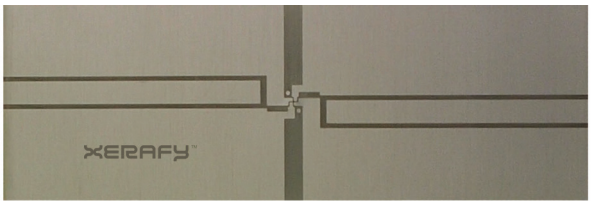
verify. quantify. XERAFY®

Mercury Metal Skin™ Dry Inlay



Functional Specifications

RF air protocol	EPC Class 1 Gen 2; ISO18000-6C
Operating frequency	UHF 860-960 MHz (Global)
IC type	Impinj Monza 4E[1]
Memory configuration	496 EPC bits, 128 bits user memory, 48-bit serialized 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[2]

Performance Characteristics

Read range on metal (2W ERP)[3]	Up to 13 ft (4 m)
Read range off metal (2W ERP)[3]	Up to 16 ft (5 m)
Polarization	Linear

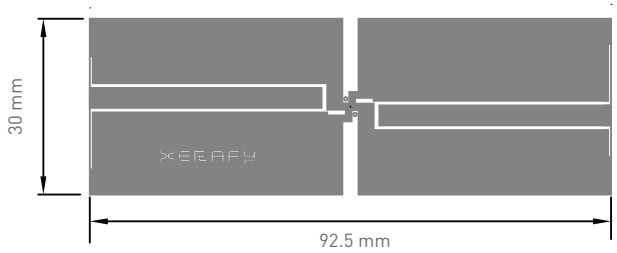
Dry Inlay Specifications

Dimensions / tolerance (mm)	92.5(+/- 1) x 30(+/- 0.8) x 0.66(+/- 0.1)
Dimensions / tolerance (in)	3.64(+/- 0.04) x 1.18(+/- 0.03) x 0.026(+/- 0.004)
Pitch on reel	1.625 in (41.275 mm)
Quantity per reel	2,500 (single lane)
Inner reel core diameter	3 in (76.2 mm)
Outer reel diameter	15.7 in (400 mm)
Weight (reel)	15 lbs (6.8 kg)

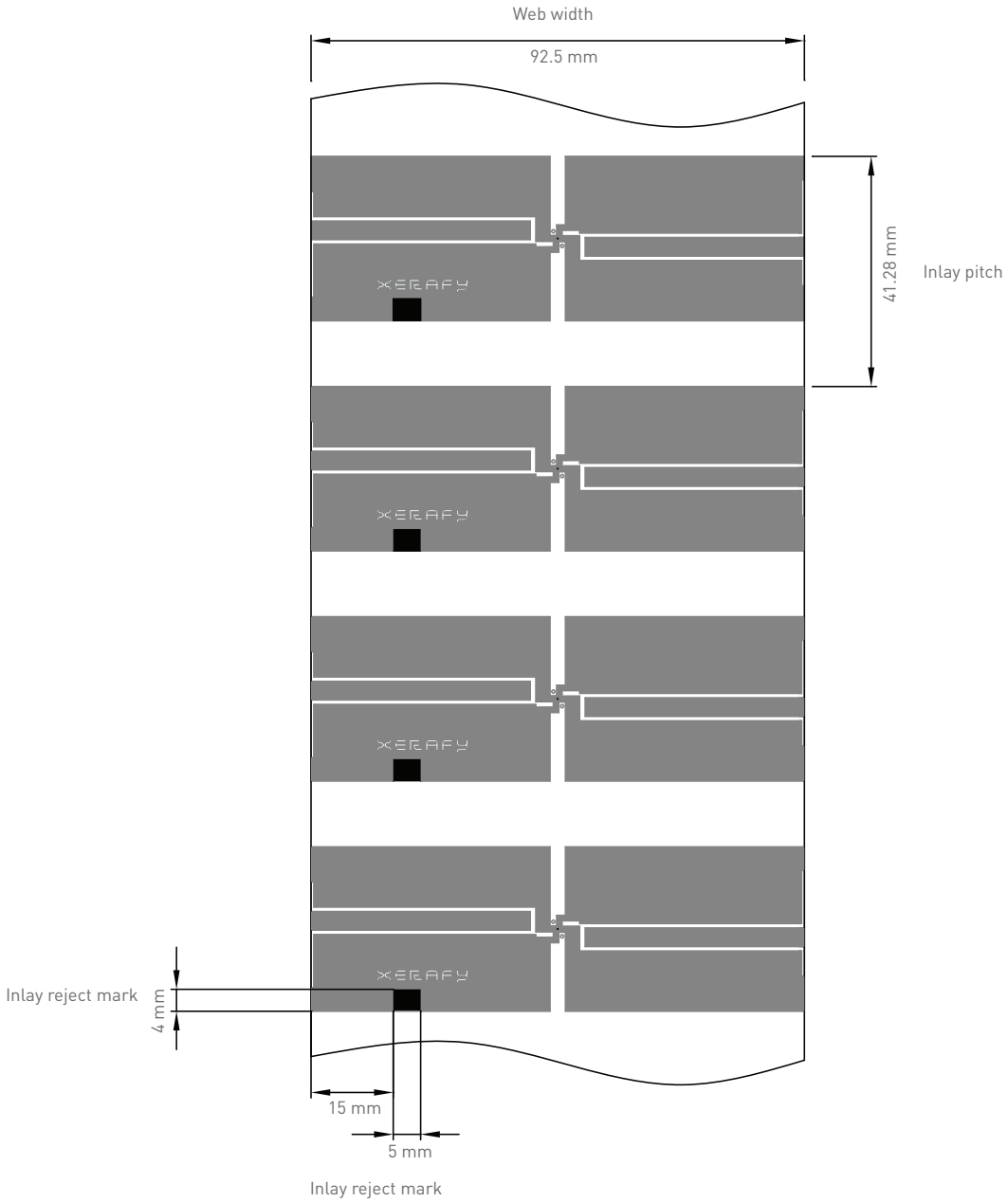
RoHS CE

[1]This product utilizes an Impinj M4E chip; each tag will have the exact same EPC number and a unique TID number. Xerafy will verify the Read/Write function of each chip memory before shipment.
[2]The chip data retention is based on chip operating under general environment conditions.
[3]Actual read range may vary based upon use case and antenna power.

Product Dimensions

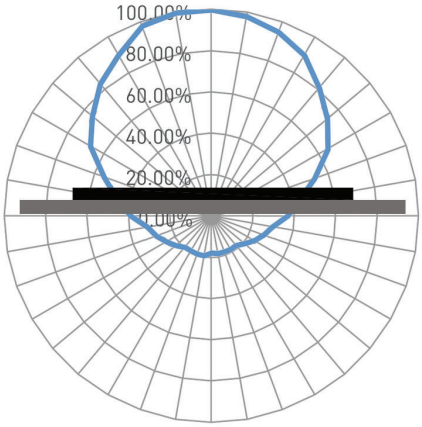


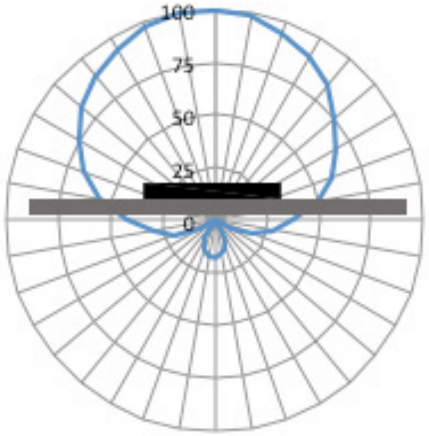
Product Reel Dimensions



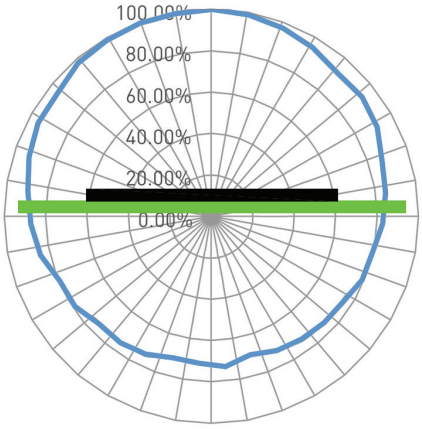
Radiation Pattern

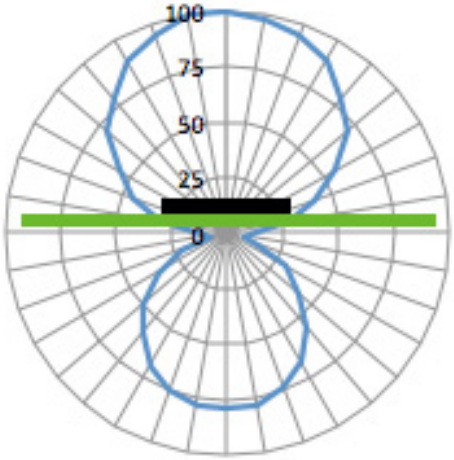
On metal-Horizontal / Vertical



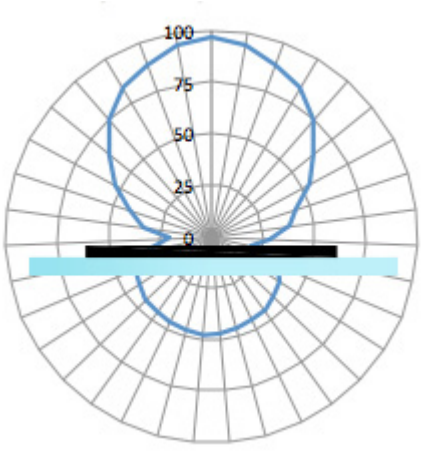


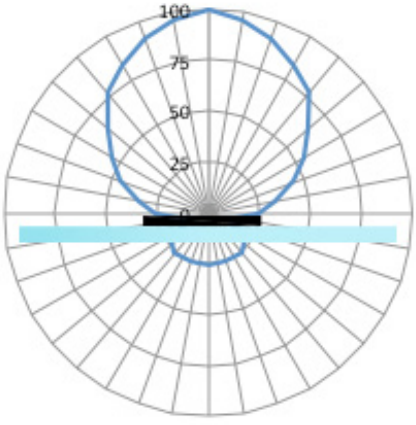
Off metal-Horizontal / Vertical





On Liquid-Horizontal / Vertical





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Operational and Environmental Specifications

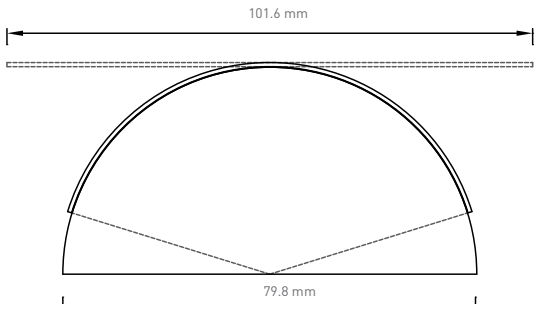
Operational temperature	
Cold	-40°F (-40°C)
Dry heat	+149°F (+65°C)
Thermal shock	-40°F to 149°F (-40°C to +65°C); cycled
Application temperature	
Cold	-40°F (-40°C)
Dry heat	+149°F (+65°C)
Storage conditions	2 years at +68°F (+20°C) and 50% relative humidity
Shock (drop)	3 ft (1 m) to concrete/granite up to 100 cycles
Vibration	MIL-STD-810F
Compression strength	92 psi (634 kPa)
Compliance	RoHS, CE

Application Instructions

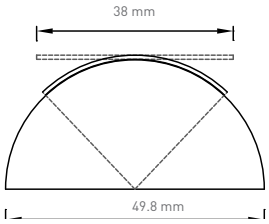
The Metal Skin can be applied directly onto metal surfaces. Its polarization is along the length of the label. For the purpose of determining a guideline, we've defined acceptable performance as 50 percent of the expected read distance. If the label is horizontally oriented, the minimum bending radius is 1.57 in (40 mm). If the label is vertically oriented, the minimum bending radius is 0.98 in (25 mm). Exceeding these recommended ranges will affect performance and may also physically damage the label, resulting in shortened life span.

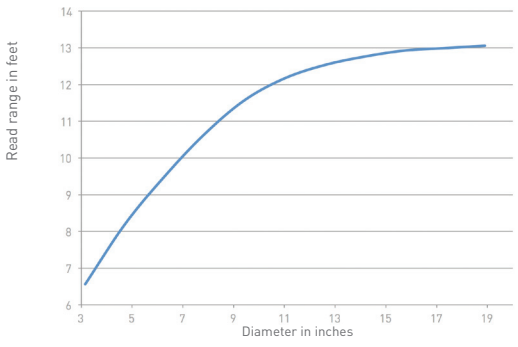
The label should ideally be applied in the following conditions, 68°F (+20°C) and 50% relative humidity. For exceptional conditions, please contact Xerafy. The label adhesive will provide maximum adhesion 24 hours after application.

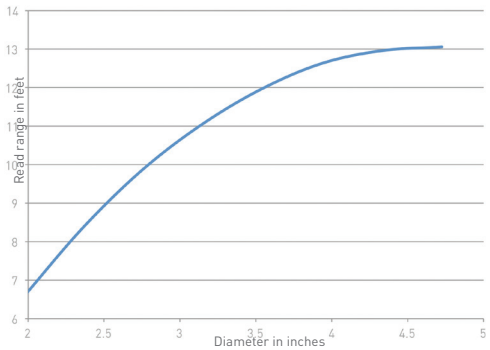
Horizontally oriented



Vertically oriented







Order information

X50A0-GL000-M4	Mercury Metal Skin Dry Inlay (Gloabl)
X50A0-GL100-M4	Mercury Metal Skin Label (Gloabl)