



# SPECIFICATION

PART NO. 101111FHAAAM406ZA

DESCRIPTION. RJ45 1X1 TAB UP W/LED & TRANSFORMER

CUSTOMER. \_\_\_\_\_

REV.: P0

REV. DATE : 2006 / Sep / 11

|      | APPROVED   | CHECKED   | PREPARED   |
|------|------------|-----------|------------|
| NAME | Kenny Chen | Bryant Tu | Nicole Lee |

## 實盈股份有限公司

### SUYIN CORPORATION

**TAIWAN HEAD OFFICE :**

NO. 377.Fu-The First Re., His-Chih,  
Taipei Hsien, Taiwan, R.O.C.  
TEL : (886) 2-2694-7697 (Rep)  
FAX : (886) 2-2694-8407 2694-8047  
E-mail : [Lesley@suyin.com.tw](mailto:Lesley@suyin.com.tw)

**SUYIN ELECTRONICS (DONGGUAN) CO., LTD.**

Suyin Road, San Zhong,  
Qing Xi Town, Dongguan City,  
TEL : (886) 2-2694-7697 (Rep)  
FAX : (886) 2-2694-8407 2694-8047  
E-mail : [kevin@suyin.com.tw](mailto:kevin@suyin.com.tw)

**HONG KONG BRANCH OFFICE :**

TEL : (852) 2-559-6017  
FAX : (852) 2-5596461  
E-mail : [suyin@netvigtor.com](mailto:suyin@netvigtor.com)

**KOREA BRANCH OFFICE :**

TEL : (82) 2-559-6017  
FAX : (82) 2-5596461  
E-mail : [yang@sdint.co.kr](mailto:yang@sdint.co.kr)

**GERMANY BRANCH OFFICE :**

TEL : (+49) 0-8561/238-8880  
FAX : (+49) 0-8561/238/8888  
E-mail : [mail@suyin.de](mailto:mail@suyin.de)

**JAPAN BRANCH OFFICE :**

TEL : (81) 45-266-2488  
FAX : (81) 45-266-2489  
E-mail : [kanashiro@suyinjapan.com](mailto:kanashiro@suyinjapan.com)

**SINGAPOER BRANCH OFFICE :**

90 Lorong 23 Geylang #02-01/02/03 Yong  
DA Industrial Building Singapore 388393  
TEL : (65) 6256-6481  
FAX : (65) 6256-6483  
E-mail : [alice@suyin.com.sg](mailto:alice@suyin.com.sg)

**U.S.A BRANCH OFFICE :**

TEL : (1) 714-750-0378  
FAX : (1) 714-750-0379  
E-mail : [steven@suyinusa.com](mailto:steven@suyinusa.com)

**ISRAEL BRANCH OFFICE :**

TEL : (1) 714-750-0378  
FAX : (1) 714-750-0379  
E-mail : [sales@suyin.co.il](mailto:sales@suyin.co.il)

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| DOCUMENT NO.: 101111FHAAAM406ZA<br>SUYIN P/N. : 101111FHAAAM406ZA<br>CUSTOMER P/N. : | DESC. : <b>RJ45 1X1 TAB UP W/LED &amp; TRANSFORMER</b> |
|--|--|

### 1 P/N SPECIFICATION

SUYIN P/N: **101 111 F** H AA A M4 06 **ZA**  
A    B    C    D    E

A. Transformer Speed: **10/100/1000 Base-T**  
 LED Polarity: **Normal**

B. Schematic: Refers to section 5.1

C. LED Color Code:

| w/o LED:<br>0 |        | RIGHT LED |       |        |     |     |     |
|---------------|--------|-----------|-------|--------|-----|-----|-----|
|               |        | YELLOW    | GREEN | ORANGE | G/O | G/Y | O/G |
| LEFT LED      | YELLOW | 1         | 7     | D      | K   | N   | R   |
|               | GREEN  | 2         | 8     | E      | L   | P   | S   |
|               | ORANGE | 3         | 9     | F      | M   | Q   | T   |
|               | G/O    | 4         | A     | G      | /   | /   | /   |
|               | G/Y    | 5         | B     | H      | /   | /   | /   |
|               | O/G    | 6         | C     | J      | /   | /   | /   |

D. RJ Contact Plating:

- M2: Gold Flash selected Gold plating over 50 u" min. Nickel
- M3: 10u" selected Gold plating over 50 u" min. Nickel
- M4: 15u" selected Gold plating over 50 u" min. Nickel
- M5: 30u" selected Gold plating over 50 u" min. Nickel
- M6: 50u" selected Gold plating over 50 u" min. Nickel.

E. Mechanical Series: Refers to section 2.1~2.2

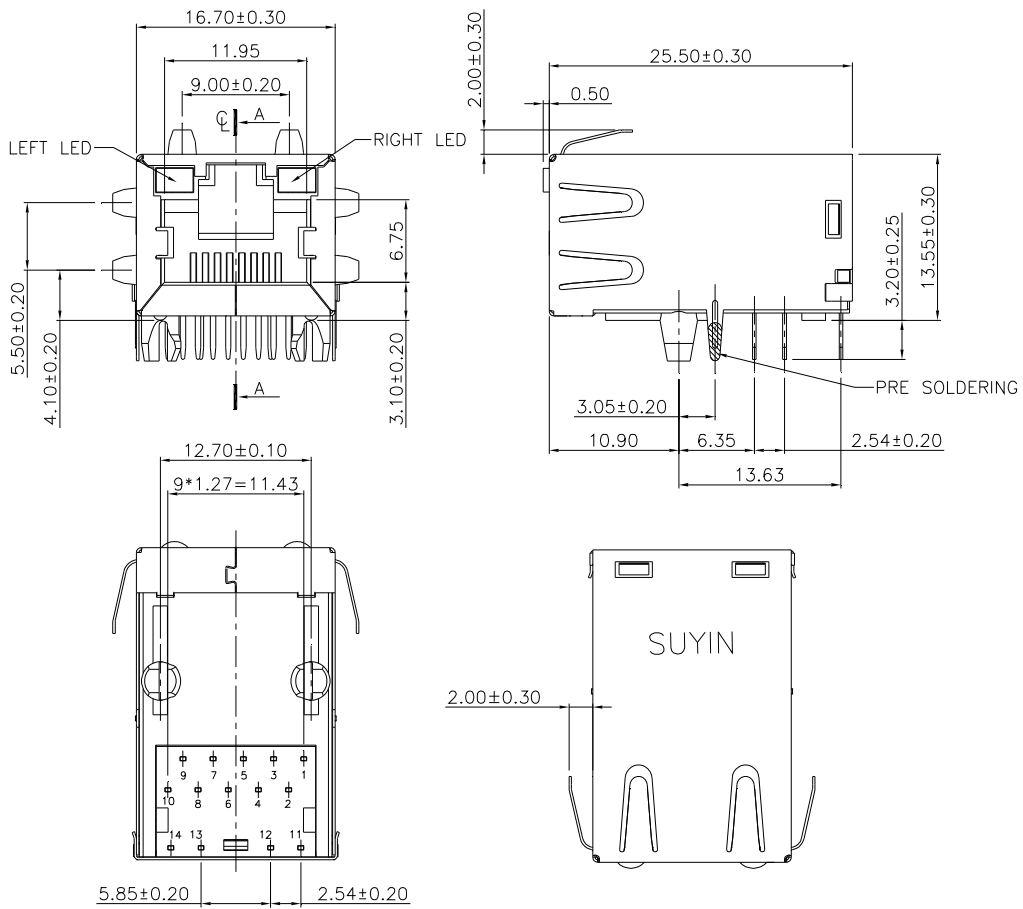
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## SPECIFICATION

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|---|--|

### 2 MECHANICAL DIMENSIONS

#### 2-1 Dimensions



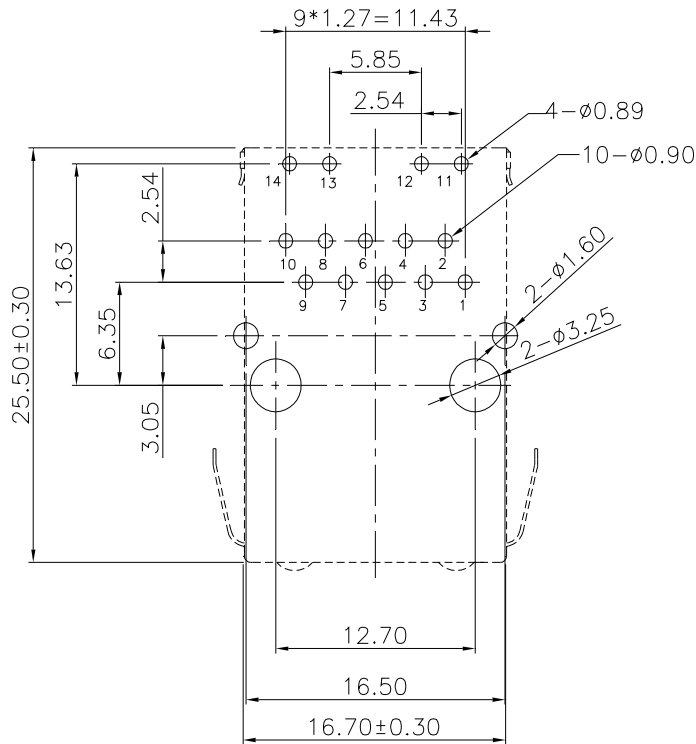
General Tolerance : 0~10mm:  $\pm 0.10$   
 10~30mm:  $\pm 0.20$   
 30~ mm:  $\pm 0.30$

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### 2-2 PCB Layout



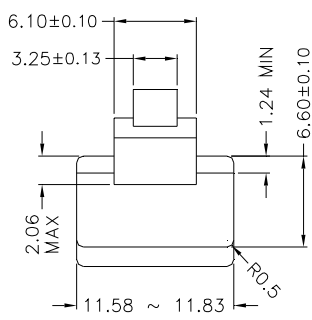
RECOMMENDED PCB LAYOUT  
 COMPONENT SIDE  
 ALL DIMENSION TOLERANCE ARE  $\pm 0.05\text{mm}$

# SUYIN CORPORATION

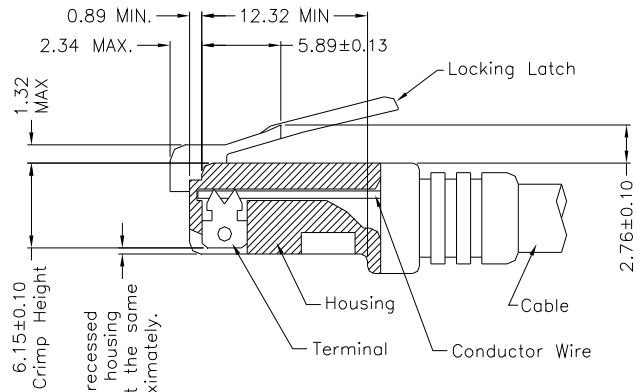
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### 3 RECOMMEND RJ PLUG SPECIFICATION

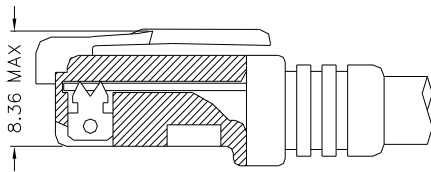


- \* There must be no damage to housing or locking latch. There must be no nicks or cuts in cable.
- \* Durability : 750 cycles generally



All contacts recessed below top of housing and must be at the same height approximately.

FOLLOW SPECIFICATION : FCC, PART 68,  
 SUBPART F FIGURE 68.500 (C)(2)(i)  
 AND IEC 603-7 FIGURE 23 & 24



FOLLOW SPECIFICATION : FCC, PART 68, SUBPART F  
 FIGURE 68.500 (C)(2)(ii)

# SUYIN CORPORATION

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CUSTOMER P/N.:

DESC. : RJ45 1X1 TAB UP W/LED &  
TRANSFORMER

### 4 MATERIAL SPECIFICATION

4-1 RoHS Compliance per EU Directive 2002/95/EC

4-2 Plastic Housings:

- A. Main Housings: Nylon 9T , UL 94V-0, Black
- B. Transformer Housing: Nylon 9T, UL94V-0, Black
- C. Spacer: PBT, UL94V-0, Black

4-3 Terminals:

- A. RJ Contacts: Phosphor Bronze
- B. RJ Solder Pins: Brass
- C. LED Solder Pins: Brass
- D. Transformer Housing Solder Pins: Brass

4-4 Shields:

- A. Shield: Stainless Steel

4-5 Plating:

- A. RJ Contacts: As P/N specified
- B. RJ Solder Pins: 100u" min. Matte Tin over 50u" Nickel under-plating
- C. LED Solder Pins: 100u" min. Tin over 50u" Nickel under-plating
- D. Transformer Housing Solder Pins: 100u" min. Matte Tin over 50u" Nickel under-plating
- E. Shield Grounding Legs: Pre-soldering, Sn/ Ag/ Cu ( 96.5/ 3/ 0.5 )

4-6 PCB: FR-4, Two Layer PCB

4-7 Internal Solder Joints: Sn/ Ag/ Cu ( 96.5/ 3/ 0.5 )

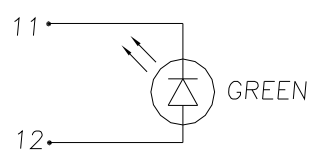
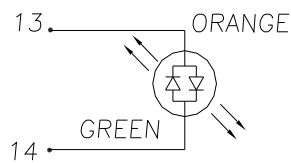
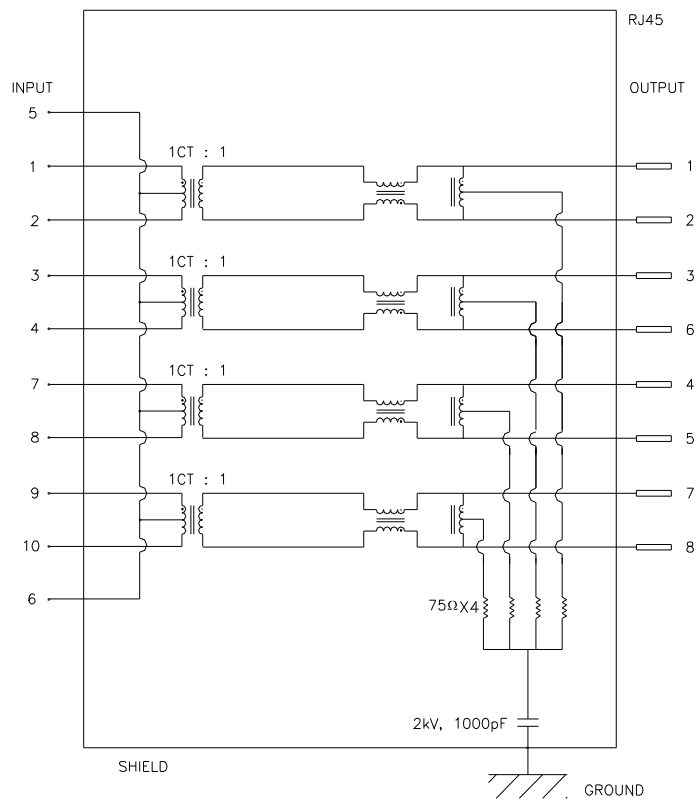
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### 5 ELECTRICAL CHARACTERISTICS

#### 5-1 Schematic



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5-2 Transmitter & Receiver Filter:

| Insertion Loss<br>(dB MAX) | Return Loss at 100Ω<br>(dB MIN) |          |          |           |
|----------------------------|---------------------------------|----------|----------|-----------|
| 1~125MHz                   | 1~30MHz                         | 30~60MHz | 60~80MHz | 80~100MHz |
| -1.2                       | -18                             | -16      | -12      | -10       |

5-3 Common Mode Rejection @ 1~100 MHz: -30dB MIN

5-4 Cross Talk @ 1~100 MHz: -25dB MIN

5-5 Inductance @ 100KHz/ 0.1V, 8mA DC BIAS: 350μH MIN

5-6 HiPot Test: 1500Vrms, 60sec

5-7 LED:

| Forward Voltage (V) @ 20mA |     |
|----------------------------|-----|
| Typical                    | MAX |
| 2.2                        | 2.6 |

## 6 OPERATING & TEST REQUIRMENTS

Product is designed to meet electrical, mechanical and environmental performance requirements specified below. All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified

6-1 Operating Temperature Range: 0°C TO +70°C

6-2 Storage Temperature: -40°C to 85°C

6-3 Ratings:

1. Insulation Resistance: 500M Ohm (MIN)
2. Dielectric Withstanding Voltage: 1000 VAC



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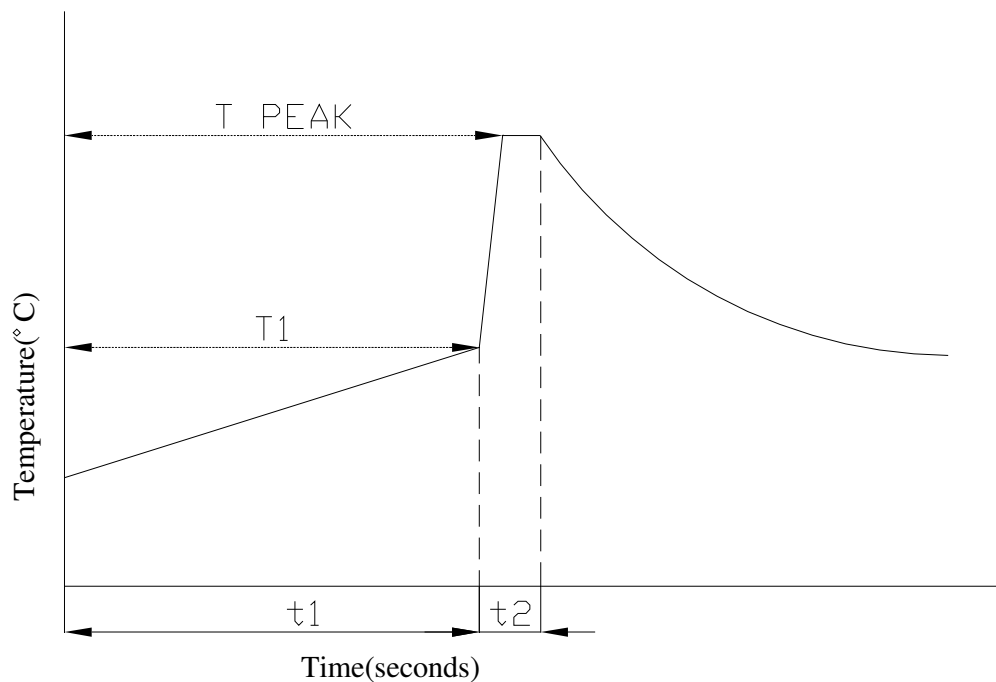
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|--|--|

### 7 STORAGE REQUIRMENTS

All products shall be packaged against any physical damage and corrosion during shipment or in storage.

### 8 RECOMMEND WAVE SOLDERING PROFILE



| PARAMETER                    | REFERENCE | LEAD FREE SPECIFICATION |
|------------------------------|-----------|-------------------------|
| PREHEAT TEMPERATURE GRADIENT |           | +1~4°C/sec              |
| PREHEAT TIME                 | t1        | 2~3 MIN                 |
| PREHEAT TEMPERATURE          | T1        | >100°C                  |
| SOLDER POT TEMPERATURE       | T PEAK    | 260°C ±5°C              |
| DWELL TIME                   | t2        | 3.5 SEC                 |
| PEAK BOARD TOP TEMPERATURE   |           | 190°C                   |
| COOLING TEMPERATURE GRADIENT |           | -6°C/SEC MAX.           |