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Nano-iN

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 in metal (2W ERP)[2]	Up to 13 ft (4 m)
Polarization	Linear

Physical Specifications

Material	Ceramic
Color	White

Environmental and Industry Compliance

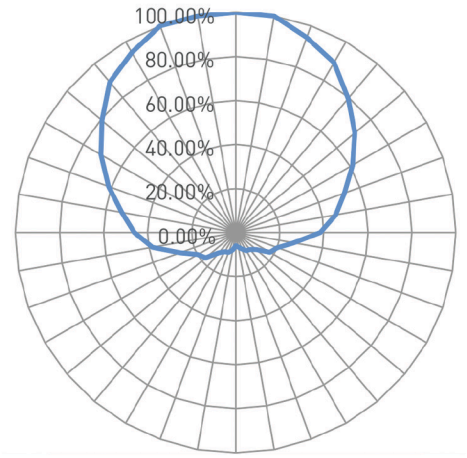
RoHS	EU Directive 2002/95/EC
ATEX	ATEX Compliant
Vibration	MIL-STD-810F

RoHS 2002/95/EC CE Ex

[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.

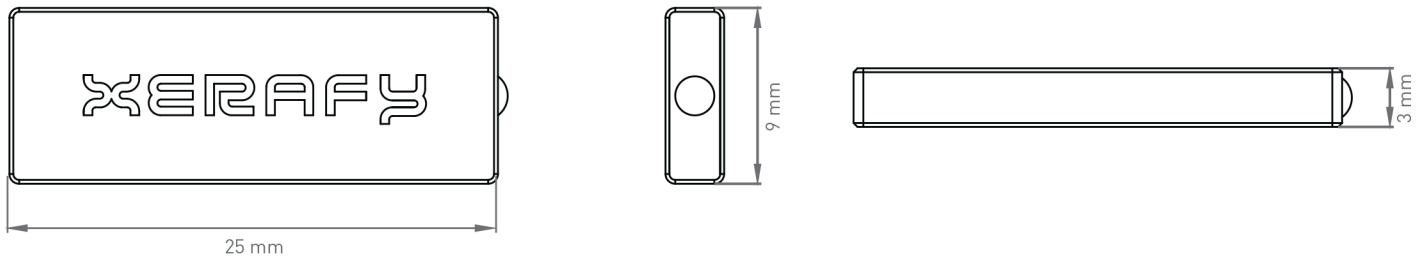
Radiation Pattern



Operational and Environmental Specifications

Operational temperature	
Cold	-22°F (-30°C)
Dry heat (Long term, days/weeks/years)	+185°F (+85°C)
Thermal shock	-22°F to 185°F (-30°C to +85°C); cycled
Peak temperature	
Cold	-40°F (-40°C)
Dry heat (Short term, minutes/hours)	+302°F (+150°C)
Humidity	
Operational humidity	5%-95% non-condensing
Storage humidity	5%-95% non-condensing

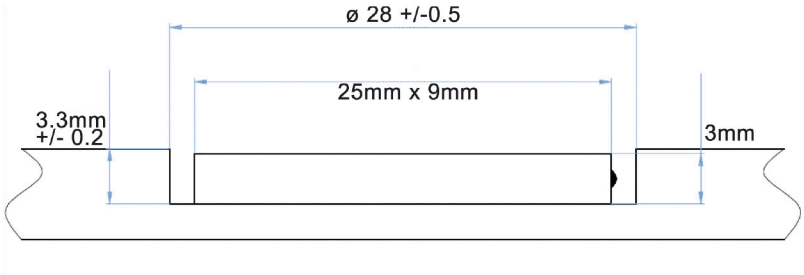
Product Packaging and Weight



Dimensions (mm)	25 x 9 x 3
tolerance	+/- 0.3
Dimensions (in)	0.98 x 0.35 x 0.12
tolerance	+/- 0.012
Weight	0.13 oz (3.6 g)

Cylndrical Socket Dimensions for Flush-mounting

Cylindrical socket dimensions / tolerance (mm)	28 (+/- 0.5) x 3.3(+/- 0.2)
Cylindrical socket dimensions / tolerance (in)	1.10(+/- 0.02) x 0.13(+/- 0.008)



Order information

X0220-US000-H3	Nano iN US
X0220-EU000-H3	Nano iN EU

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