



(1,27 mm) .050"

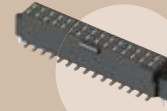
SFM, SFML SERIES

SFM-110-02-L-D-A

SFML-125-T2-L-D-LC



SFM-125-02-L-SH



SFML-115-T2-L-D-LC

**SPECIFICATIONS**

For complete specifications and recommended PCB layouts see [www.samtec.com?SFM](http://www.samtec.com?SFM) or [www.samtec.com?SFML](http://www.samtec.com?SFML)

**Insulator Material:**

Black Liquid Crystal Polymer  
**Contact Material:**  
 Tiger Eye™ = BeCu  
 Tiger Eye™ LITE = Phosphor Bronze  
**Plating:**  
 Au or Sn over 50µ" (1,27 µm) Ni



**Voltage Rating:**

350 VAC mated with TFM

**Operating Temp Range:**

-55°C to +125°C

**Contact Resistance:**

15 mΩ

**Insertion Depth:**

(3,05 mm) .120" to (4,06 mm) .160"

**Wiping Distance:**

(0,38 mm) .015"

**Normal Force:**

Standard = 132 g (1,29 N) avg.; LIF = 90 g (0,88 N) avg.

**Insertion Force (SFM):**

(Single contact only)  
 Standard = 2.5 oz (0,69 N) avg.; LITE = 2.0 oz (0,56 N) avg.;

LIF = 1.4 oz (0,39 N) avg.

**Withdrawal Force (SFM):**

(Single contact only)  
 Standard = 2.0 oz (0,56 N) avg.;

LITE = 1.5 oz (0,42 N) avg.;

LIF = 1.0 oz (0,28 N) avg.

**Insertion Force (SFML):**

(Single contact only)  
 2.5 oz (0,69 N) avg.

**Unmating Force (SFML):**

Withdrawal force per contact (Single contact only) = 1.5 oz (0,42 N) average; Incremental unmatting force with friction locks: 10-20 pins/row (One Lock) increases withdrawal force by 4 x average; 25 & 30 pins/row (Two Locks) increases withdrawal force by 3 x average; 35-50 pins/row (Three Locks) increases withdrawal force by 1.7 x average

**Max Cycles:**

10,000 with 30µ" (0,76 µm) Au (Call Samtec for E.L.P. plating option)

**RoHS Compliant:**

Yes

**Processing:**

**Lead-Free Solderable:**

Yes

**SMT Lead Coplanarity:**

(0,10 mm) .004" max (05-25)

(0,15 mm) .006" max (30-50)

**Processing:**

**Lead-Free Solderable:**

Yes

**SMT Lead Coplanarity:**

(0,10 mm) .004" max (05-25)

(0,15 mm) .006" max (30-50)

**Note:** Some sizes, styles and options are non-standard, non-returnable.

**SFM Mates with:**  
 TFM, TFSD, TFSS, FTS, FW, FTSH

**SFML Mates with:**  
 TFML, TFSD (-XL option), TFSDT (-XL option)



Low insertion force  
 Tiger Eye™ contacts available

(1,27 mm x 1,27 mm)  
 .050" x .050" micro pitch

Locking feature  
 increases unmatting  
 force (SFML)

Choice of SMT or  
 through-hole tails

CURRENT RATING (PER CONTACT)	
AMBIENT TEMP	TFM/SFM
20°C	5A
40°C	4.5A
60°C	3.9A
95°C	2.6A

6 POSITIONS (2x3) POWERED

- Passes 10 Year MFG
- Locking option
- Locking clip option
- Screw Down option

EXTENDED LIFE PRODUCT  
 10 year Mixed Flowing Gas with 30µ" Gold  
 1,000 cycles when mated with TFM

TYPE STRIP	NO. PINS PER ROW	LEAD STYLE
1	04 (SFM only)	(Surface Mount) (Through-hole)
SFM = Standard	05, 07, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec or see SFMC Series for more sizes)	-02 = Tiger Eye™ Contact
SFML = Locking		-L2 = Low Insertion Force Tiger Eye™ Contact
		-T2 = Tiger Eye™ LITE Contact (Phosphor Bronze)
		-01, -03 = Tiger Eye™ Contact
		-L1, -L3 = Low Insertion Force Tiger Eye™ Contact
		-T1 = Tiger Eye™ LITE Contact (Phosphor Bronze)

**SINGLE ROW (SURFACE MOUNT)**  
 (2,03) .080  
 (1,27) .050 x No. of Positions + (3,94) .155 except for alignment pin option:  
 (1,27) .050 x No. of Positions + (3,17) .125  
 (1,27) .050 x No. of Positions + (0,38) .015  
 (1,27) .050 TYP

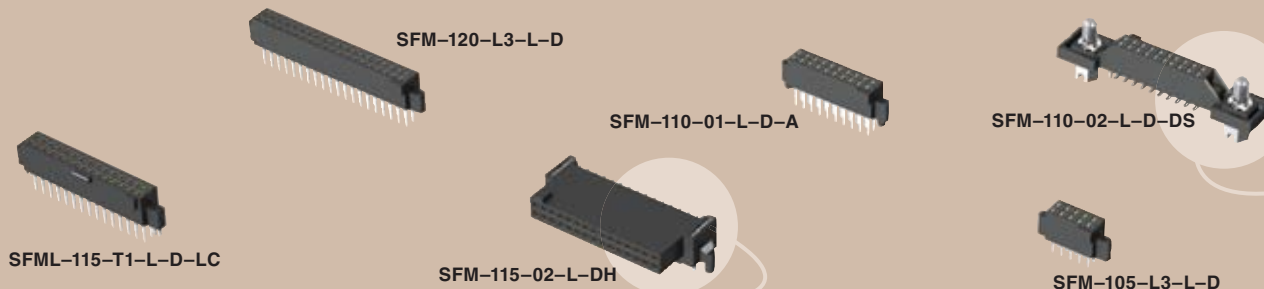
**DOUBLE ROW (SURFACE MOUNT)**  
 (0,58) .023  
 (3,68) .145  
 (0,13) .005 TYP  
 (2,79) .110  
 (4,19) .165

**-SH (-02 only)**  
 (9,78) .385  
 (3,12) .123  
 (2,26) .089  
 (3,37) .133

**-DH (-02 only)**  
 (9,78) .385  
 (4,39) .173  
 (4,64) .183  
 (2,26) .089

Due to technical progress, all designs, specifications and components are subject to change without notice.

WWW.SAMTEC.COM



High reliability  
Tiger Eye™  
contacts

(1,27 mm x 1,27 mm)  
.050" x .050" micro pitch

Mates with TFM  
for coplanar and  
perpendicular mating



Screw down  
option

Surface mount or  
Through-hole tails

### COST-SAVING APPLICATIONS

See SFC Series for lower cost plating options.

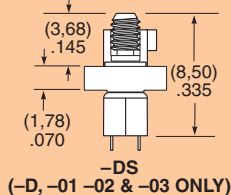
### PLATING OPTION

**-L**

= 10µ" (0,25 µm) Gold on contact, Matte Tin on tail  
(Call Samtec for E.L.P. plating option)

Note: Other Gold plating options available.  
Contact Samtec.

LEAD STYLE	A	B
-01, -L1, -T1	(3,05) .120	(0,51) .020
-03, -L3	(1,91) .075	(0,41) .016



### ROW OPTION

**-S**

= Single Row  
(SFM only)

**-D**

= Double Row

**-SH**

= Single Horizontal  
(05 thru 30 positions only)  
(SFM only)  
(Lead style -02 only)

**-DH**

= Double Horizontal  
(05 thru 30 positions only)  
(SFM only)  
(Lead style -02 only)

### OPTION

Specify only **-A**, **-LC** or **-DS**  
(Not available with **-DH**, **-SH**)

**-A**

= Alignment Pin  
(Available with all Lead Styles)

**-LC**

= Locking Clip  
(Available with all lead styles)  
(Manual placement required)

**-DS**

= Dual Screw Down for  
(1,60mm) .062" PCB  
(05 thru 40 positions only)  
(Lead styles -01, -02 & -03 only)  
(Requires **-D** row option)  
(Not available with SFML)  
(Mates with TFM-DS option)

Specify only  
**-K** or **-P**  
(Lead styles -02,  
-L2, -T2 only)

**-K**

= Polyimide film  
Pick & Place Pad  
(Not available  
with **-DH**, **-SH**)

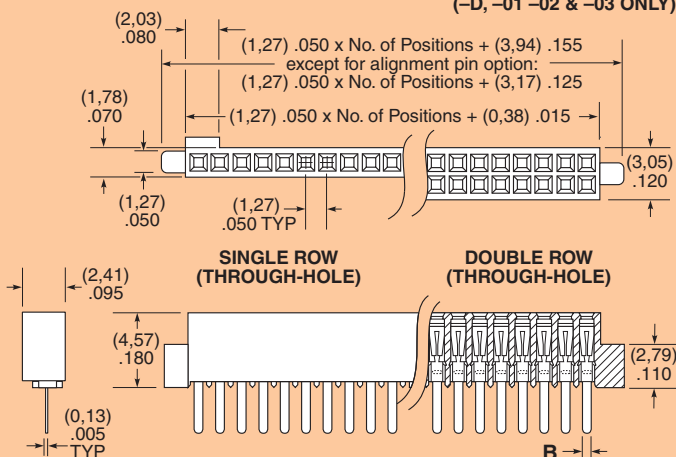
**-P**

= Plastic Pick &  
Place Pad  
(Not available  
with **-DH**, **-SH**)

Specify **-TR** last  
(Lead styles -02,  
-L2, -T2 only)

**-TR**

= Tape & Reel  
(Required callout  
for **-DH**, **-SH**)



### APPLICATION SPECIFIC OPTION

Solder nail option available.  
Call Samtec.

Due to technical progress, all designs, specifications and components are subject to change without notice.

[WWW.SAMTEC.COM](http://WWW.SAMTEC.COM)

SAMTEC USA • Tel: 1-800-SAMTEC-9 or 812-944-6733 SAMTEC NORTHERN CALIFORNIA • Tel: 408-395-5900 SAMTEC SOUTHERN CALIFORNIA • Tel: 1-800-726-8329  
SAMTEC AMERICA LATINA COMERCIO EXTERIOR LTDA • Tel: (+55 31) 3786 3227 SAMTEC UNITED KINGDOM • Tel: 44 01236 739292 SAMTEC GERMANY • Tel: +49 (0) 89 / 89460-0  
SAMTEC FRANCE • Tel: 33 01 60 95 06 60 SAMTEC ITALY • Tel: 39 039 6890337 SAMTEC NORDIC/BALTIC • Tel: +46-84477280 SAMTEC BENELUX • Tel: 44 01236 739292  
SAMTEC ISRAEL • Tel: 972-3-7526600 SAMTEC INDIA • Tel: +91-80-3272 1612 SAMTEC ASIA PACIFIC • Tel: 65 6745-5955 SAMTEC JAPAN • Tel: 045-475-1385 SAMTEC CHINA • Tel: 86-21-6083 3766  
SAMTEC TAIWAN • Tel: 886-2-2735-6109 SAMTEC HONG KONG • Tel: 852-26904858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC ANZ • Tel: 613 9580 0683