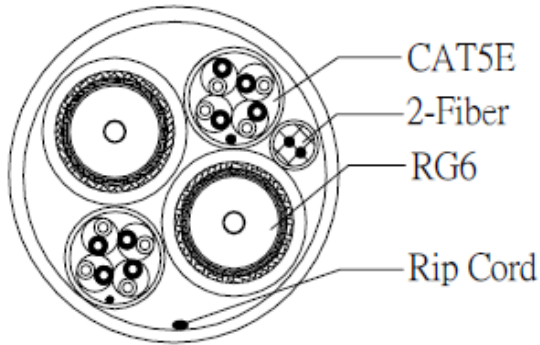


(2) Cat 5E + (2) RG6 Quad + (2) Fiber Composite Cable



Electrical Performance

CAT5E UTP LAN CABLE	For details, please see Attachment 1
RG6 Quad Shield Coaxial Cable	For details, please see Attachment 2
Fiber Interconnect Cables	For details, please see Attachment 3

Description

Two 4 Pair Cat5E UTP Cable
Complies to TIA 568-C.2
24 Awg Solid Bare Copper Conductor / PE Insulation

Two RG6 Quad Shield Coaxial Cable
Complies to SCTE ISP-IP-001
18 Awg Copper Clad Steel (CCS)
Al foil / 60% Al-Mg alloy Braid Shield +
Al foil / 40% Al-Mg alloy Braid Shield

One 2-Fiber Interconnect Cable
FDDI-Grade Fiber 62.5/125 UM

Applicable Standards

Multi-media Cables for Smart Home

Reference Standard
SCTE IPS-SP-001, TIA-568-C.2

Physical Characteristics

CAT5E TUP LAN CABLE	For details, please see Attachment 1
RG6 Quad Shield Coaxial Cable	For details, please see Attachment 2
Fiber Interconnect Cables	For details, please see Attachment 3
Nominal Weight	110 lbs.

Cable Marking

TYPE CMR OF 2 x RG6 QUAD 18AWG + 2 x CAT5E 350 & 62.5 UM MULTIMODE FIBER 75C VERIFIED TO XXXXXX C(ETL)US
****FT

Electrical Characteristics

CAT5E UTP LAN CABLE	For details, please see Attachment 1
RG6 Quad Shield Coaxial Cable	For details, please see Attachment 2
Fiber Interconnect Cables	For details, please see Attachment 3

Mechanical Characteristics

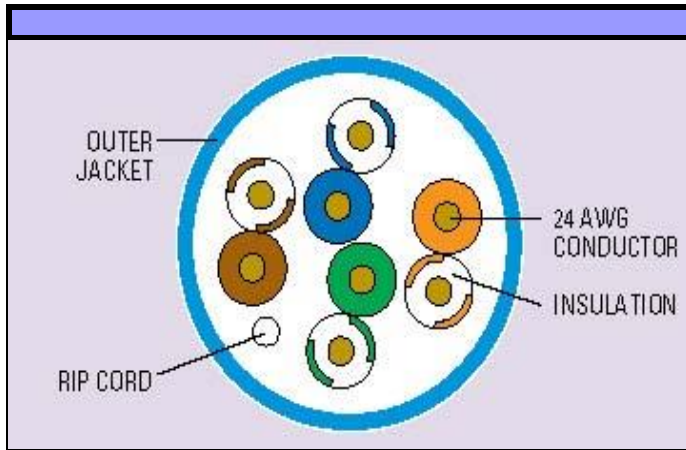
Test Object		Outer Jacket	
	Test Material	PVC	
Before	Tensile Strength (Mpa)	>=1.034	
Aging	Elongation (%)	>=200	
	Aging Condition (°C x hrs)	113.0 ± 1.0 x 168	
After	Tensile Strength (Mpa)	>=85% unaged	
Aging	Elongation (%)	>=50% unaged	
	Cold Bend (-20 ± 2°C x 4 hrs)	No crack	
	Average Thickness (inches)	0.0334	
	Min. Point Thickness (inches)	0.0299	
	Outer Diameter (inches)	0.6889	
	Rip Cord	Yes	

Jacket Colors

Overall Jacket	Yellow
Category 5E	Blue and Grey
RG6 Quad	White and Black
Fiber Cable	Orange

Part Numbers

Part Number	Color	Put-up
	Yellow	500' Reel



Description

24 AWG Cat5E CMR, High-Performance Data Cable

Applicable Standards

- ETL Listed Type CMR
- C(ETL) listed CMG FT4
- ETL Verified to TIA - 568-C.2, and ISO/IEC 11801
- ROHS Compliant
- ATM 155 Mbps
- Ethernet 10BASE-T, 100BASE-TX, 100BASE-VG, 100BASE-T4,
- 1000 Mbps 1000BASE-T Gigabit Ethernet™ (IEEE 802.3)
- 16 Mbps Token Ring™ (IEEE 802.5)

Physical Characteristics

Number of Conductor Pairs	4
Size	24 AWG
Stranding	Solid
Conductor Material	Solid Annealed Bare Copper
Shield Material	Unshielded
Rip Cord	Yes
Insulation Material	Polyethylene
Insulation Overall Diameter	0.035 in. ± 0.0002 in.
Insulation Average Thickness	0.0081 in.
Jacket	Flame Retardant PVC
Outer Jacket Average Wall Thickness	0.023 in.
Outer Jacket Nominal O.D.	0.200 in. ± 0.008 in.

Mechanical Characteristics

Temperature Rating	Installation	0 to + 60°C
	Operating	-20°C to + 75°C
Tensile Strength	Before	> = 13.8 Mpa
	Aging	> = 100%
Aging Condition		100°C x 240 hours
	After Aging	> = 85% of unaged > = 50% of unaged

Color Code

Pair 1	White / Blue	Blue
Pair 2	White / Orange	Orange
Pair 3	White / Green	Green
Pair 4	White / Brown	Brown

Electrical Performance

Frequency (MHz)	Attenuation (dB/100m)		Return loss (dB)		NEXT (dB)		PS-NEXT (dB)	
	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
	0.772	1.8	1.5	23.0	33.0	72.0	81.1	70.0
1	2.0	1.8	23.0	38.6	70.3	79.4	68.3	76.9
4	4.1	3.6	23.0	39.8	61.2	69.9	59.3	67.4
8	5.8	5.1	24.5	38.2	56.8	61.9	54.8	59.4
10	6.5	5.8	25.0	38.0	55.3	62.4	53.5	59.9
16	8.2	7.4	25.0	37.4	52.3	57.8	50.3	55.2
20	9.3	8.2	25.0	36.8	50.8	56.4	48.8	53.8
25	10.4	9.3	24.3	35.2	49.3	56.3	47.3	53.6
31.25	11.7	10.5	23.6	33.3	47.9	53.8	45.9	51.1
62.5	17.0	14.9	21.5	32.2	43.4	49.8	41.4	47.4
100	22.0	19.2	20.1	31.3	40.3	47.5	38.3	45.0
155	28.1	24.2	18.8	29.8	37.4	45.1	35.4	42.6
200	32.4	27.3	18.0	28.5	35.7	43.3	33.7	40.2
250	38.9	30.9	17.5	27.3	34.8	41.4	32.5	39.0
300	41.0	34.1	16.8	25.6	33.1	40.2	31.1	37.7
350	44.9	37.8	16.3	23.2	32.1	39.0	30.1	36.5

Electrical Characteristics

Frequency (MHz)	ELFEXT (dB)		PS-ELFEXT (dB)		ACR (dB)		PS-ACR (dB)	
	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
0.772	66.0	73.3	63.0	72.7	70.2	79.2	68.2	77.0
1	63.8	71.3	60.8	70.6	68.2	77.6	66.3	75.0
4	51.7	59.4	48.7	58.7	57.2	66.3	55.2	63.5
8	45.7	53.2	42.7	51.1	51.0	59.8	49.0	56.9
10	43.8	50.5	40.8	49.7	48.8	56.6	47.0	53.7
16	39.7	47.0	36.7	45.1	43.0	53.0	42.1	47.4
20	39.7	45.0	34.7	43.6	41.5	50.5	39.5	45.0
25	35.8	43.3	32.8	42.0	38.9	47.0	36.9	43.7
31.25	33.9	41.3	30.9	40.5	36.5	43.3	34.2	40.0
62.5	27.8	35.8	24.8	34.5	26.4	35.0	24.4	31.2
100	23.8	31.3	20.8	30.3	18.3	26.2	16.3	24.2
155	19.9	27.5	16.9	26.9	10.0	20.9	7.3	15.9
200	17.7	24.7	14.7	24.5	5.0	16.0	2.0	10.0
250	17.1	22.2	14.0	22.5	0.0	10.6	-	4.0
300	16.7	20.5	13.5	20.7	-	6.1	-	-1.3
350	16.0	19.4	12.8	19.6	-	1.2	-	-6.4

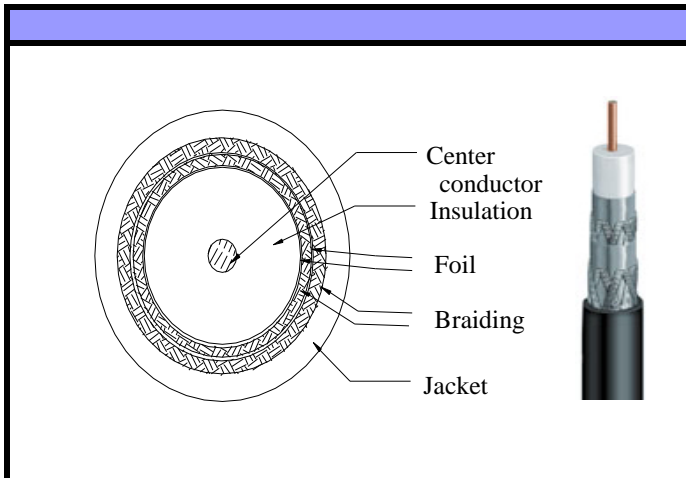
* Values above 100MHz are information only

Electrical Characteristics

Maximum Conductor DC Resistance @ 20°C	9.38 Ω / 100 Meters
Maximum DC Resistance Unbalanced @ 20°C	5%
Maximum Pair-to-Pair Ground Capacitance Unbalanced	330 pF / 100 Meters
Characteristic Impedance (1 ~ 350 MHz)	100 ± 15 Ω
Mutual Capacitance	5.6 nF / 100 Meters
Maximum Delay Skew	40 nS / 100 Meters

Cable Marking

CATEGORY 5E 350MHZ 24AWG 4 PR UTP CMR C(ETL)US XXXXXX ETL LISTED & VERIFIED TO TIA/EIA - 568C.2 ****FT



Electrical Performance			
Frequency (MHz)	Attenuation (dB/100m)	Frequency (MHz)	Attenuation (dB/100m)
1	0.89	1000	22.00
10	2.90	1200	24.60
50	5.25	1450	27.20
100	7.20	1800	30.50
200	9.84	2200	32.80
400	14.10	2400	32.83
700	19.00	3000	37.88
900	21.00		

Description

RG-6/U QUAD CATV 75 Ω Coaxial Cable

Applicable Standards

Reference Standard

SCTE IPS-SP-001
UL 1655, UL 13, UL 444, ROHS

Physical Characteristics

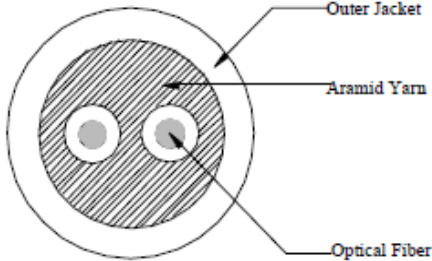
Conductor		C.C.S.
AWG		18
Diameter	(inches)	0.04
Insulation		Skin Foamed PE
Nom. Thickness	(inches)	0.073
Insulation Diameter	(inches)	0.186
First Braid Shield		Aluminum
Coverage Area	(%)	60
Second Braid Shield		Aluminum
Coverage Area	(%)	40
Jacket		FR-PVC
Cable Diameter	(inches)	0.2968
Nom. Thickness	(inches)	0.0255

Cable Marking

RG6/U QUAD SHIELD 18AWG CMR VERIFIED TO C(ETL)US
4003289 CATV SWEPT TO 3.0 GHZ ****FT

Electrical Characteristics

Temperature Rating	(°C)	-20 to 60
Impedence	(± 3.0 Ohms)	75
Capacitance	(pF/ft)	15.5
Conductor DCR@20° C	(ohms/1000ft)	28.6
Velocity of Propagation	(%)	84
ROHS Compliant		Yes



Description

PVC Tight Buffered Optical Fiber, Riser type PVC Jacket
Meets NEC riser (OFNR) safety standards
Intrabuilding backbones & horizontal installations in riser and general purpose environments.

Applicable Standards

UL 1651, UL 1666, TIA/EIA-568-B.3 & BELLCORE GR-409

Construction

Geometrical Characteristics:
 2 Cores Ultra pure Silica Glass
 Core Diameter (±3 μ m) 62.5
 Clad Diameter (±2 μ m) 125
 Cladding Non-Circularity (%) < 2.0
 Core/Clad Concentricity Error (μ m) < = 3.0

Primary Coating Material UV Curable Acrylate
 Primary Coating Dia. (±5 μ m) 245

Secondary Buffer Material PVC
 Secondary Buffer Dia. (±0.05 mm) 0.9

Strength Member Aramid Yara

Jacket PVC
 Nom. Thickness (mm) 0.70
 Min. Thickness (mm) 0.53
Cable Dia. (±0.15 mm) 3.80

Performance

Optical Characteristics:

Numerical Aperture	(± 0.015)		
Wavelength	(nm)	At 850nm	At 1300nm
Max. Attenuation	(db/KM)	< = 3.5	< = 1.5
Min. Modal Bandwidth	(MHz KM)	> = 200	> = 500

Mechanical Characteristics

Low and High Temperature Cable Bend		Mandrel Size of 50mm	
Max. Tensile Load	(N)	Short Term	700
		Long Term	450
Jacket Tensile Strength	(Mpa)	13.8	
Aging Conditions	(°C x Hours)	110 ± 2°C x 168 H	
Elongation at Break	Before Aging	> = 166	
	After Aging	> = 100	
Cable Aging	(°C x Hours)	85 ± 2°C x 168 H	
Min. Bending Radium	(mm)	Short Term	45
		Long Term	50

Cable Marking

OFNR DUPLEX 62.5/125 75C VERIFIED TO C(ETL)US XXXXXX MULTIMODE OPTICAL CABLE **FT**