TITAN Blade

- Passive RFID Tag
- EPC Class1 Gen2
- Both On metal and off metal applications
- 138mm*6mm*4.0mm (US/EU)

Version of edition	v2.0
Date of latest edition	August 2011
Version of this product	v1.0
Date of release, original product	August 2011
Date of release, this product	August 2011

Contents:

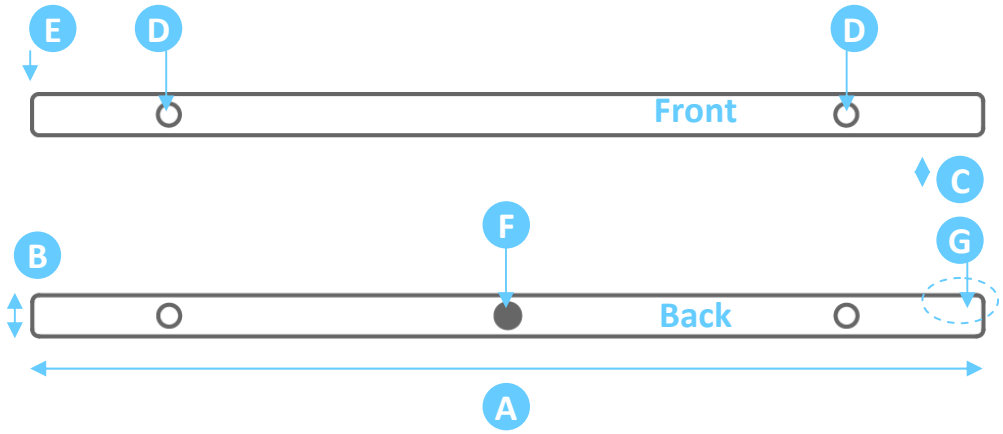
RFcamp Ltd. | Songdo Building, 868-10 Bangbae, Seocho, Seoul 137060 Korea | Tel. +82.2.593.8808 | Fax. +82.2.593.8804 | company@rfcamp.com

Specification

Titan Blade is worldwide steady selling metal tag since year of 2008. With its heat resistance up to 200C degree as well as unparalleled robustness against mechanical and chemical stress, it appeals to RFID users pursuing long term ROI and stable RFID systems.

Basic information		
Function	**Passive RFID – Only on metal application**	
Protocol	EPC Class1 Gen2& ISO18000-6-C	
Frequency band	US type	900-930MHz
	EU type	860-880MHz
Chip	Alien Higgs3* SOT package	
Chip bonding	Soldering	
Chip memory	EPC 96 bits | User 512 bits | TID 64 bits | CRC 32 bits	
Dimensions	(L)130mm*(H)6mm*(T)4.1mm	
Materials	Heat pressed double layer copper clad FR4 PCB (Printed Circuit Board)	
RoHS	100% Compliant	
Warranty	18 months	

* http://www.alientechnology.com/docs/products/DS_H3.pdf



A. Length	138.0mm
B. Height	6.0mm
C. Thickness	4.0mm
D. Hole's diameter	3.2mm
D. Hole center from right (left) side	20.0mm
D. Hole center from up (down) side	3.0mm
E. Corner radius	1.0mm
F. Chip circle's diameter	3.6mm
F. Chip circle center from left side	69.0mm
F. Chip circle center from upside	3.0mm
G. Regional mark **(U or E)**	U = US | E = EU

Read performance

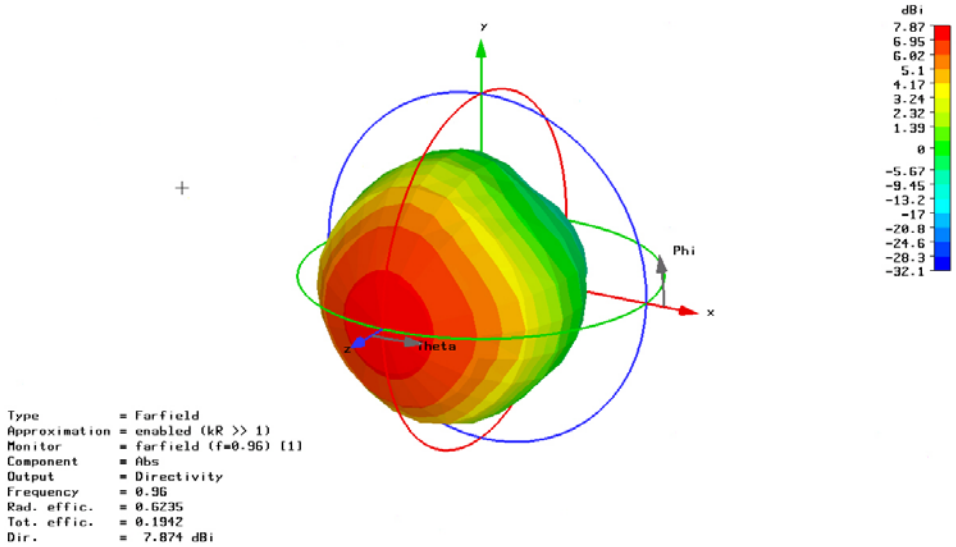
Below are Titan Basic's main specifications. Read range has been measured at anechoic chamber in RFID/USN Center Korea (www.ruc.or.kr), certified by EPC Global. Real read range may be different due to real RF environment, tag location& orientation, reader power& antenna gain, etc.

Titan Blade	On metal		Off metal	
	Handheld**	Fixed***	Handheld**	Fixed***
Read range (meters)*	3.0	6.0	4.0	8.0

* Measured in anechoic chamber, RFID/USN center, national lab, Korea ** AT870 (manufactured by ATID Inc.) *** Alien9900+ / Alien9900+EMA

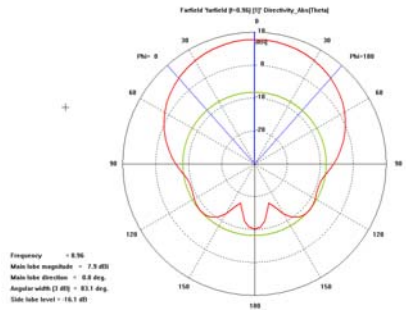
Tag radiation Pattern

3 Dimensions



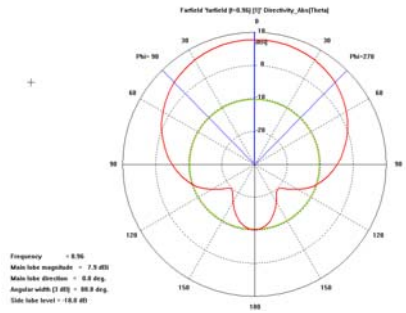
2 Dimensions

[Phi = 0°]



2 Dimensions

[Phi = 90°]



Environmental durability

RFcamp

Tag should endure! ID tag should survive ID'ed objects. That's what RFcamp is for!

Test type	Criteria	Descriptions	Pass/Fail
Mechanical stress			
Vibration	IEC60068-2-6/64	Vibrate tags in various frequency and gravity	Pass
Trample	50Kgs	Trample on tags with 50Kgs with 1m/second – 500 times	Pass
Iron ball free fall	1Kg ball / 1.5meter	1Kg iron ball falls on tags from 1.5 meters' height – 50 times	Pass
Water extraction press	Jensen's machine	Withstands up to 57Kgs bar – 50 times	Pass
Ingression stress			
IP68	1.5 meter water level	Soak tags in 1.5 meter water depth – 24 hours	Pass
Temperature stress			
High temperature	200C degree	Withstand 200C degree – 24 hours	Pass
Thermal cycle	-45<>150C degree	Withstand -45<>150C degree – 500 cycles	Pass
Humidity stress			
Humidity chamber	85C degree / 85% RH	Withstand 85/85 – 168 hours	Pass
Boiling water	100C degree	Soak tags in boiling water – 48 hours	Pass
Chemical stress			
Acid	5% Sulfuric acid	Soak tags – 24 hours	Pass
Alkali	5% Sodium hydroxide	Soak tags – 24 hours	Pass
Salt water	IEC60060-2-11	Soak tags – 24 hours	Pass
Kerosene	99.9%	Soak tags – 24 hours	Pass
Diesel	99.9%	Soak tags – 24 hours	Pass
Gasoline	99.9%	Soak tags – 24 hours	Pass
Ethanol	99.9%	Soak tags – 24 hours	Pass
Methanol	99.9%	Soak tags – 24 hours	Pass
Medical enzyme	STERIS*	Soak tags – 24 hours	Pass

* www.steris.com/products/view.cfm?id=3183

Value added service

Upon customer's request, RFcamp provides various kinds of customized services as below in quickest way.

Chip pre-programming service

- To encode from 16 bits to 128 bits for EPC
- To encode up to 512 bits for User

Heat curable double sided adhesive tape

- 3M468MP
- 3M VHB
- Avery Dennison's

Backing glue

- ALTECO - Instantly curable glue
- CEMEDINE – Silicone based super power glue

Customized label with printing

- Water proof polysynthetic label
- Various label color – yellow or white, if not specified
- Black printing color – logo, text, human readable ID, barcode
- RGB printing color – logo, text, human readable ID, barcode

Laser marking (x)

- Not applicable

Metallic& non metallic fixture

- Metallic clip, bracket or plate, upon customer's request
- Non-metallic bracket or case, on injection molding basis

Contact information

Contact information

Address	Songdo Building, 868-10 Bangbae, Seocho, Seoul 137060 Korea
Contact person	Jerry (Jaehyung) RYU, Mr.
Phone	+82.2.593.8808
Fax	+82.2.593.8804
Email	
General inquiry	company@rfcamp.com
Technical inquiry	titantag@rfcamp.com
Business inquiry	jerry_ryu@rfcamp.com
SKYPE	jerry_ryu (located in Seoul, Korea)
MSN	jerry_ryu