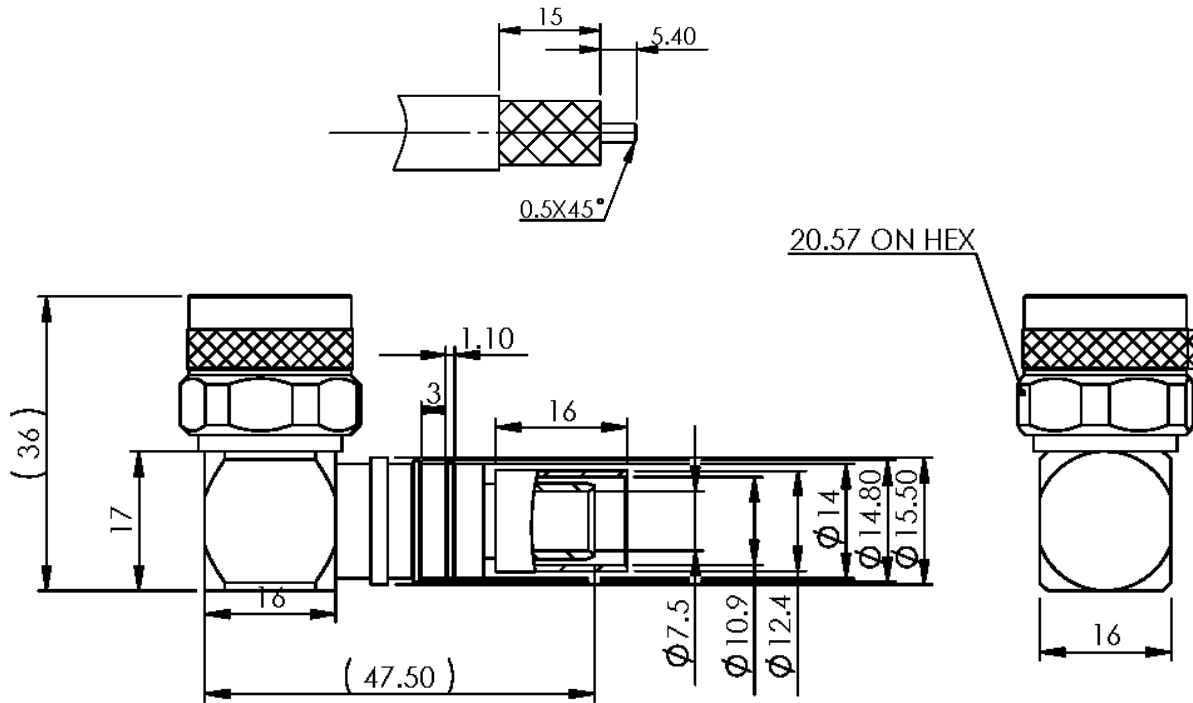


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| SYM | REVISION DESCRIPTION | DFTM | DATE | APPD | DATE |
|-----|-------------------------|--------|---------|--------|--------|
| A | RELEASED FOR PRODUCTION | K.A.M. | 5/19/11 | J.D.B. | 6/9/11 |



Reference standard IEC60169-16I, Electric Performance
 Nominal Impedance(Ω): 50
 Frequency Range: DC-6GHz
 VSWR: ≤ 1.35
 Insert Loss: ≤ 0.10 (0-3G)
 Insulation resistance ($M\Omega$): >5000
 Proof voltage (V): 2500
 Conductor resistance ($m\Omega$):
 outer conductor <0.4
 inner conductor <0.8

II、 Mechanical Performance

Whorl pull 500N
 Nut torque 5N.m
 Tensile force(cable-connect) 300N
 Torsion(cable-connect) 3N.m

III、 Material and plating :

| | | |
|-----------------|------------------|---------------------------|
| Component | Material | Plating |
| inner conductor | Beryllium copper | Au $>1.27\mu m$ |
| outer conductor | Brass | Copper-tin-zinc $>2\mu m$ |
| insulator | PTFE | |
| nut | Brass | Copper-tin-zinc $>2\mu m$ |

IV、 Environment

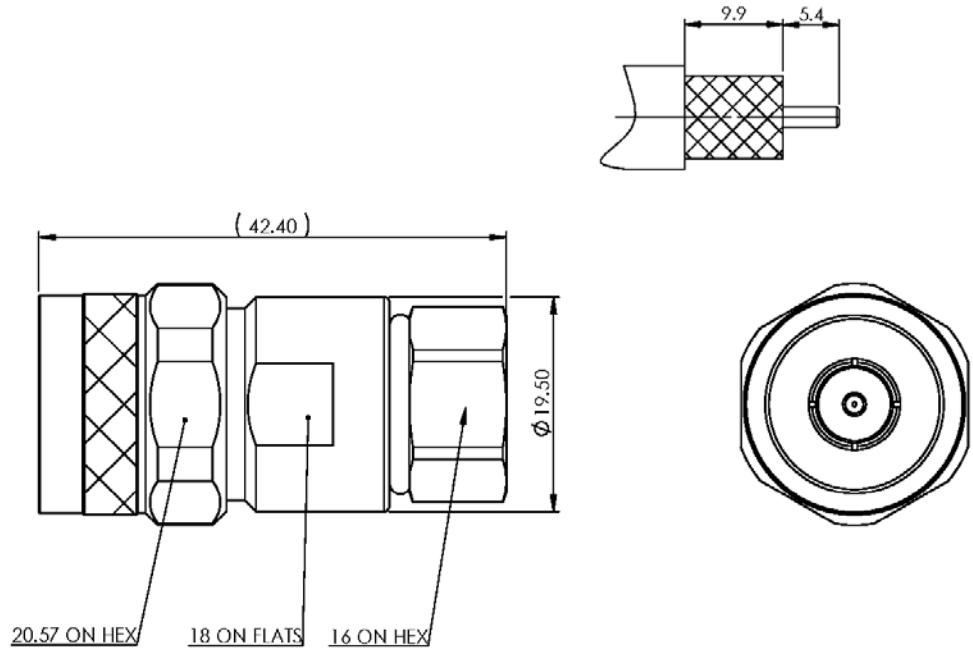
| | |
|------------------|--------------------------------|
| Temp.range | -55°C~+155°C |
| Weather standard | IEC 60068 55 / 155/ 56 |
| Thermal shock | US MIL-STD 202,Meth.107,Cond.B |
| Vibration | US MIL-STD 202,Meth.204,Cond.B |
| Shock | US MIL-STD 202,Meth.213,Cond.I |
| ROHS compliant | |

V、 Assemble: inner conductor installed and outer conductor crimped

| | | | | | | | |
|----------|----------------------------|----------------------|------------------|--|--------------|-------------|-------|
| MATL: | UNLESS OTHERWISE SPECIFIED | | DFTM. K. A. M. | TIMES MICROWAVE SYSTEMS | | | |
| | ALL DIMENSIONS ARE IN mm | | DATE 5/19/11 | | | | |
| USED ON: | | | CHKD. J. D. B. | CONNECTOR, 90° NM FOR LMR-400 (EZ-400-NMH-RA-X) | | | |
| | | | DATE 6/9/11 | | | | |
| SCALE: ~ | DWG. SIZE A | DO NOT SCALE DRAWING | CODE IDENT 68999 | DATE 6/9/11 | SHEET 1 of 1 | SD3190-2638 | REV A |
| | | | | | | | |

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| SYM | REVISION DESCRIPTION | DFTM | DATE | APPD | DATE |
|-----|-------------------------|--------|---------|--------|--------|
| A | RELEASED FOR PRODUCTION | K.A.M. | 5/20/11 | J.D.B. | 6/9/11 |



Reference standard IEC60169-16

I. Electric Performance

| | |
|-------------------------------------|--|
| Nominal Impedance(Ω): | 50 |
| Frequency Range: | DC-6GHz |
| VSWR: | ≤ 1.35 |
| Insert Loss: | ≤ 0.10 (0-3G) |
| Insulation resistance ($M\Omega$) | > 5000 |
| Proof voltage (V) | 2500 |
| Conductor resistance ($m\Omega$) | outer conductor < 0.4 inner conductor < 0.8 |

II. Mechanical Performance

| | |
|------------------------------|------|
| Whorl pull | 500N |
| Nut torque | 5N.m |
| Tensile force(cable-connect) | 400N |
| Torsion(cable-connect) | 2N.m |

III. Material and plating :

| Component | Material | Plating |
|-----------------|------------------|----------------------------|
| inner conductor | Beryllium copper | Au $> 1.27\mu m$ |
| outer conductor | Brass | Copper-tin-zinc $> 2\mu m$ |
| insulator | PTFE | |
| nut | Brass | Copper-tin-zinc $> 2\mu m$ |

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 |
| Waterproof standard | IP67 |
| ROHS compliant | |

| | | | | | | | |
|-----------|----------------------------|----------------------|-------------------|---|---------------|-------------|--------|
| MATERIAL: | UNLESS OTHERWISE SPECIFIED | | DFTM: K. A. M. | TIMES MICROWAVE SYSTEMS | | | |
| | ALL DIMENSIONS ARE IN mm | | DATE: 5/20/11 | | | | |
| USED ON: | | | CHKD: J. D. B. | CONNECTOR, NM FOR LMR-400 (EZ-400-NMC-2-D) | | | |
| | | | DATE: 6/9/11 | | | | |
| | | | APPD: J. D. B. | | | | |
| SCALE: ~ | DWG. SIZE: A | DO NOT SCALE DRAWING | CODE IDENT: 68999 | DATE: 6/9/11 | SHEET: 1 of 1 | SD3190-2640 | REV: A |



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

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:

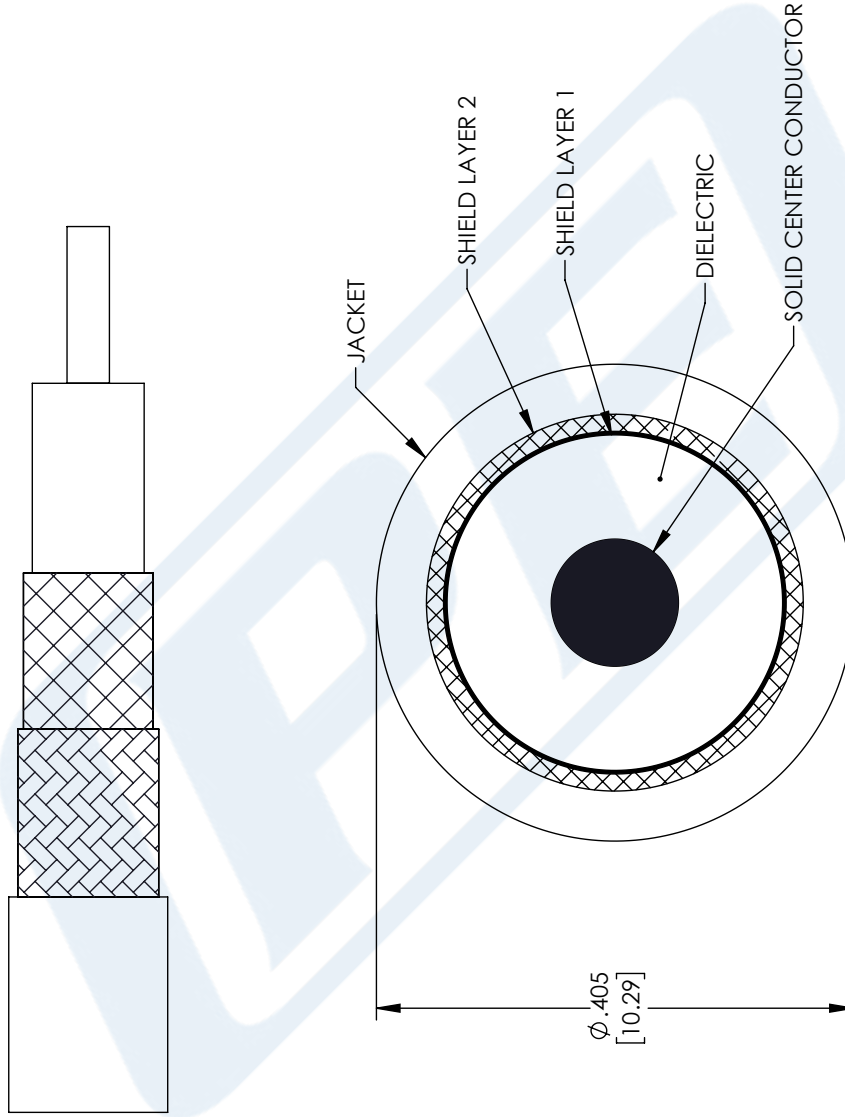
LMR-400-FR Fire Rated version of the 400 series Low Loss Coax from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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.

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

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1
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