperature	-40°C to +85°C
Survival temperature	-50°C to +220°C (long term)
Peak temperature	-50°C to +250°C (168 h one time / 500cycles)
Chemical resistance	Various mold treatments and coating / lubricants
IP rating	IP68
Compression strength	10,100 psi (70 MPa)
Weather ability	All weather including UV-resistance and sea water immersion

## Industry Compliance

RoHS	EU Directive 2011/65/EU
CE	Yes
ATEX/IECEX	Compliant
Warranty	1 year

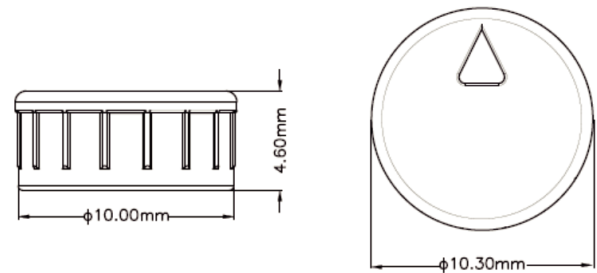
## Order Information

X4202-US100-H3	Dot Wedge US
X4202-EU100-H3	Dot Wedge EU
Optional service	encoding / laser etching



## Product Dimensions and Weight

Dimensions (in)	ø 0.405 x 0.181
Tolerance	+/- 0.004
Dimensions (mm)	ø 10.3 x 4.6
Tolerance	+/- 0.1
Weight	0.28 oz (8 g)



## Installation Instructions



Instructions for optimal performances:

1. Preparation - For a spherical or curved surface, first make a plane on the surface (Length  $\geq$  12 mm \* Width  $\geq$  12 mm).
2. Drilling - Make a flat bottom groove on the metal surface 10 mm \* 5 mm).
3. Position - Put  $\frac{1}{3}$  of the Dot Wedge into the groove and adjust the tag's direction according to the object size. The  $\Delta$  mark on the tag indicates the recommended installation direction to ensure the tag's polarization direction is parallel with the length of the metal asset. Read range performance will decrease when the polarization direction forms an angle with the length direction.
4. Insertion - Drive the remaining  $\frac{2}{3}$  of the tag into the groove, using a hammer or similar tool.

### About Xerafy

Xerafy designs and manufactures the world's toughest RFID tags to power Industrial IoT applications in Aerospace, Oil & Gas, Automotive, Healthcare and Manufacturing.

For Product inquiries: [sales@xerafy.com](mailto:sales@xerafy.com)  
Singapore | China | US | UK

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