

Cargo Trak



Functional Specifications

RF air protocol	EPC Class 1 Gen 2; ISO18000-6C
Operating frequency	UHF 902-928 MHz (US); 866-868 MHz (EU)
IC type	Alien Higgs-3
Memory configuration	96-bit EPC ; 512-bit user memory; 64-bit TID
Functionality	Read / write (user programmed)
Memory – expected read / write cycles	100,000 cycles at 77°F (25°C)
Data retention	Up to 50 years ¹
Read rate	400 tags per second for 96-EPC bit number
Warranty (limited)	1 year

Performance Characteristics

Read range on-metal (2W ERP) ²	Up to 39 ft (12 m)
Read range off-metal (2W ERP) ²	Up to 20 ft (6 m)
Polarization	Linear

Physical Specifications

Material	Industry Grade Polymer
Mounting system	Rivet hole, ø 0.14 in (3.5 mm), adhesive (optional)
Color	Cool gray

Environmental and Industry Compliance

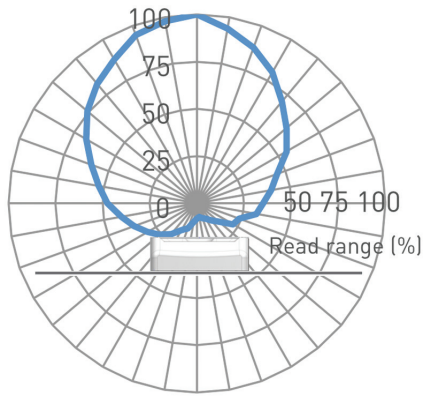
RoHS	EU Directive 2002/95/EC
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¹ The chip data retention is based on chip operating under general environment conditions.

² Actual read range may vary based upon use case and antenna power. [Datasheet: 07.03.14](#)

Radiation Pattern



Operational and Environmental Specifications

Operational temperature

Cold	-40°F (-40°C)
Dry heat (Long term, days/weeks/years)	+185°F (+85°C)
Thermal shock	-40°F to 185°F (-40°C to +85°C); cycled

Application temperature

Cold	-40°F (-40°C)
Dry heat (Short term, minutes/hours)	+185°F (+85°C)

Humidity

Operational humidity	5%-95% non-condensing
Storage humidity	5%-95% non-condensing

Shock (drop)

3 ft (1 m) to concrete/granite up to 200 cycles

Vibration

MIL-STD-810F

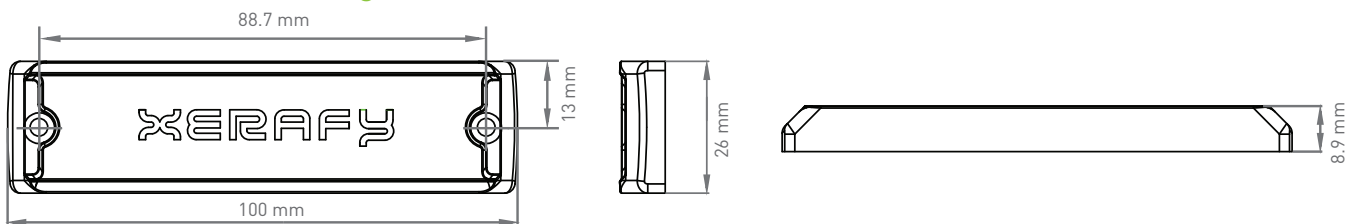
Compression strength

29 psi (200 kPa)

IP classification

IP68

Product Dimensions and Weight



Dimensions (mm)

100 x 26 x 8.9

tolerance

+/- 0.5

Dimensions (in)

3.94 x 1.02 x 0.35

tolerance

+/- 0.02

Rivet hole diameter

0.137 in +/-0.008 (3.5 mm +/-0.2)

Weight

0.61 oz (17.2 g)

Order information

X03A0-US100-H3

Cargo Trak US

X03A0-EU100-H3