

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

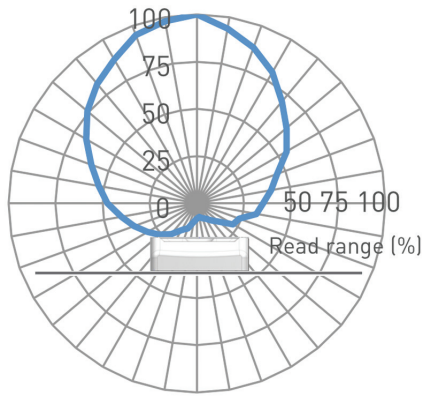
RoHS	EU Directive 2011/65/EU
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¹ The chip data retention is based on chip operating under general environment conditions.

² Actual read range may vary based upon use case and antenna power.

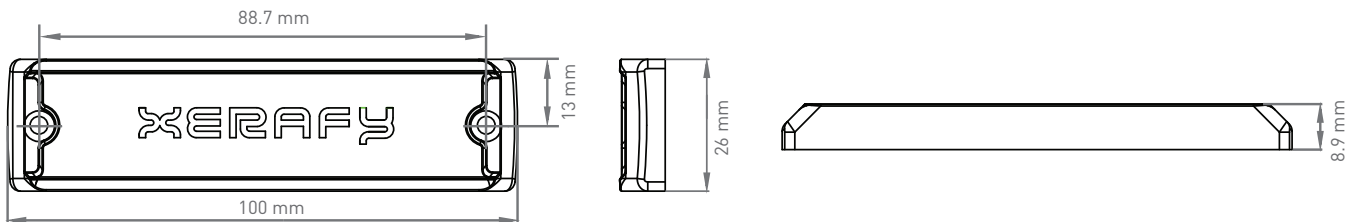
Radiation Pattern



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	Cargo Trak EU