

# SPECIFICATIONS

- DESCRIPTION:** CATEGORY 6A CABLE, CONSISTING OF 4 PAIRS, 23 AWG, UNSHIELDED WITH A PVC JACKET. CMR, c(UL)us TYPE FT4 PER UL 444. PACKAGING TYPE: REEL
  - CONDUCTOR:** 23 AWG SOLID BARE COPPER (.0241" NOM OD) INSULATION: POLYOLEFIN .041" - .046" NOM OD, .0107" AVG WALL
  - PAIRING:** COMPONENTS ARE TWISTED INTO PAIRS WITH VARYING LEFT HAND LAYS TO MINIMIZE CROSSTALK.
- | PAIR # | COLOR               |
|--------|---------------------|
| 1      | WHT PAIRED WITH BLU |
| 2      | WHT PAIRED WITH ORG |
| 3      | WHT PAIRED WITH GRN |
| 4      | WHT PAIRED WITH BRN |
- CABLING:** THE FOUR (4) TWISTED PAIRS ARE CABLED AROUND A TAPE BISECTOR WITH A LEFT HAND LAY.
  - OVERALL JACKET:** PVC LF SEE COLOR TABLE FOR CABLE COLOR .315" NOM OD .058" AVG WALL
  - MARKING:** OCC (WWW.OCCFIBER.COM) P/N OCC-U6A4R --- ETL VERIFIED CATEGORY 6A 4 PR 23 AWG CMR C(US)US OCCV E322888 MADE IN USA MYLLDDS XXXX FT

WHERE: MYLLDDS = TRACEABILITY CODE  
XXXX FT = SEQUENTIAL FOOTAGE MARKINGS

- AGENCY APPROVAL:** UNDERWRITERS LABORATORIES, INC. TYPE CMR, COMMUNICATIONS RISER CABLE, LISTED AS BEING SUITABLE FOR USE IN VERTICAL RUN IN A SHAFT, OR FROM FLOOR TO FLOOR PER UL 444. ALSO LISTED AS HAVING FIRE-RESISTANT CHARACTERISTICS CAPABLE OF PREVENTING THE CARRYING OF FIRE FROM FLOOR TO FLOOR, IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE.

### 8. TYPICAL CATEGORY 6A ELECTRICAL CHARACTERISTICS\*:

CHARACTERISTIC IMPEDANCE: 100 ± 15 Ω  
 MAXIMUM CONDUCTOR RESISTANCE: 7.61 Ω/100 METERS @ 20°C  
 MAXIMUM RESISTANCE UNBALANCED: 4%  
 MAXIMUM MUTUAL CAPACITANCE: 6 nF/100 METERS @ 1kHz  
 NOMINAL VELOCITY OF PROPAGATION: 65%  
 INSTALLATION TEMPERATURE RANGE: 0°C +60°C  
 OPERATING TEMPERATURE RANGE: -20°C +60°C

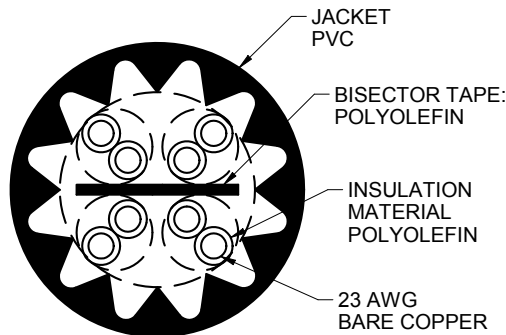
\* DISCRETE VALUES ARE FOR INFORMATION ONLY. EQUATIONS FOR SWEEPED FREQUENCIES GOVERN LIMITS. VERIFIED TO MEET CAT 6A TIA 568-C.2 PERFORMANCE REQUIREMENTS PER THE VERIFICATION REQUIREMENTS DEFINED IN CABLE MANUFACTURERS UL/ETL FILE.

- PRODUCT APPROVAL REQUIRES CERTIFICATION OF COMPLIANCE TO E.U. RoHS DIRECTIVE 2002/95/EC.

# ELECTRICAL PERFORMANCE

Frequency (MHz.)	Insertion Loss max dB/100 meters	NEXT Loss Min. (dB)	ACR Min. (dB)	PSACR Min. (dB)	PSNEXT Loss Min. (dB)	ACR-F Min. (dB)	PSACRF Min. (dB)	Return Loss Min. (dB)	Propagation Delay Max. (ns)	Delay Skew Max. (ns)	*TCL Min. (dB)	*ELTCL Min. (dB)	PSANEXT Loss Min. (dB)	PSAACRF Loss Min. (dB)
1	2.1	74.3	72.2	70.2	72.3	67.8	64.8	20	570	45	40.0	35	67	67
4	3.8	65.3	61.5	59.5	63.3	55.8	52.8	23	552	45	40.0	23	67	66.2
8	5.3	60.8	55.5	53.5	58.8	49.7	46.7	24.5	547	45	40.0	16.9	67	60.1
10	5.9	59.3	53.4	51.4	57.3	47.8	44.8	25	545	45	40.0	15	67	58.2
16	7.5	56.2	48.7	46.7	54.2	43.7	40.7	25	543	45	38.0	10.9	67	54.1
20	8.4	54.8	46.4	44.4	52.8	41.8	38.8	25	542	45	37.0	9	67	52.2
25	9.4	53.3	43.9	41.9	51.3	39.8	36.8	24.3	541	45	36.0	7	67	50.2
31.25	10.5	51.9	41.4	39.4	49.9	37.9	34.9	23.6	540	45	35.1	5.5	67	48.3
62.5	15.0	47.4	32.4	30.4	45.4	31.9	28.9	21.5	539	45	32.0	-	65.6	42.3
100	19.1	44.3	25.2	23.2	42.3	27.8	24.8	20.1	538	45	30.0	-	62.5	38.2
200	27.6	39.8	12.2	10.2	37.8	21.8	18.8	18	537	45	27.0	-	58	32.2
250	31.1	38.3	7.2	5.2	36.3	19.8	16.8	17.3	536	45	26.0	-	56.5	30.2
300	34.3	37.1	2.8	0.8	35.1	18.3	15.3	16.8	536	45	25.2	-	55.3	28.7
400	40.1	35.3	-	-	33.3	15.8	12.8	15.9	536	45	24.0	-	53.5	26.2
500	45.3	33.8	-	-	31.8	13.8	10.8	15.2	536	45	23.0	-	52	24.2

"OPTICAL CABLE CORPORATION (OCC) RESERVES THE RIGHT TO REVISE ANY AND ALL DESIGN SPECIFICATIONS."  
**UNCONTROLLED COPY**



OCC-U6A4R-09	ORANGE
OCC-U6A4R-08	VIOLET
OCC-U6A4R-07	WHITE
OCC-U6A4R-06	GRAY
OCC-U6A4R-05	BLUE
OCC-U6A4R-04	GREEN
OCC-U6A4R-03	RED
OCC-U6A4R-02	BLACK
OCC-U6A4R-01	YELLOW
OCC PART NUMBER	JACKET COLOR
CABLE COLOR TABLE	

<p>THIRD ANGLE PROJECTION</p>	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES: FRACTIONS ±1/32" ANGLES ±1/2" 3 PLACE DECIMALS ±.005" 2 PLACE DECIMALS ±.01"	THIS DRAWING AND THE DESIGN SHOWN ARE THE PROPERTY OF OPTICAL CABLE CORPORATION AND MAY NOT BE USED AS THE BASIS FOR MANUFACTURE OR SALE WITHOUT SPECIFIC WRITTEN PERMISSION OF OPTICAL CABLE CORPORATION.		<p><b>OPTICAL CABLE CORPORATION</b></p> 33 Superior Way Swannanoa, NC 28778 Phone: 828-298-2260 Fax: 828-298-2487 www.occfiber.com
	MATERIAL SEE NOTES AND TABLES	DRAWN D.A.HOLBERT DATE 9/15/08	CHECKED J.HOWE DATE 11/14/08	
CRITICAL DIMENSION CODE (F)= FUNCTION (M)= MATING (A)= AUDIT	FINISH SEE NOTES AND TABLES	ENGINEER J.YANIK DATE 9/15/08	APPROVED J.CALLOWAY DATE 12/11/20	SIZE B DWG NO. <b>C109151</b> REV E
		PREVIOUS DWG	NEXT DWG	FILENAME C109151E.dft SCALE: NONE SHEET 1 OF 1

**PROPRIETARY AND CONFIDENTIAL**