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Mercury Metal Skin™

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)

Performance Characteristics

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

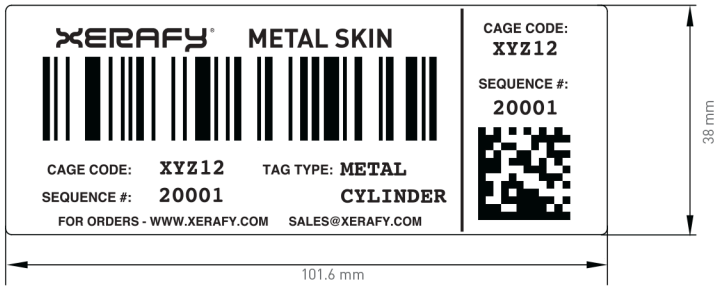
Smart Label Specifications

Dimensions / tolerance (mm)	101.6(+/- 1) x 38(+/- 0.8) x 0.76(+/- 0.1)
Dimensions / tolerance (in)	4(+/- 0.04) x 1.5(+/- 0.03) x 0.03(+/- 0.004)
Face material	White thermal transfer face stock
Background adhesive	High performance adhesive
Delivery format	On reel
Quantity per reel	500
Inner reel core diameter	3 in (76.2 mm)
Outer reel diameter	8 in (203 mm)
Weight (reel)	4.85 lbs (2.2 kg)

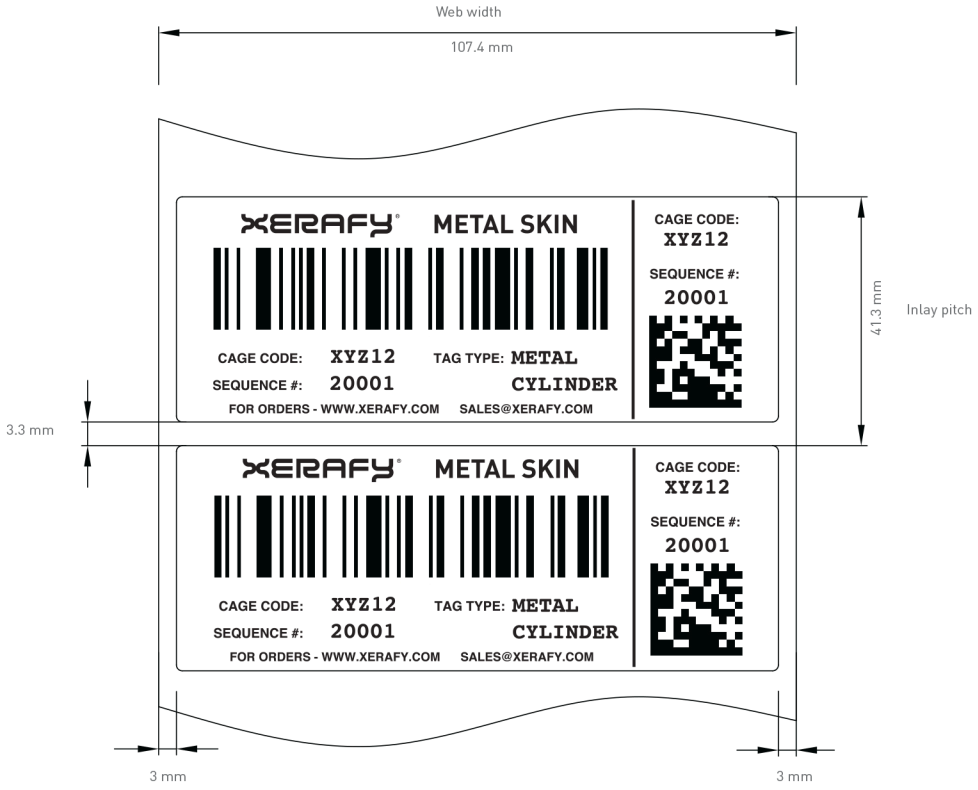
[1]This product utilizes an Impinj M4E chip; each tag will have the exact same EPC number and a unique TID number. Xerafy will verify the Read/Write function of each chip memory before shipment.
[2]Actual read range may vary based upon use case and antenna power.

Version: 07.03.14

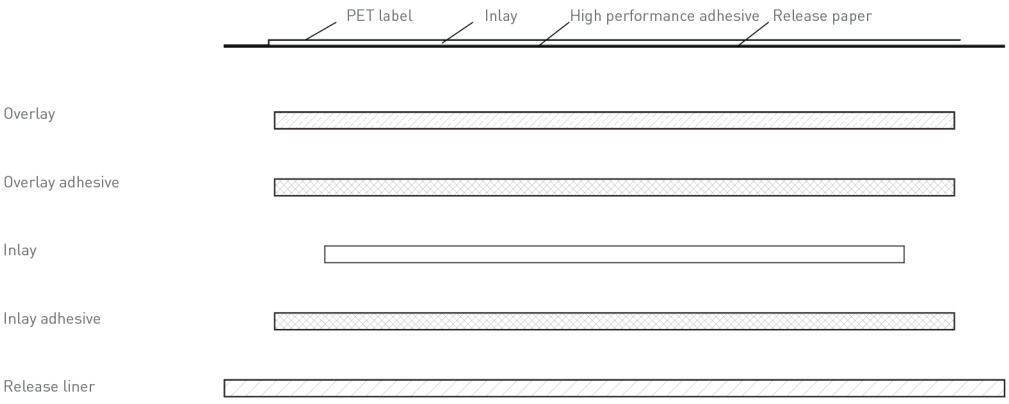
Product Dimensions



Product Reel Dimensions



Smart Label Cross Section

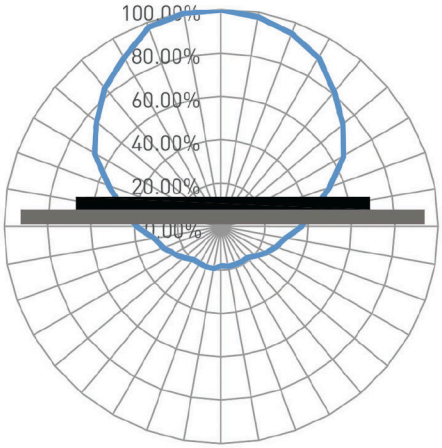


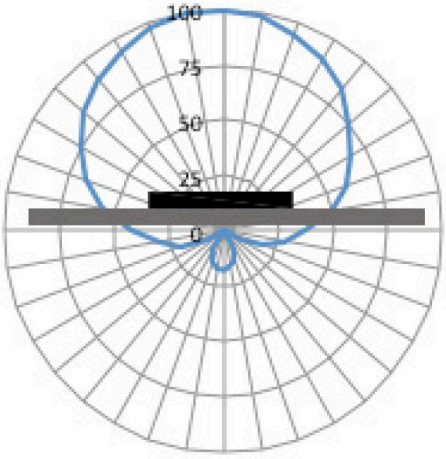
Printer Compatibility

Version: 07.03.14

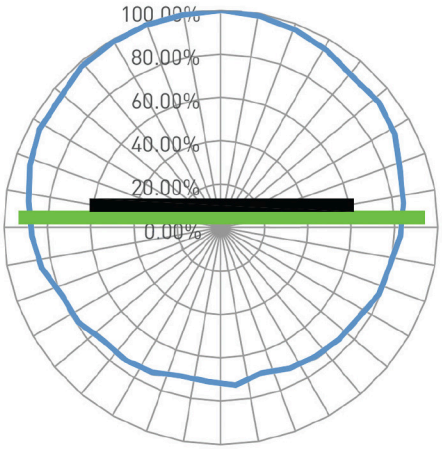
Radiation Pattern

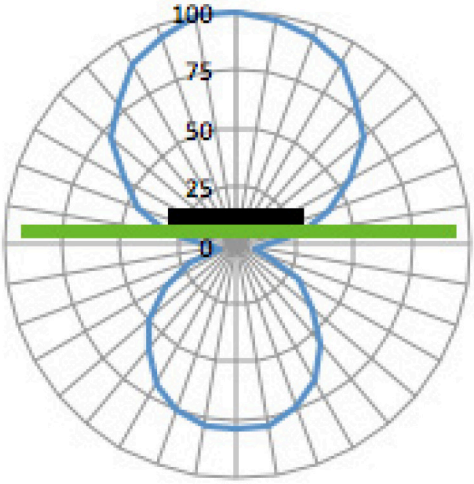
On metal-Horizontal / Vertical



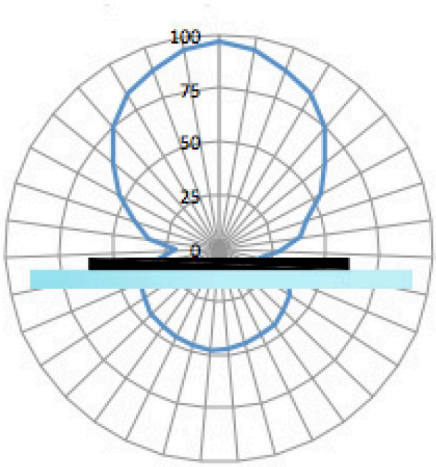


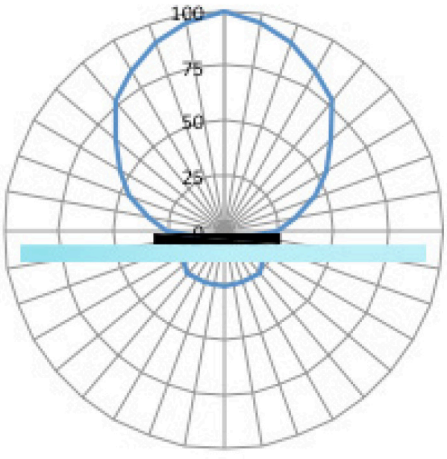
Off metal-Horizontal / Vertical





On Liquid-Horizontal / Vertical





Operational and Environmental Specifications

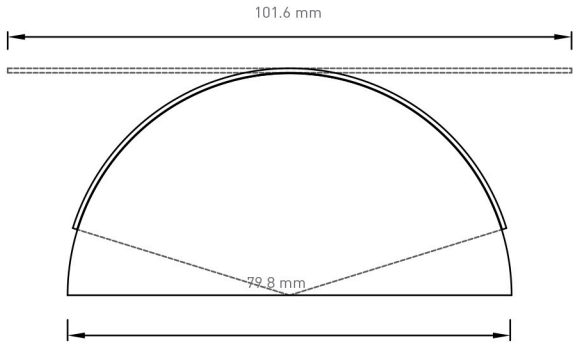
Operational temperature	
Cold	-40°F (-40°C)
Dry heat	+185°F (+85°C)
Thermal shock	-40°F to 185°F (-40°C to +85°C); cycled
Application temperature	
Cold	-40°F (-40°C)
Dry heat	+185°F (+85°C)
Storage conditions	2 years at +68°F (+20°C) and 50% relative humidity
Shock (drop)	3 ft (1 m) to concrete/granite up to 100 cycles
Vibration	MIL-STD-810F
Compression strength	92 psi (634 kPa)

Application Instructions

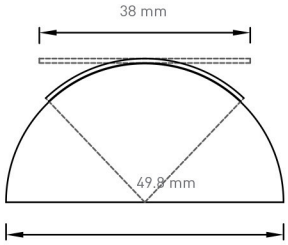
The Metal Skin can be applied directly onto metal surfaces. Its polarization is along the length of the label. For the purpose of determining a guideline, we've defined acceptable performance as 50 percent of the expected read distance. If the label is horizontally oriented, the minimum bending radius 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.

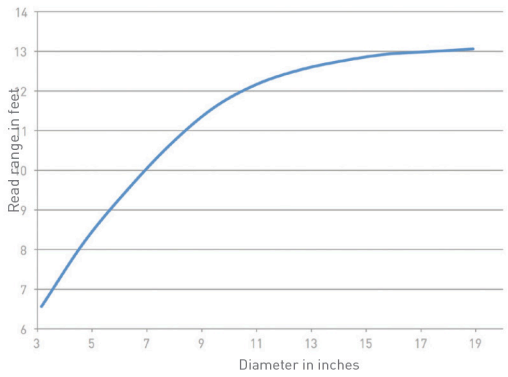
Horizontally oriented

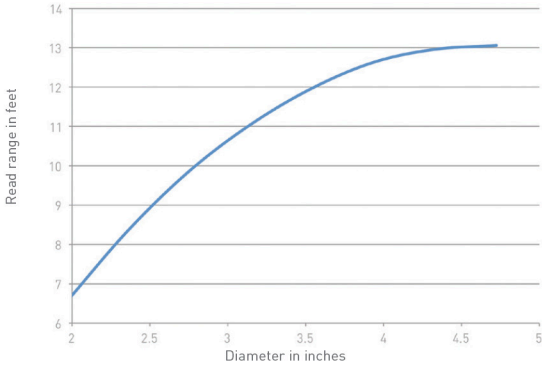


Vertically oriented



Read range





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