



**Product:** [2139A](#)

Category 5e Indoor/Outdoor OSP/CM-LS LSZH 25pr Corrugated Shield

**Product Description**

CAT5e (100MHz), 25-Pair, Unshielded Pairs, Rated-CM-LS, Indoor/ Outdoor Premise Backbone Cable, 24 AWG solid bare copper conductors, Polyolefin insulation, Polymer Gel Waterblocked, Polyolefin Inner Jacket, Corrugated Aluminum Tape, FR Polyolefin Outer Jacket

**Technical Specifications**

**Product Overview**

Suitable Applications:	OSP-Outdoor, Indoor/Outdoor, Premise Backbone Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments
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**Physical Characteristics (Overall)**

**Conductor**

AWG	Stranding	Material	No. of Pairs
24	Solid	BC - Bare Copper	25

Conductor Count:	50
Total Number of Pairs:	25

**Insulation**

Material
PO - Polyolefin

Bonded-Pair:	N/A
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**Color Chart**

Number	Color
1	Black & Blue
2	Black & Orange
3	Black & Green
4	Black & Brown
5	Black & Gray
6	Yellow & Blue
7	Yellow & Orange
8	Yellow & Green
9	Yellow & Brown
10	Yellow & Gray
11	Purple & Blue
12	Purple & Orange
13	Purple & Green
14	Purple & Brown
15	Purple & Gray
16	White & Orange
17	White & Green
18	White & Brown
19	White & Gray
20	Red & Blue
21	Red & Orange

22	Red & Green
23	Red & Brown
24	Red & Gray
25	White & Blue

#### Inner Jacket Material

Material	Nominal Diameter	Ripcord
PE - Polyethylene	0.51 in	Yes

Water Penetration: GR 421CORE para. 4.3.5.1, ANSI/ICEA S107704 para. 8.2.1, ANSI/ICEA S-99-689

#### Outer Shield Material

Material
Aluminum

#### Outer Jacket Material

Material	Nominal Diameter	Ripcord
LSZH - Low Smoke Zero Halogen (Flame Retardant)	0.730 in	Yes

## Construction and Dimensions

#### Armor

Type of Armor	Material	Thickness of Armoring Tape
Corrugated	Aluminum	.008 in

## Electrical Characteristics

#### Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance
93.8 Ohm/km	5 %

#### Capacitance

Max. Capacitance Unbalance	Nom. Mutual Capacitance
330 pF/100m	14 pF/ft

#### Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew
100 MHz	537.6 ns/100m	45 ns/100m

#### High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. PSNEXT [dB]	Min. RL (Return Loss) [dB]	Max./Min. Fitted Impedance
1 MHz	2.0 dB/100m	62.3 dB	20.0 dB	100 ± 15%
4 MHz	4.1 dB/100m	53.3 dB	23.0 dB	100 ± 15%
8 MHz	5.8 dB/100m	48.8 dB	24.5 dB	100 ± 15%
10 MHz	6.5 dB/100m	47.3 dB	25.0 dB	100 ± 15%
16 MHz	8.2 dB/100m	44.3 dB	25.0 dB	100 ± 15%
20 MHz	9.3 dB/100m	42.8 dB	25.0 dB	100 ± 15%
25 MHz	10.4 dB/100m	41.3 dB	24.3 dB	100 ± 15%
31.25 MHz	11.7 dB/100m	39.9 dB	23.6 dB	100 ± 15%
62.5 MHz	17.0 dB/100m	35.4 dB	21.5 dB	100 ± 15%
100 MHz	22.0 dB/100m	32.3 dB	20.1 dB	100 ± 15%

#### Voltage

UL Voltage Rating
300 V RMS

## Temperature Range

Installation Temp Range:	-20°C To +75°C
UL Temp Rating:	75°C
Storage Temp Range:	-40°C To +75°C
Operating Temp Range:	-40°C To +75°C

## Mechanical Characteristics

Cold Bend Test:	-20°C Compliance per UL 1581
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Bulk Cable Weight:	240 lbs/1000ft
Max. Pull Tension:	150 lbs
Min Bend Radius During Installation:	14.75 in
Min Bend Radius/Minor Axis:	7.5 in

## Standards

NEC/(UL) Compliance:	CM-LS
CEC/C(UL) Compliance:	CM-LS
IEC Compliance:	11801 ed 2.2 (2011) Class D
Data Category:	Category 5e
ANSI Compliance:	S-90-661-2012 Category 5e, ANSI/NEMA WC-63.1 Category 5e
TIA/EIA Compliance:	ANSI/TIA-568-C.2 Category 5e
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3
Other Compliance:	Outdoor Use ANSI/ICEA S56434, Broadband Outdoor Use ANSI/ICEA S99689, Indoor/Outdoor Use ANSI/ICEA S100685

## Applicable Environmental and Other Programs

Environmental Space:	Indoor/Outdoor
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2003/96/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	Yes
EU CE Mark:	Yes
EU REACH SVHC Compliance (yyyy-mm-dd):	2017-07-10
EU RoHS Compliance Date (yyyy-mm-dd):	2015-10-27
MII Order #39 (China RoHS):	Yes

## Suitability

Suitability - Aerial:	Yes - When supported by messenger wire
Suitability - Burial:	Yes - Engineered burial only
Suitability - Hazardous Locations:	No
Suitability - Indoor:	Yes
Suitability - Non-Halogenated:	No
Suitability - Oil Resistance:	No
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

## Flammability, LSOH, Toxicity Testing

UL Flammability:	UL 1685 (UL Loading-Limited Smoke)
UL voltage rating:	300 V RMS

## Plenum/Non-Plenum

Plenum (Y/N):	No
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## Part Number

### Variants

Item #	Color	UPC
2139A 0101000	Black	612825377870

## Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Print Includes Descending Footage Markings. Not Suitable for Direct Burial.
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## History

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