

# Elite Cables

## Specification for Approval

### Product Part Number

- TFR2204Z##

### Product Description

- S/FTP, 22AWG solid bare copper, CAT 8, CMR
- Each pair twist with metal foil screen
- With braid wire

### Product Features

- High performance of transmission.
- High quality of safety property.
- Sweep frequency up to 2000 MHz.

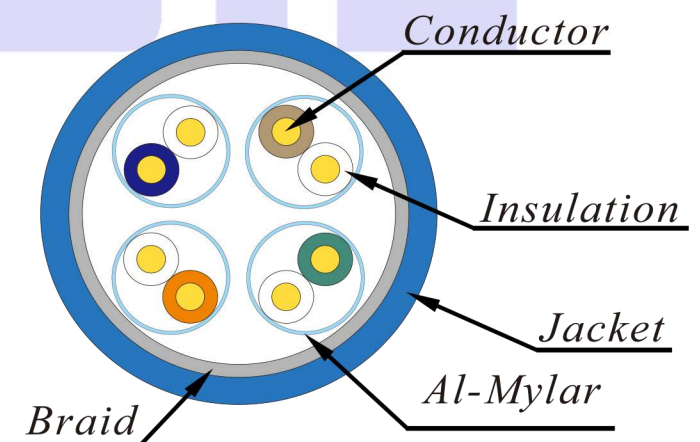
### Application

- Transmission of digital and analogue for data, video, voice and audio applications.
- Metal shielded and braided providing good protection from EMI noise.
- Beyond IEEE Std 802.3bq-2016 25G/40GBASE-T and legacy speeds.
- Top-of-Rack (ToR), End-of-Row (EoR), Middle-of Row (MoR) and for data center cabling.
- CDDI / ATM / Token Ring
- IEEE 802.3af (PoE) / IEEE 802.3at (PoE+)

### Applicable Standard

- Electrical Transmission
  - IEC 61156-9 Category 8.2
  - ISO/IEC 11801 (Edition 2.2)
- Flame Test
  - UL 1666 (CMR)
- Material and Construction
  - UL 444
  - CSA 22.2 NO.214
- EU Directive 2011/65/EU (RoHS2)
- EU Directive 2006/95/EC (LVD)

### Sectional Drawing



All Material According To SS-00259

Establish Date	2009.08.19	Edition	1.3	Revised Date	2020.01.20
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### Material and Construction

Conductor	Material	22AWG solid bare copper	
Insulation	Material	Foam Polyolefin (PO)	
	Color code & diameter	Blue & white	1.58± 0.02 mm
		Orange & white	1.58± 0.02 mm
		Green & white	1.58± 0.02 mm
	Brown & white	1.58± 0.02 mm	
Twisted	Description	Left hand direction	
Pair shield	Material	Al Mylar tape	
	Description	100 % coverage and aluminum side facing out	
Assembly	Description	Left hand direction	
Braid	Material	Tinned copper	
	Description	> 40 % coverage	
Jacket	Material	Low smoke flame retardant polyvinyl chloride (LSFRPVC)	
	Diameter	8.6± 0.2 mm	
	Thickness	0.50 ± 0.05 mm	
	Color	Per customer's request	
Marking	<p>ELITE 40GS CAT 8---E142890 S/FTP 22AWG 4PR 75C C(UL)US CMR---ETL            VERIFIED IEC61156-9 &amp; TIA-568.2-D mmyy<sup>1</sup> XXXXM</p> <p>Note 1: mmyy is date code.</p>		

### Usage & Environmental Condition

Temperature range	Storage & shipping	-20°C to 75°C
	Installation	0°C to 60°C
	Operation	-20°C to 60°C
Minimum bending radius	≥ 4 times of overall diameter	
Maximum pulling tension	≤ 110 N	

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### Physical & Electrical Characteristics (at 20°C)

Temperature rating	75°C
Spark test	2.5 KV DC
AC leakage current through overall jacket	≤ 10mA (1.5KV AC)
Cable cold bend	-20°C for 4 hr
Conductor DC resistance	≤ 2.1 Ω/30m
Resistance unbalance (Within a pair)	≤ 2%
Dielectric strength	1.7 KV ac for 2 s
Insulation resistance	≥ 5000 MΩ · km
Mutual capacitance	not specified
Capacitance unbalance pair-to-ground	≤ 36 pF/30m

### Transmission Performance (at 20°C)

Frequency (MHz)	IL	NEXT	PS.NEXT	ACRF	PS.ACRF	RL	Propagation Delay	Delay Skew	PS. ANEXT	PS. AACRF
	Max. dB/30m	Min. dB/30m	Min. dB/30m	Min. dB/30m	Min. dB/30m	Min. dB/30m	Max. ns/30m	Max. ns/30m	Min. dB/30m	Min. dB/30m
4	1.12	78	75	78	75	23.0	165.6	7.5	80.0	80.0
8	1.57	78	75	78	75	24.5	164.0		80.0	80.0
10	1.75	78	75	78	75	25.0	163.6		80.0	80.0
16	2.20	78	75	76.5	73.5	25.0	162.9		80.0	78.1
20	2.46	78	75	74.6	71.6	25.0	162.6		80.0	76.2
25	2.75	78	75	72.6	69.6	25.0	162.4		80.0	74.2
31.25	3.08	78	75	70.7	67.7	25.0	162.1		80.0	72.3
62.5	4.37	78	75	64.7	61.7	23.6	161.6		80.0	66.3
100	5.56	75.4	72.4	60.6	57.6	22.2	161.3		80.0	62.2
200	7.94	70.9	67.9	54.6	51.6	20.1	161.0		80.0	56.2
250	8.92	69.4	66.4	52.6	49.6	19.4	160.9		80.0	54.2
300	9.81	68.2	65.2	51.1	48.1	18.9	160.8		80.0	52.7
400	11.40	66.4	63.4	48.6	45.6	18.0	160.7		78.5	50.2
500	12.83	64.9	61.9	46.6	43.6	17.3	160.7		77.0	48.2
600	14.13	63.7	60.7	45.0	42.0	16.8	160.6		75.8	46.6
1000	18.56	60.4	57.4	40.6	37.6	15.2	160.5		72.5	42.2
1500	23.17	57.8	54.8	37.1	34.1	14.0	160.5	69.9	38.7	
2000	27.15	55.9	52.9	34.6	31.6	13.1	160.4	68.0	36.2	