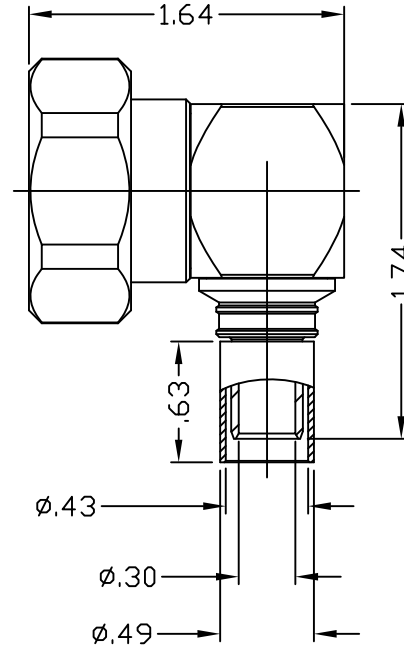
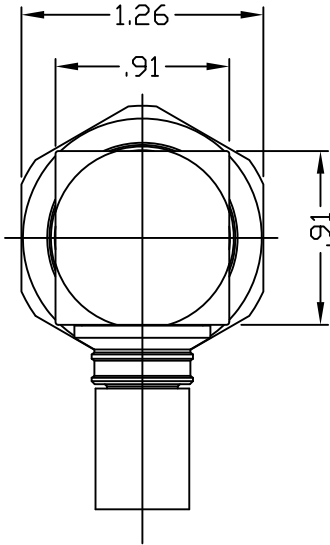


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| SYM | REVISION DESCRIPTION    | DFTM   | DATE    | APPD   | DATE    |
|-----|-------------------------|--------|---------|--------|---------|
| A   | RELEASED FOR PRODUCTION | K.A.M. | 3/31/10 | J.B.D. | 5/17/10 |



Reference standard IEC60169-4

**I Electric Performance**

Nominal Impedance( $\Omega$ ): 50  
 Frequency Range: DC-3GHz  
 VSWR:  $\leq 1.15$   
 INSERT LOSS:  $\leq 0.1$   
 Insulation resistance(M $\Omega$ ) 10000  
 Proof voltage(V) 2500  
 Conductor resistance(m $\Omega$ ) outer conductor  $\leq 0.2$   
 inner conductor  $\leq 0.8$

**II Mechanical Performance**

Pin torque 25N.m  
 (Nut)Whorl pull 1000N  
 Tensile force(cable-connect) 400N  
 Torsion(cable-connect) 2N.m

**III Material and plating**

| Component       | Material        |
|-----------------|-----------------|
| Inner conductor | Spring Copper   |
| Outer conductor | Brass           |
| Ferrule         | Copper          |
| Nut             | Brass           |
| Gasket          | Silicone rubber |
| Insulator       | PTFE            |

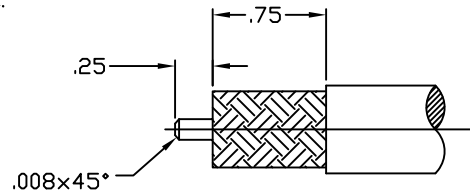
**Plating**  
 Ag 200 micro inches  
 Copper-tin-zin (Albaloy) 150 micro inches  
 Copper-tin-zin (Albaloy) 150 micro inches  
 Copper-tin-zin (Albaloy) 150 micro inches

**IV Environment**

Temp.range -55 $^{\circ}$ C~+155 $^{\circ}$ C  
 Weather standard IEC 60068 55 / 155/ 56  
 Thermal shock US MIL-STD 202,Meth.107,Cond.B  
 Vibration US MIL-STD 202,Meth.204,Cond.B  
 Shock US MIL-STD 202,Meth.213,Cond.I  
 Waterproofing standard IP67

V Assembly: inner conductor installed and outer conductor crimped

**VI ROHS Compliant.**

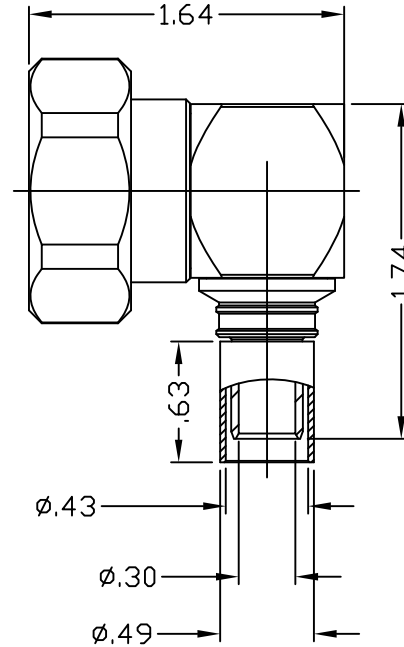
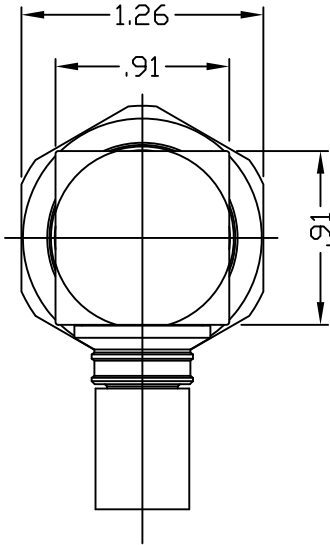


Recommended cable stripping Dim's

|           |                              |                      |                |                                   |
|-----------|------------------------------|----------------------|----------------|-----------------------------------|
| MATERIAL: | UNLESS OTHERWISE SPECIFIED   |                      | DFTM: K. A. M. | TIMES MICROWAVE SYSTEMS           |
|           | ALL DIMENSIONS ARE IN INCHES |                      | DATE: 3/31/10  |                                   |
| USED ON:  | 0                            |                      | CHKD: J. D. B. | 90° 7/16 MALE<br>FOR LMR400 CABLE |
|           |                              |                      | DATE: 5/17/10  |                                   |
| SCALE: ~  | DWG. SIZE: A                 | DO NOT SCALE DRAWING | APPD: J. D. B. |                                   |
|           |                              | CODE IDENT: 68999    | DATE: 5/17/10  | 1 of 1   SD3190-2545   REV: A     |

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| SYM | REVISION DESCRIPTION    | DFTM   | DATE    | APPD   | DATE    |
|-----|-------------------------|--------|---------|--------|---------|
| A   | RELEASED FOR PRODUCTION | K.A.M. | 3/31/10 | J.B.D. | 5/17/10 |



Reference standard IEC60169-4

**I Electric Performance**

Nominal Impedance( $\Omega$ ): 50  
 Frequency Range: DC-3GHz  
 VSWR:  $\leq 1.15$   
 INSERT LOSS:  $\leq 0.1$   
 Insulation resistance(M $\Omega$ ) 10000  
 Proof voltage(V) 2500  
 Conductor resistance(m $\Omega$ ) outer conductor  $\leq 0.2$   
 inner conductor  $\leq 0.8$

**II Mechanical Performance**

Pin torque 25N.m  
 (Nut)Whorl pull 1000N  
 Tensile force(cable-connect) 400N  
 Torsion(cable-connect) 2N.m

**III Material and plating**

| Component       | Material        |
|-----------------|-----------------|
| Inner conductor | Spring Copper   |
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| Ferrule         | Copper          |
| Nut             | Brass           |
| Gasket          | Silicone rubber |
| Insulator       | PTFE            |

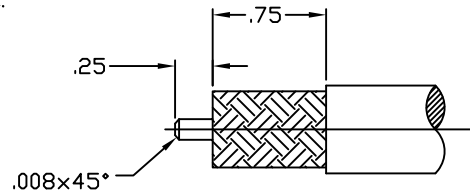
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**IV Environment**

Temp.range -55 $^{\circ}$ C~+155 $^{\circ}$ C  
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 Thermal shock US MIL-STD 202,Meth.107,Cond.B  
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 Shock US MIL-STD 202,Meth.213,Cond.I  
 Waterproofing standard IP67

V Assembly: inner conductor installed and outer conductor crimped

VI ROHS Compliant.



Recommended cable stripping Dim's

|           |                              |                      |                   |                                   |               |             |        |
|-----------|------------------------------|----------------------|-------------------|-----------------------------------|---------------|-------------|--------|
| MATERIAL: | UNLESS OTHERWISE SPECIFIED   |                      | DFTM: K. A. M.    | TIMES MICROWAVE SYSTEMS           |               |             |        |
|           | ALL DIMENSIONS ARE IN INCHES |                      | DATE: 3/31/10     |                                   |               |             |        |
| USED ON:  | 0                            |                      | CHKD: J. D. B.    | 90° 7/16 MALE<br>FOR LMR400 CABLE |               |             |        |
|           |                              |                      | DATE: 5/17/10     |                                   |               |             |        |
| SCALE: ~  | DWG. SIZE: A                 | DO NOT SCALE DRAWING | CODE IDENT: 68999 | DATE: 5/17/10                     | SHEET: 1 of 1 | SD3190-2545 | REV: A |



## LMR-400-FR Fire Rated version of the 400 series Low Loss Coax

### RF Cables Technical Data Sheet



LMR-400-FR

## Times Microwave Systems Coax Cable Specification

### Configuration

- Low Loss, Outdoor Flexible Cable
- 2 Shield(s)

### Features

- CMR Riser Rated Coax
- Non-Halogen, Low Smoke FRPE Jacket
- Max Operating Frequency of 5.8 GHz
- Phase Velocity 84% VoP
- Max Operating Temperature +85°C
- Min Install Bend Radius of 1 inches

### Applications

- In-Building Riser Runs
- Short Antenna Installs
- RF Test Systems
- General Purpose RF Interconnect
- Laboratory Applications

### Description

LMR-400-FR Fire Rated version of the 400 series Low Loss Coax from Times Microwave is part of the large product offering by Pasternack of radio frequency coaxial cable types specifically stocked to be ready for same-day shipment. Pasternack LMR-400-FR coax cable is manufactured in a flexible design and has a 50 Ohm impedance. This low loss and CMR riser rated 50 Ohm coax cable LMR-400-FR is constructed with a 0.405 inch diameter and Black FRPE jacket.

LMR-400-FR flexible 50 Ohm coax cable with FRPE jacket is rated for a 5.8 GHz maximum operating frequency. This 50 Ohm 0.405 inch diameter and low loss fire rated coax cable is built with an aluminum double shield count and RF shielding of 90 dB. Times Microwave LMR-400-FR FRPE coax is constructed with Foam PE dielectric and a maximum operating temperature of 85 degrees C. Pasternack's offering of LMR-400-FR coax cable provides specs for this wire on its RF coax cable LMR-400-FR datasheet.

LMR-400-FR cable is part of more than one million RF, microwave parts in stock at Pasternack. This Times Microwave low loss flexible LMR-400-FR coax cable is ready to buy and can be shipped worldwide. Pasternack also maintains a wide selection of other radio frequency coaxial cable types that ship same-day from our warehouse as with the rest of our other RF/microwave components.

\* LMR™ is a trademark of Times Microwave Systems.

### Electrical Specifications

| Description                          | Minimum | Typical  | Maximum | Units      |
|--------------------------------------|---------|----------|---------|------------|
| Frequency Range                      | DC      |          | 5.8     | GHz        |
| Impedance                            |         | 50       |         | Ohms       |
| Velocity of Propagation              |         | 84       |         | %          |
| Time Delay                           |         | 1.2 3.94 |         | ns/ft ns/m |
| Shielding Effectiveness              | 90      |          |         | dB         |
| Dielectric Withstanding Voltage (DC) |         |          | 2,500   | Vdc        |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [LMR-400-FR Fire Rated version of the 400 series Low Loss Coax LMR-400-FR](#)



## LMR-400-FR Fire Rated version of the 400 series Low Loss Coax

### RF Cables Technical Data Sheet



LMR-400-FR

|                               |              |              |
|-------------------------------|--------------|--------------|
| Jacket Spark                  | 8,000        | Vrms         |
| Inner Conductor DC Resistance | 1.39         | Ohms/1000ft  |
| Outer Conductor DC Resistance | 1.65         | Ohms/1000ft  |
| Nominal Capacitance           | 23.9 [78.41] | pF/ft [pF/m] |
| Nominal Inductance            | 0.06 [0.2]   | uH/ft [uH/m] |
| Input Power (Peak)            | 16           | kWatts       |

#### Performance by Frequency Band

| Description           | F1    | F2    | F3    | F4   | F5   | Units    |
|-----------------------|-------|-------|-------|------|------|----------|
| Frequency             | 50    | 150   | 220   | 450  | 900  | MHz      |
| Attenuation, Typ      | 0.9   | 1.5   | 1.9   | 2.7  | 3.9  | dB/100ft |
|                       | 2.95  | 4.92  | 6.23  | 8.86 | 12.8 | dB/100m  |
| Input Power (CW), Max | 2,570 | 1,470 | 1,200 | 830  | 580  | Watts    |

| Description           | F6    | F7   | F8    | F9    | F10   | Units    |
|-----------------------|-------|------|-------|-------|-------|----------|
| Frequency             | 1.5   | 1.8  | 2     | 2.5   | 5.8   | GHz      |
| Attenuation, Typ      | 5.1   | 5.7  | 6     | 6.8   | 10.8  | dB/100ft |
|                       | 16.73 | 18.7 | 19.69 | 22.31 | 35.43 | dB/100m  |
| Input Power (CW), Max | 440   | 400  | 370   | 330   | 210   | Watts    |

#### Mechanical Specifications

|                                 |                         |
|---------------------------------|-------------------------|
| Diameter                        | 0.405 in 10.29 mm       |
| Weight                          | 0.068 lbs/ft [0.1 Kg/m] |
| Min. Bend Radius (Installation) | 1 in [25.4 mm]          |
| Min. Bend Radius (Repeated)     | 4 in [101.6 mm]         |
| Bending Moment                  | 0.5 lbs-ft [0.68 N-m]   |
| Tensile Strength                | 160 lbs [72.57 kg]      |
| Flat Plate Crush                | 40 lbs/in [0.71 Kg/mm]  |

#### Construction Specifications

| Description     | Material and Plating | Diameter           |
|-----------------|----------------------|--------------------|
| Inner Conductor | Copper, 1 Strand     | 0.108 in [2.74 mm] |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [LMR-400-FR Fire Rated version of the 400 series Low Loss Coax LMR-400-FR](#)



LMR-400-FR Fire Rated version of the 400 series Low Loss Coax

RF Cables  
Technical Data Sheet



LMR-400-FR

|                |               |                     |
|----------------|---------------|---------------------|
| Conductor Type | Solid         |                     |
| Dielectric     | Foam PE       | 0.285 in [7.24 mm]  |
| First Shield   | Aluminum Tape | [ ]                 |
| Second Shield  | Tinned Copper | [ ]                 |
| Jacket         | FRPE, Black   | 0.405 in [10.29 mm] |

**Environmental Specifications**

**Temperature**

|                    |                  |
|--------------------|------------------|
| Operating Range    | -40 to +85 deg C |
| Installation Range | -40 to +85 deg C |
| Storage Range      | -70 to +85 deg C |

**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

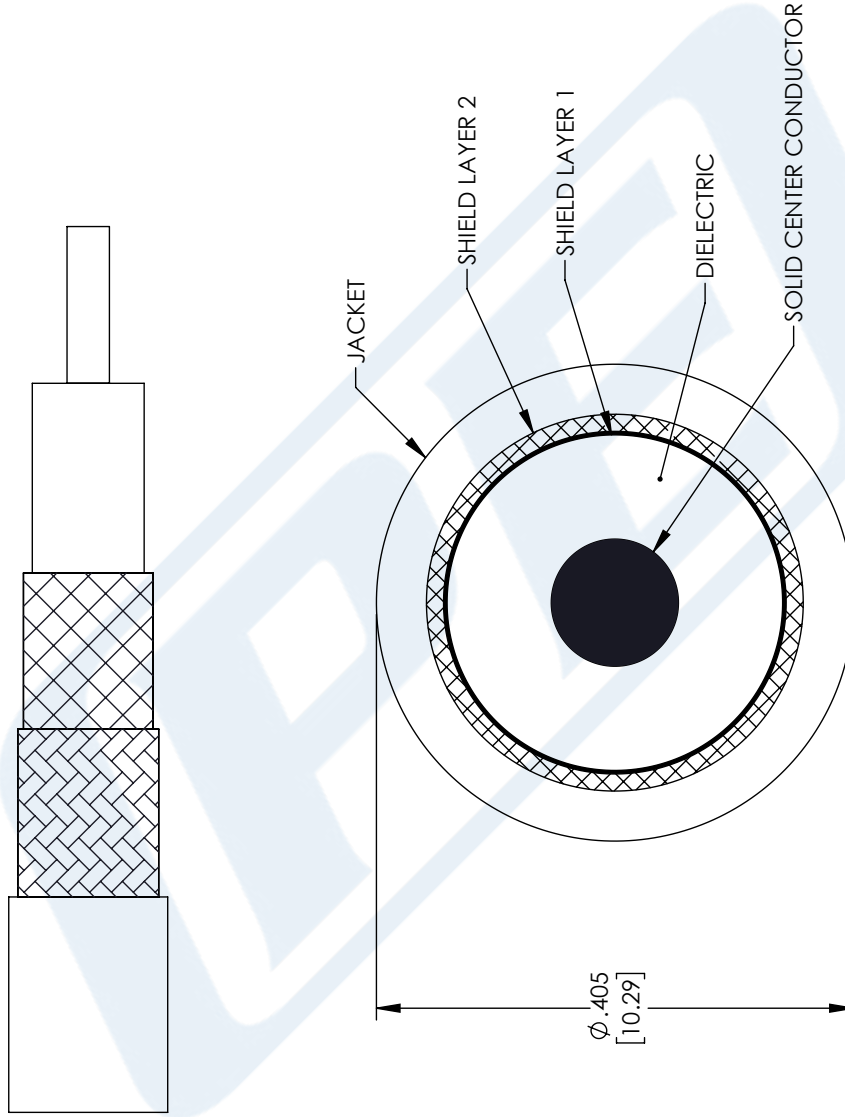
LMR-400-FR Fire Rated version of the 400 series Low Loss Coax from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [LMR-400-FR Fire Rated version of the 400 series Low Loss Coax LMR-400-FR](#)

URL: <https://www.pasternack.com/low-loss-flexible-lmr-400-fr-frpe-jacket-aluminum-tape-over-tinned-copper-outer-conductor-double-shielded-lmr-400-fr-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

| REVISIONS |                 |            |
|-----------|-----------------|------------|
| REV.      | DESCRIPTION     | DATE       |
| A         | INITIAL RELEASE | 06-04-2021 |
|           |                 | APPROVED   |
|           |                 | SELLIS     |



UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES:  
 .X = ±.2 [5.08] FRACTIONS ± 1/32  
 .XX = ±.02 [ .51] ANGLES ± 1°  
 .XXX = ±.005 [ .13]

CABLE LENGTH (L) TOLERANCES:  
 L ≤ 12 [305] = +1 [25] / -0  
 12 [305] < L ≤ 60 [1524] = +2 [51] / -0  
 60 [1524] < L ≤ 120 [3048] = +4 [102] / -0  
 120 [3048] < L ≤ 300 [7620] = +6 [152] / -0  
 300 [7620] < L = +5% / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

**PE PASTERNAK**  
 an INFINITI brand

Pasternack Enterprises, Inc.  
 P. O. Box 16759, Irvine, CA 92623.  
 Phone: 1.949.261.1920 | 1.866.727.8376  
 Fax: 1.949.261.7451  
 Website: www.pasternack.com  
 E-mail: sales@pasternack.com

SIZE [CAGE CODE] DRAWN BY ITEM NO.  
 A 53919 MVEERAPPAN LMR-400-FR

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

REV A

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