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Nano-iN

STANDARD | **HIGH TEMPERATURE**

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

[1] The chip data retention is based on chip operating under general environment conditions.

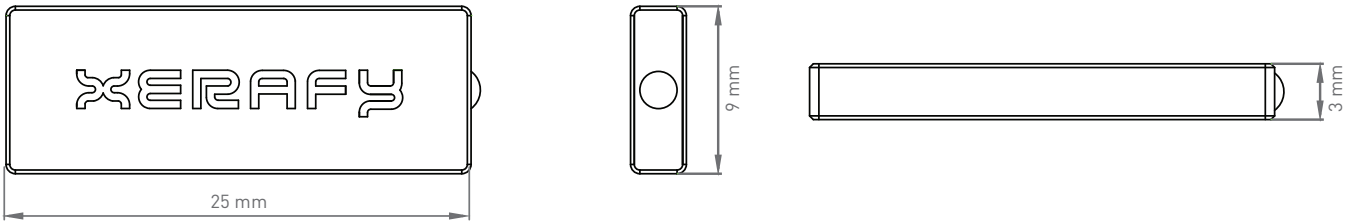
[2] Actual read range may vary based upon use case and antenna power.

For product inquiries: sales@xerafy.com

Operational and Environmental Specifications

Shock (drop)	3 ft (1 m) to concrete/granite up to 200 cycles
Vibration	MIL-STD-810F
Compression strength	Packaging dependent
IP classification	IP 68
Humidity	
Operational humidity	5%-95% non-condensing
Storage humidity	5%-95% non-condensing
Operational temperature	
Cold	-22°F (-30°C)
Dry heat	+185°F (+85°C)
Thermal shock	-22°F to 185°F (-30°C to +85°C); cycled
STANDARD VERSION	
Application temperature	
Cold	-40°F (-40°C)
Dry heat	+302°F (+150°C)
HIGH TEMPERATURE VERSION	
Application temperature	
Cold	-40°F (-40°C)
Dry heat	**+455°F (+235°C)**
Peak temperature	**+482°F/+250°C** 6 hours duration
Temperature cycling test	30 Minutes at + 482°F/+ 250°C, 1 hour cool-down; 500 test cycles

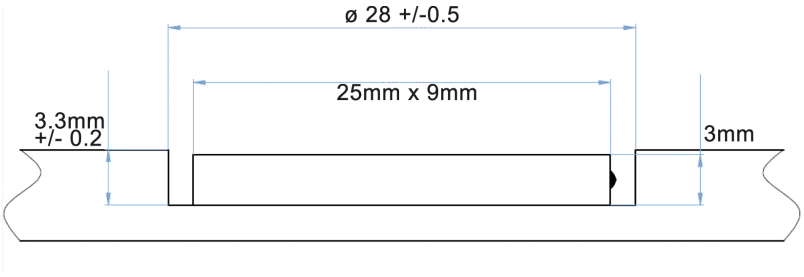
Product Dimensions and Weight



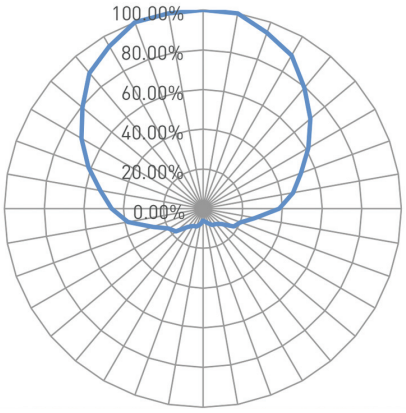
Dimensions (mm)	25 x 9 x 3
tolerance	+/- 0.3
Dimensions (in)	0.98 x 0.35 x 0.12
tolerance	+/- 0.012
Weight	0.13 oz (3.6 g)

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)



Radiation Pattern



Order information

X0220-US000-H3	Nano iN US Standard Version
X0220-EU000-H3	Nano iN EU Standard Version
X0220-US050-H3	Nano iN US High Temperature Version
X0220-EU050-H3	Nano iN EU High Temperature Version