

Theta Inlay



The Theta Inlay is a flexible printed circuit (FPC) RFID inlay specially designed for high temperature applications up to 200°C.

Its flexible, thin and light form factor makes it can be easily molded into non-metallic assets at the point of manufacturing.



Global frequency



Hi-Temp resistant



Flexible and embeddable



Long read range
off metal



Cost effective label



- Inject Molding
- Cable Joints
- Logistics

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Performance Characteristics

| | |
|-----------------------------------|---------------------|
| Read range off metal ¹ | Up to 29.5 ft (9 m) |
| Read range off metal ² | Up to 16 ft (5 m) |
| Polarization | Linear |
| Mounting system | Mold injection |

1. Fix reader
2. Handheld reader

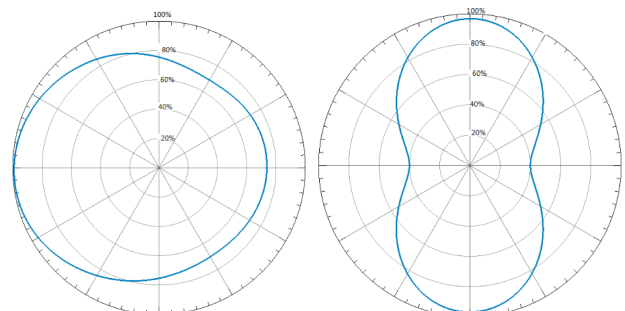
Functional Specifications

| | |
|-----------------------------|--|
| RF protocol | EPC global Class 1 Gen2 |
| Frequency | 860-960 (Global) |
| IC type (chip) ¹ | Alien Higgs-3 |
| Memory | 96-bit EPC, 512-bit user memory, 64-bit serialized TID |
| Material | FPC |
| Format | Dry inlay |

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

Radiation Pattern

Off metal Horizontal / Vertical



Environmental Specifications

| | |
|----------------------------------|--------------------------------|
| Operational temperature | -40°C to +100°C |
| Survival temperature | -40°C to +200°C |
| Chemical resistance ¹ | Various caustic chemicals |
| Shock (drop) | 3 ft (1 m) to concrete/granite |
| Vibration | MIL-STD-810G |
| IP rating | IP 68 |

1. The chemical resistance is based on the concentration of solutions and application environment. Please contact Xerafy for further details on chemical resistance.

Industry Compliance

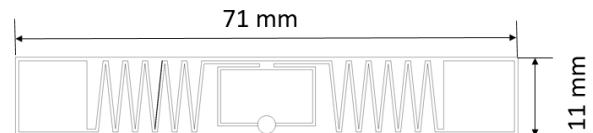
| | |
|------------|-------------------------|
| RoHS | EU Directive 2011/65/EU |
| CE | Yes |
| ATEX/IECEx | Compliant |
| Warranty | 1 year |

Order Information

| | |
|------------------|-------------|
| X7101-GL100-H3 | Theta Inlay |
| Optional service | encoding |

Product Dimensions and Weight

| | |
|-----------------|--------------------|
| Dimensions (in) | 2.8 x 0.43 x 0.005 |
| Tolerance | +/- 0.02 |
| Dimensions (mm) | 71 x 11 x 0.13 |
| Tolerance | +/- 0.5 |
| Weight | 0.2g |



Embed the Theta Inlay during the mold injection process.



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.

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