

"OPTICAL CABLE CORPORATION (OCC)
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SPECIFICATIONS

1. **DESCRIPTION:** CATEGORY 6A CABLE, CONSISTING OF 4 PAIRS, 23 AWG, UNSHIELDED WITH A PVC JACKET. CMP, c(UL)us TYPE FT6 PER UL 444.
2. **CONDUCTOR:** 23 AWG SOLID BARE COPPER (.0241" NOM OD) INSULATION: FEP .044" NOM OD, .0094" AVG WALL
3. **PAIRING:** COMPONENTS ARE TWISTED INTO PAIRS WITH VARYING LEFT HAND LAYS TO MINIMIZE CROSSTALK.
- | PAIR # | COLOR |
|--------|-------------------------|
| 1 | BLU PAIRED WITH WHT/BLU |
| 2 | ORG PAIRED WITH WHT/ORG |
| 3 | GRN PAIRED WITH WHT/GRN |
| 4 | BRN PAIRED WITH WHT/BRN |
4. **CABLING:** THE FOUR (4) TWISTED PAIRS ARE CABLED AROUND A FEP ISOLATOR WITH A LEFT HAND LAY. TAPE: POLY/ALUMINUM/POLY
5. **OVERALL JACKET:** PVC, SEE COLOR TABLE FOR CABLE COLOR .265" NOM OD
6. **MARKING:** OCC (WWW.OCCFIBER.COM) P/N OCC-U6A4SPLM --- ETL VERIFIED CATEGORY 6A 4 PR 23 AWG CMP C(UL)US 105C OCCV E322888 MADE IN USA MYLLDDS XXXXX FT

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

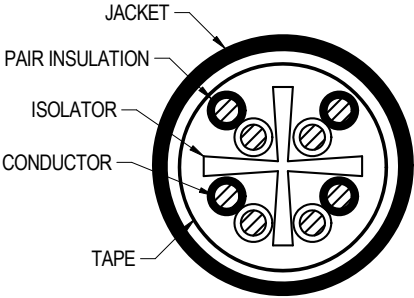
7. **AGENCY APPROVAL:** UNDERWRITERS LABORATORIES, INC. TYPE CMP, COMMUNICATIONS PLENUM CABLE, LISTED AS BEING SUITABLE FOR USE IN DUCTS, PLENUMS, AND OTHER SPACES USED FOR ENVIRONMENTAL AIR PER UL 444. ALSO LISTED AS HAVING ADEQUATE FIRE-RESISTANT AND LOW SMOKE-PRODUCING CHARACTERISTICS, IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE.
8. **TYPICAL CATEGORY 6A ELECTRICAL CHARACTERISTICS*:**
- | | |
|----------------------------------|----------------------------|
| CHARACTERISTIC IMPEDANCE: | 100 ± 15 Ω (1 TO 500 MHz.) |
| MAXIMUM CONDUCTOR RESISTANCE: | 8 Ω/100 METERS @ 20°C |
| MAXIMUM RESISTANCE UNBALANCED: | 4% |
| MAXIMUM MUTUAL CAPACITANCE: | 5.6 nF/100 METERS @ 1kHz. |
| NOMINAL VELOCITY OF PROPAGATION: | 70% |
| DIELECTRIC STRENGTH: | 1500 Vac 2500 Vdc |
| LP (LIMITED POWER) RATING: | 0.7 A (PER CONDUCTOR) |
| OPERATING FREQUENCY: | 500 MHZ MAX |
| OPERATING VOLTAGE: | 80 V |

* DISCRETE VALUES ARE FOR INFORMATION ONLY. EQUATIONS FOR SWEPT FREQUENCIES GOVERN LIMITS. VERIFIED TO MEET CAT 6A TIA-568.2 PERFORMANCE REQUIREMENTS DEFINED IN THE MANUFACTURERS UL/ETL FILE(S).

9. **ENVIRONMENTAL SPECIFICATIONS:**
- | | |
|---------------------------|---------------------------------|
| INSTALLATION TEMPERATURE: | 0°C TO +60°C (+32°F TO +140°F) |
| OPERATING TEMPERATURE: | -20°C TO +75°C (-4°F TO +167°F) |
10. CABLE COMPLIES 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)	*ELTCTL 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



CABLE COLOR TABLE

OCC-U6A4SPLM-09	ORANGE
OCC-U6A4SPLM-08	VIOLET
OCC-U6A4SPLM-07	WHITE
OCC-U6A4SPLM-06	GRAY
OCC-U6A4SPLM-05	BLUE
OCC-U6A4SPLM-04	GREEN
OCC-U6A4SPLM-03	RED
OCC-U6A4SPLM-02	BLACK
OCC-U6A4SPLM-01	YELLOW
OCC PART NUMBER	JACKET COLOR

THIRD ANGLE PROJECTION

CRITICAL DIMENSION CODE
(F) = FUNCTION
(M) = MATING
(A) = AUDIT

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.	
	DRAWN D.A.HOLBERT	DATE 5/27/22
MATERIAL SEE NOTES AND TABLES	CHECKED D.Stikeleather	DATE 6/1/22
	ENGINEER J.YANIK	DATE 5/27/22
FINISH SEE NOTES AND TABLES	APPROVED J.CALLOWAY	DATE 6/2/22
	PREVIOUS DWG	
	NEXT DWG	FILENAME C113770A.dft



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DWG TITLE CABLE, CAT6A, 23AWG, 4PR, UNSHIELDED, PLENUM, CMP		
SIZE B	DWG NO. C113770	REV A
SCALE: NONE	SHEET 1 OF 1	

PROPRIETARY AND CONFIDENTIAL