

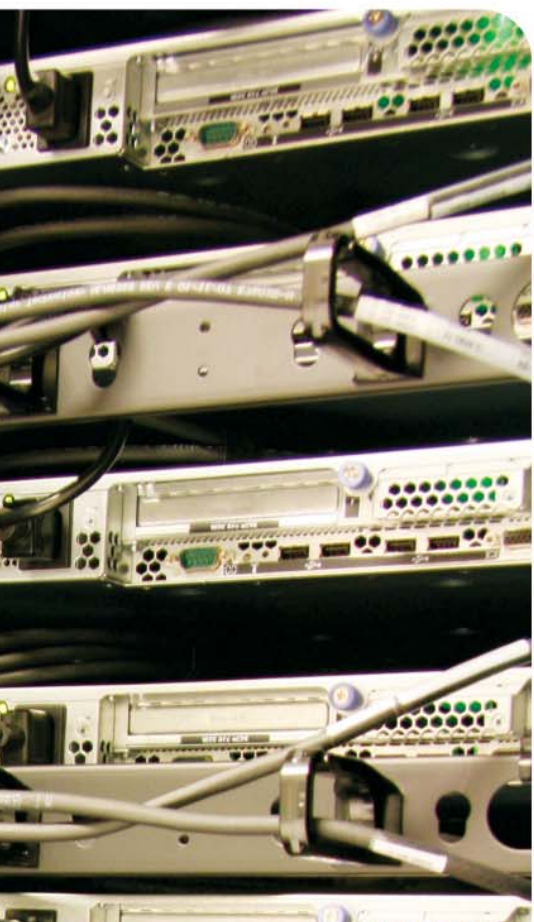


# MEGATONE ELECTRONICS

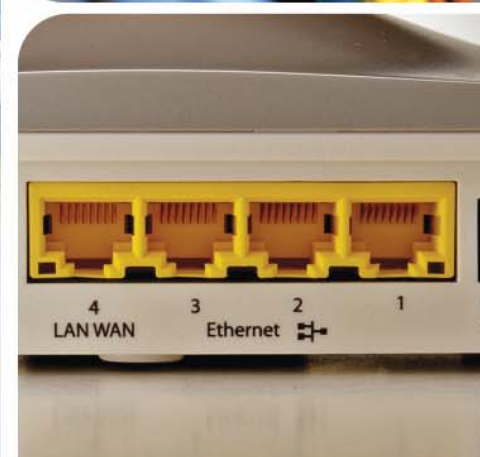


**Communication | Fiber Optic**

**Connectors  
Cables  
Tools**



An ISO 9001:2000 Certified Company



## Adapters

### Features

- In compliance with Bellcore 326 and TIA/EIA. 604 standard
- Easy installation
- High precision
- Low insertion loss

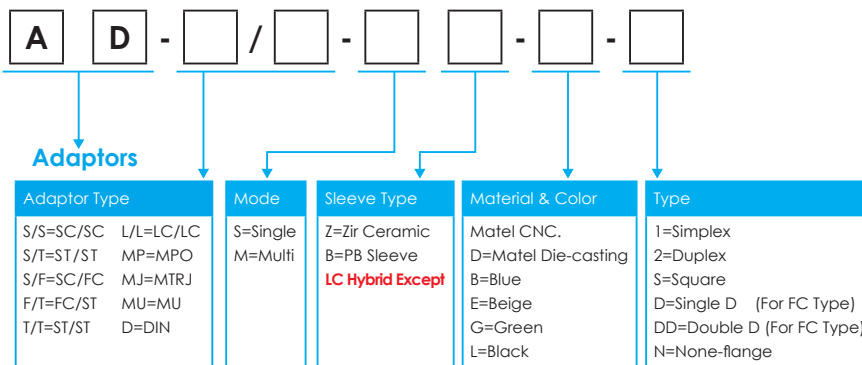
### Applications

- CATV system
- Telecommunications
- Optical networks
- Testing instruments

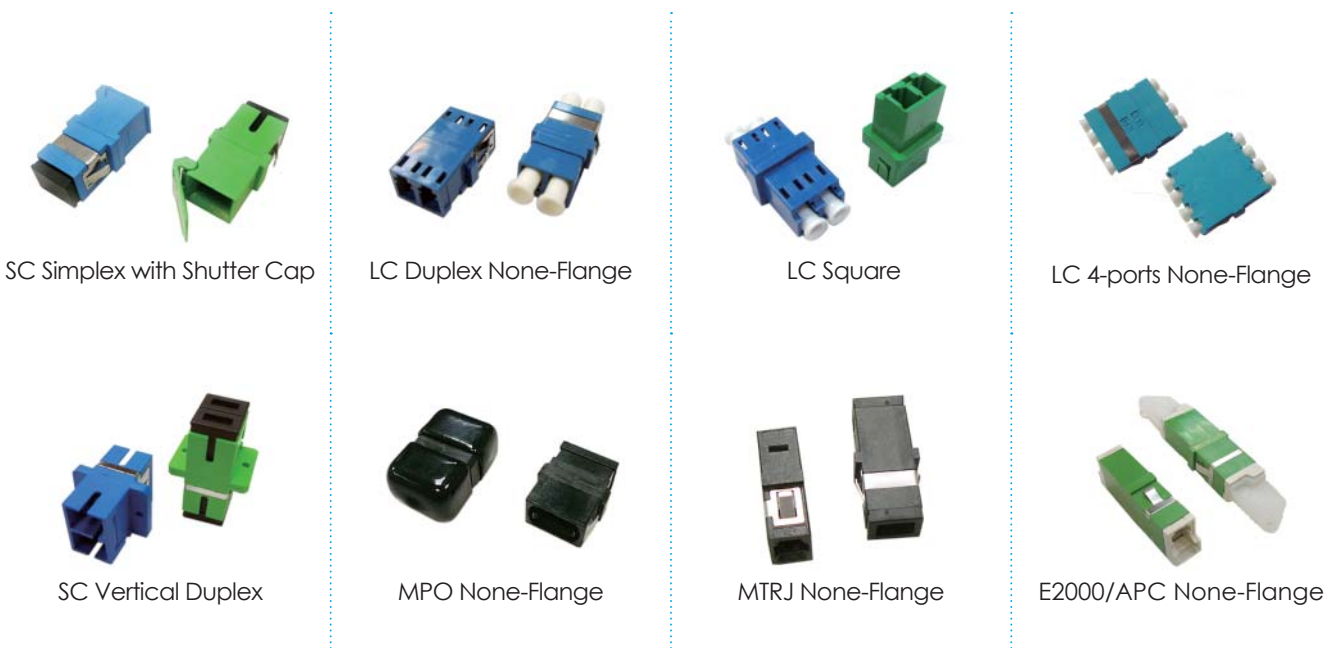
### Specifications

Insertion	≤ 0.2 dB (Zr. Ceramic) ≤ 0.3 dB (P-Bronze)
Repeat Ability	0.2 dB (500 Cycle Passed)
Operating Temp Range	-40 °C to +75 °C
Storage Temp Range	-40 °C to +85 °C
Humidity	95% RH (Non-Packaging)

### Ordering Information



### Special Type



Standard Type



SC Simplex None-Flange



SC Duplex None-Flange



SC Simplex



SC Duplex



SC Simplex Metal



SC Duplex Metal



LC 4-ports with Hole



LC Simplex



LC Duplex-SC Footprint



LC Duplex-Standard Type



SMA Metal



DIN



D-Type Mini D Double D  
FC D-Type



FC Square



FC Duplex Metal



ST Simplex Metal



ST Duplex Metal



ST Duplex



MPO



MU Simplex & Duplex



MU Duplex



MTRJ



MTRJ Standard Type



E2000/APC

## Hybrid Type

### Features

- In compliance with Bellcore 326 and TIA/EIA 604 standard
- Easy installation
- High precision
- Low insertion loss

### Applications

- CATV system
- Telecommunications
- Optical networks
- Testing instruments

### Specifications

Insertion	$\leq 0.2$ dB (Zr. Ceramic) $\leq 0.3$ dB (P-Bronze)
* LC/SC, LC/FC, LC/ST	I.L $\leq 0.5$ dB
Repeat Ability	0.2 dB (500 Cycle Passed)
Operating Temp Range	-40 °C to +75 °C
Storage Temp Range	-40 °C to +85 °C
Humidity	95% RH (Non-Packaging)



SC-FC Simplex



LC-SC Metal



LC-FC Metal



LC-ST Metal



LC-SC Simplex



SC-FC Simplex Metal



SC-FC Duplex Metal



FC-ST Simplex



FC-ST D-type



FC-ST Simplex Metal



DIN-FC



SC-ST Simplex



SC-ST Duplex



SC-ST Simplex Metal



SC-ST Duplex Metal

## Connectors

### Features

- In compliance with Bellcore 326 and TIA/EIA 604 standard
- Low insertion loss
- High return loss
- Easy installation
- Compatible with NTT standard
- RoHS approved

### Specifications

Typical Insertion Loss	0.3dB Maximum for SM 0.4dB Maximum for MM
Typical Return Loss	45dB Minimum for SM
Operating Temp Range	-40 °C to +75 °C
Storage Temp Range	-40 °C to +85 °C
Repeat Ability	40.2dB (500 Cycle Passed)
Humidity	95% RH (Non-Packaging)

### Applications

- CATV system
- Telecommunications
- Optical networks
- Testing instruments



## Attenuators

### Features

- Precise attenuation value
- Excellent reflectance
- Perfect environmental stability and reliability
- Flawless end face
- Dual window (1310nm/1550nm)
- 1dB increment



### Specifications

SPECIFICATIONS		VALUE	
Item		SM	MM
Wavelength		1310nm and 1550nm	850nm and 1310nm
		1310nm or 1550nm	850nm or 1310nm
Attenuation Range		1dB ~ 25dB	1dB ~ 20dB
Attenuation Variation	≤5 dB	±0.5dB	±1dB
	> 5 dB	±10%	±10% ±15%
Reflectance	SPC	≥ 50dB	
	UPC	≥ 55dB	
	APC	≥ 65dB	
Operation Temperature		-40 °C ~ 75 °C	-40 °C ~ 75 °C
Storage Temperature		-40 °C ~ 85 °C	-40 °C ~ 85 °C

## Patch Cords & Pigtails

### Features

- Various connector type available
- Low back reflection loss
- Compact size
- Low insertion loss
- High return loss
- Diameter  $\Phi 0.9\text{mm}$ ,  $\Phi 1.6\text{mm}$ ,  $\Phi 2.0\text{mm}$ ,  $\Phi 2.4\text{mm}$ ,  $\Phi 3.0\text{mm}$  fiber available
- Single-mode Fiber or Multi-mode fiber available (For Simplex or Duplex)



4~12 Armored Patch Cord

### Applications

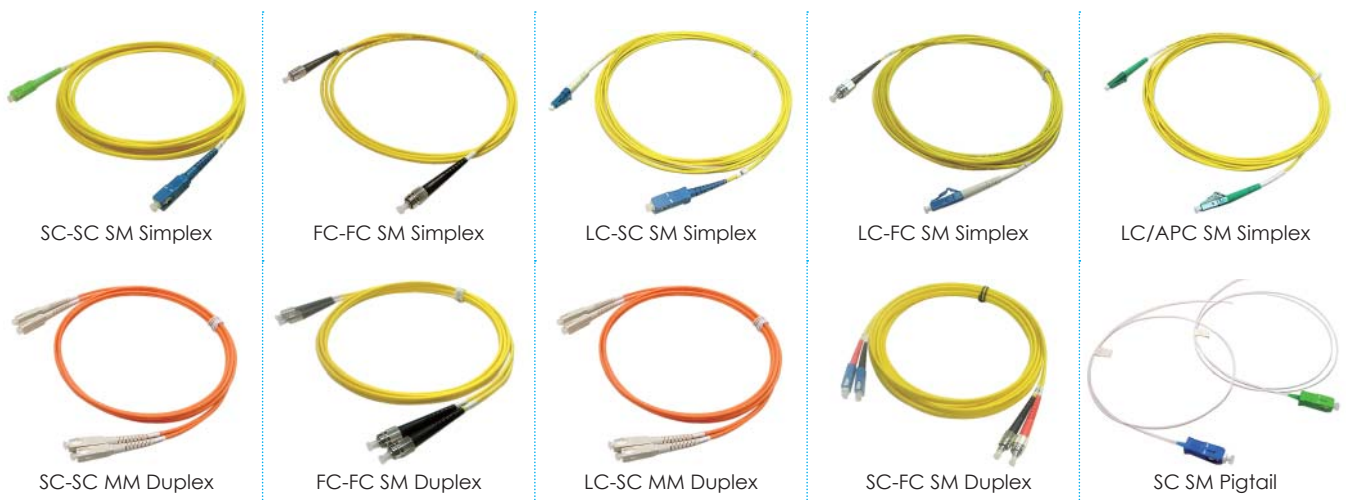
- CATV system
- Telecommunications
- Optical networks
- FTTH (Fiber to the Home)
- High speed transmission systems
- Testing instruments

### Specifications

	SM	MM
Insertion Loss	$\leq 0.3\text{dB}$	$\leq 0.3\text{dB}$
Return Loss	$\geq 50\text{dB(FC)}$	
	$\geq 55\text{dB(UPC)}$	$\geq 20\text{dB(UPC)}$
	$\geq 65\text{dB(APC)}$	
Repeat Ability	$\geq 0.2\text{dB}$ typical change, 500matings	
Tensile Strength	100N(10kg) for FC	
Operating Temperature	-40 to +85 °C	

### Ordering Information

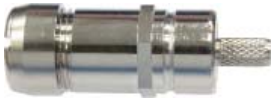
<b>P</b>	-		/		-			-			
Patch Cords											
Connector Type	Cable Type		Cable Outer Diameter	Fiber Type	Cable Length						
SP=SC/PC TP=ST/PC FP=FC/PC LP=LC/PC	FA=FC/APC MT=MTRJ MP=MPO NN=NONE (Pigtail)	1=Simplex 2=Duplex	9=0.9mm 6=1.6mm 2=2.0mm 3=3.0mm 4=2.4mm 8=1.8mm	9=9/125 SM 5=50/125 MM 6=625/125 MM	005=0.5Meter 010= 1Meter 100= 10Meter .....						



**Coaxial Connectors**

**M4 Female Coaxial Connectors**

Straight Coaxial Jack with Nut



**MCN-2035-0001**  
75Ω, 0-4GHz  
CC6-K-2-2



**MCN-2035-0005**  
75Ω, 0-1GHz  
CC6-J-2-2

**NEC Connectors**



**MCN-2035-0007**  
Series 600  
75Ω, 0-1GHz  
NEC-75J L



**MCN-2035-0008**  
Series 500  
75Ω, 0-1GHz  
NEC-75J S

**Coaxial Connectors** Siemens



**MCN-2035-0004**  
Jack with Nut  
75Ω, 0-1GHz  
L9-KY-2-2



**MCN-2035-0009**  
Jack with Nut  
75Ω, 0-1GHz  
L9-JW



**MCN-2035-0010**  
Plug with Nut  
75Ω, 0-4GHz  
L9-KYW

**1.6/5.6 Jack Crimp Connector**



**MCN-2021-0008**  
Straight  
NG+G+T  
12-211-Flex3

**Phone Butt Splice**



**MCN-2037-0001**  
For 2 Wires  
22-26AWG  
UY-II, 3MK2



**MTB-300000001 8 X 32 BLOCK**

**Model:** 512 Wire Wrap  
**Condition:** new in box with hardware

Terminal block 8 x 32 512 ultimate terminal blocks are provided with cinch self-locking connector.

It will mount on most frames with 7 1/2 or 3 3/4 inch centered mounting holes. May be mounted vertically or horizontally.



## MSG-1013-0001

### IDC Connectivity with Protection Facility

#### 48 ports, IDC, with protection facility

Product design integrates unique features to match TELCO's expectations for a mass xDSL lines deployment with the better Service Level.

#### Better Service Quality

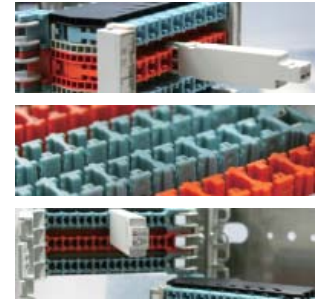
The splitters are fully protected to avoid any unsafe disconnection of the end-user. Particularly important in the emergence of higher added valued services over DSL such as Triple Play services.

#### Smart design

Compact and smart design makes this product desirable. Its design requires less space on the frames. 64 ADSL ports can be served with 180mm length block. It's very adapted for remote application in cabinets or shelters.

#### Adaptation

The block is convenient for craftsmen as a whole 8 pairs bundle can be terminated on the same connection module. It matches existing information systems. Also this product does not require any further investment in connectivity tooling or training.



### Single Line Splitter & Bridging Modules

The product design is based on the management of single line splitters allowing a customer based service allocation.

This single line management allows mix and match different services and different providers lines on the same block in order to decrease cost and move from one service to the other efficiently.

This product is easily adapted to emergence of upgraded services over DSL such as Multi Play service offers as well as for splitter less services such as g.SHDSL and VoIP.

Splitters and Bridging Modules are inserted at the rear of the Splitter Block Filter after swiveling the 16 ports swiveling element. A mechanical device assures that the splitter is only inserted at the proper position.

Splitters and Bridging modules can be removed at any time without removing wires from the block.

When either splitter module or bridging module is removed a life line service is maintained by an automatic connection between POTS and Customer LINE ports.

#### Features:

- Different type of splitters available
- Lifeline service
- Bridging Module

#### Benefits:

- Available solution for any kind of network
- Splitter removal results in disconnection of DSLAM & voice
- Circuit connection
- Available solution for g.SHDSL, VoIP, full unbundling



### Protection Module

The flexible range of protection offers an individual protection on each single port. Protection plug provides the necessary protection level, but varies by the application.

The protection plug is based on an over voltage protection done by a Gas Discharge Tube equipped with an external Fail Safe device.

This product has 2 types of Protection Module:

#### Double Protection Module for DSLAM ports

- Module is inserted in the DSLAM interconnection module (the orange colored) of the swiveling object
- 1 module protects 2 DSLAM ports

#### Single Protection Module for Subscriber Line port

- Module is inserted on the external interconnection of the swiveling object

#### Features

- Protection remains during operation on splitters at the rear of the product
- Cost of the product is justified and effective
- The product is multipurpose

#### Benefits

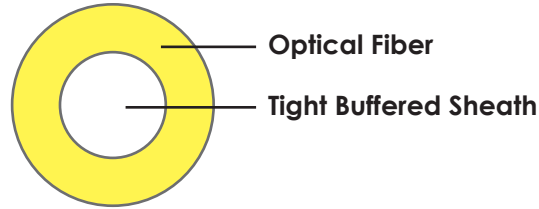
- Protection for DSLAM pots
- Protection for subscriber lines
- Product will offer all-time protection
- Offers better fee maintenance and flexibility for single-line protection



### Applications

- The cables can be directly assembled with connectors as pigtail or patch-cord
- Multiple tight-buffered fibers can be bundled as distribution cable for indoor wiring
- All of sheath materials is RoHS compliant:  
PVC, LSZH (Low Smoke Zero Halogen), Hytrel (TPE), OFNP etc.
- Both OFNP and OFNR meets UL flame retardant specification

#### Tight · Loose-Buffered Cable



Fiber Count	Outer Diameter (mm)	Weight (g/m)	Min. Bending Radius (mm)		Max. Tensile Strength(N)	
			Load	Unload	Short Term	Long Term
1	0.6	0.4	50	25	6.0	3.0
1	0.9	0.8				

Please refer to specification sheet for actual data

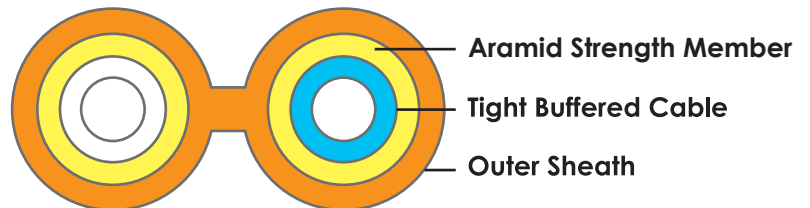
#### Simplex Optical Fiber Cable



Fiber Count	Outer Diameter (mm)	Weight (g/m)	Min. Bending Radius(mm)		Max. Tensile Strength(N)		Crush Resistance (N/cm)
			Load	Unload	Short Term	Long Term	
1	1.6	≤ 5.0	45	30	500	300	750
1	1.8	≤ 6.7					
1	2.0	≤ 7.0					
1	2.4	≤ 7.5					
1	3.0	≤ 8.0					

Please refer to specification sheet for actual data

#### Zipcord Optical Fiber Cable



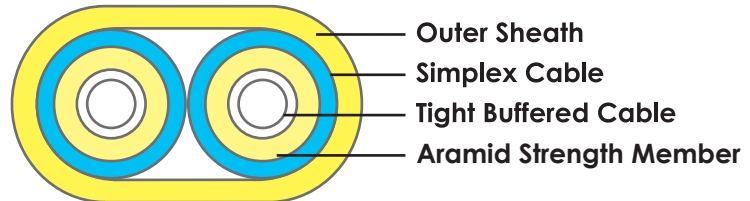
Fiber Count	Outer Diameter (mm)	Weight (g/m)	Min. Bending Radius (mm)		Max. Tensile Strength (N)		Crush Resistance (N/cm)
			Load	Unload	Short Term	Long Term	
2	1.6	≤ 10	45	30	500	300	750
2	1.8	≤ 13					
2	2.0	≤ 12					
2	2.4	≤ 15					
2	3.0	≤ 16					

Please refer to specification sheet for actual data

## Flat Twin Optical Fiber Cable

### Applications

- The fiber cable can be directly assembled with connectors as pigtail or patch-cord
- Multiple tight-buffered fibers can be bundled as distribution cable for indoor wiring
- All of sheath materials is RoHS compliant:  
PVC, BLSZH (Low Smoke Zero Halogen), BHytrell (TPE), BOFNP etc.
- Both OFNP and OFNR meets UL flame retardant specification



Fiber Count	Outer Diameter (mm)	Weight (g/m)	Min. Bending Radius (mm)		Max. Tensile Strength (N)		Crush Resistance (N/cm)
			Load	Unload	Short Term	Long Term	
2	3.8×7.0	≤ 16	≤ 48	≤ 24	≤ 500	≤ 300	≤ 750

Please refer to specification sheet for actual data

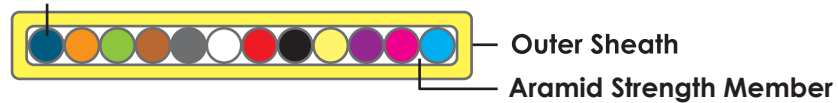
## Ribbon Cable

### Applications

- The Ribbon optical fiber cable is designed for indoor vertical and horizontal connections between terminals
- It can be directly assembled with connectors as pigtail to speed up the installation
- All of sheath materials is RoHS compliant:  
PVC, LSZH (Low Smoke Zero Halogen), Hytrell (TPE), OFNP etc.
- Both OFNP and OFNR meets UL flame retardant specification

#### Optical Fiber Ribbons:

MU. OG. GN. BN. GY. WT. RD. BK. YL. PL. GY. LBU.



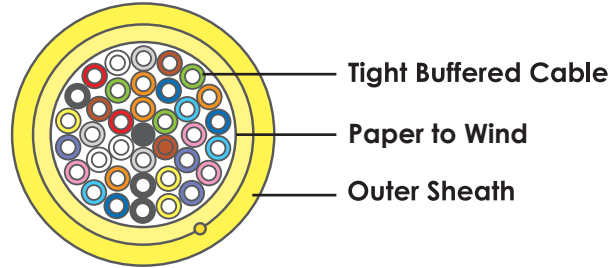
Fiber Count	Outer Diameter (mm)	Weight (g/m)	Min. Bending Radius (mm)		Max. Tensile Strength (N)		Crush Resistance (N/cm)
			Load	Unload	Short term	Long term	
2-12	≤ 2.5×4.7	≤ 20	≤ 48	≤ 30	≤ 2700	≤ 600	≤ 750

Please refer to specification sheet for actual data

### Applications

- The cables can be directly assembled with connectors as pigtail or patch-cord
- As building to building connecting cables. As indoor soft cable along the walls, and ceiling and between layers and in ducts
- All of sheath materials is RoHS compliant:  
PVC, LSZH (Low Smoke Zero Halogen), Hytrel (TPE), OFNP etc.
- Both OFNP and OFNR meets UL flame retardant specification

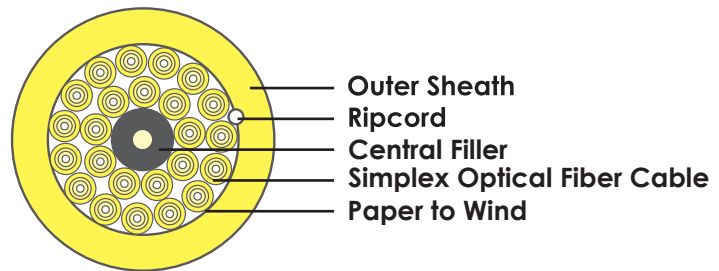
### Distribution Optical Fiber Cable



Fiber Count	Outer Diameter (mm)	Weight (g/m)	Min. Bending Radius (mm)		Max. Tensile Strength (N)		Crush Resistance (N/cm)
			Load	Unload	Short Term	Long Term	
6-36	≤ 15	≤ 160	≤ 65	≤ 45	≤ 1800	≤ 600	≤ 1500

Please refer to specification sheet for actual data

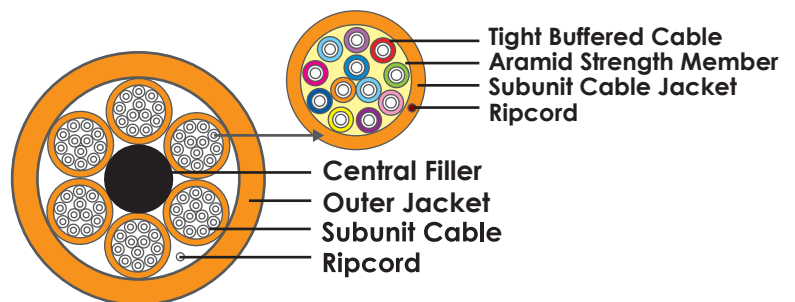
### Breakout Optical Fiber Cable



Fiber Count	Outer Diameter (mm)	Weight (g/m)	Min. Bending Radius (mm)		Max. Tensile Strength (N)		Crush Resistance (N/cm)
			Load	Unload	Short Term	Long Term	
2-36	≤ 16.5	≤ 203	160	150	9600	2400	3500

Please refer to specification sheet for actual data

### Subgroup Optical Fiber Cable



Fiber Count	Outer Diameter (mm)	Weight (g/m)	Min. Bending Radius (mm)		Max. Tensile Strength (N)		Crush Resistance (N/cm)
			Load	Unload	Short Term	Long Term	
6-72	≤ 20	≤ 305	20	18	11300	37500	3500

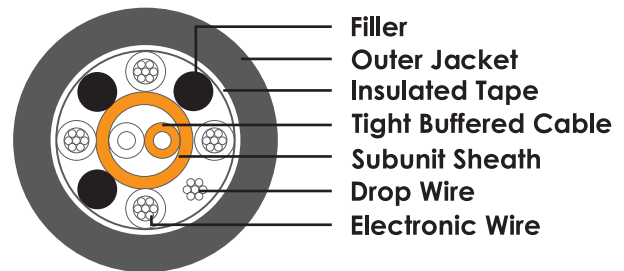
Please refer to specification sheet for actual data

Customization available upon request.

### Hybrid Optical Fiber Cable

#### Applications

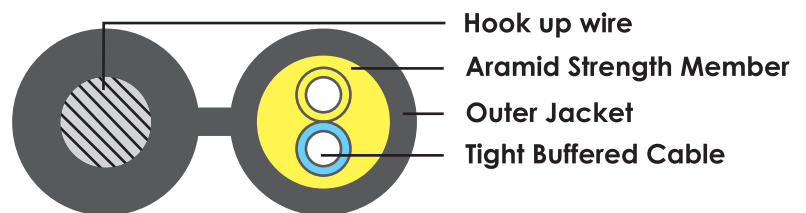
- Long distance and local area network (LAN) communication
- High speed digital data transmission, telephony and power can be transferred via one physically contained cable
- FTTX networking system
- All of sheath materials is RoHS compliant  
PE, PVC, LSZH (Low Smoke Zero Halogen), Hytrel (TPE), OFNP etc.
- Both OFNP and OFNR meets UL flame retardant specification



### Self-Support Optical Fiber Cable

#### Applications

- Long distance and local area network (LAN) communication
- Provide one physically-contained cable through which video, data, telephony and power can be locally distributed
- FTTX networking system
- All of sheath materials is RoHS compliant:  
PE, PVC, LSZH (Low Smoke Zero Halogen), Hytrel (TPE), OFNP etc.
- Both OFNP and OFNR meets UL flame retardant specification



**LAN Cable** Cat.5e UTP Solid LAN Cable**For Hyper-Data 1000****UL 444 & CSA-C22.2 No.214:** Type CM, 24AWG x 4P**TIA/EIA-568-B.2:** Horizontal Cable**Conductor:** Solid Bare copper (1 x AWG24)**Insulation :** HDPE(CMI-75E)

Min. Avg. Thickness	0.178 mm
Min. Thickness	0.153 mm

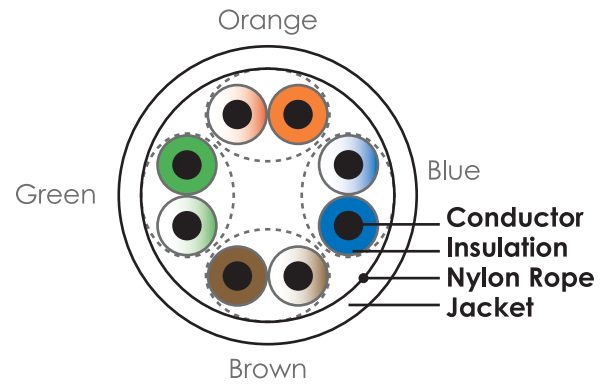
**Color Code:**

Pair 1: Blue, White/Blue

Pair 2: Orange, White/Orange

Pair 3: Green, White/Green

Pair 4: Brown, White/Brown

**Jacket:** 75 °C PVC Compound (CMI-80S)

Min. Avg. Thickness	0.585 mm
Min. Thickness	0.458 mm
Approximate O.D.	5.2 mm ± 0.3mm

**Electric Requirements:** (Cable length: 100M)

Characteristic Impedance( $Z_0$ )	85~115 $\Omega$ (1~100 MHz)
DC. Resistance Capacitance Unbalance	5%
Pair-to-Ground Capacitance Unbalance	330 pF/100M Max
Conductor Resistance	9.38 $\Omega$ / 100M 20°C Max
Mutual Capacitance	5.6 nF/m Max
Spark Test	2.5KV
Nominal Velocity of Propagation (NVP)	69 %

Frequency MHz	Att. Solid	Pr-Pr NEXT	PS NEXT	Prop. Delay ns	Delay Skew ns	Return Loss	Pr-Pr ELFEXT	PS ELFEXT
1	2.0	65.3	62.3	538.5	45	20.0	63.8	60.8
10	5.9	50.3	47.3	545.0	45	25.0	43.8	40.8
16	8.0	47.3	44.4	539.9	45	25.0	39.7	36.7
20	9.2	45.8	42.8	540.2	45	25.0	37.7	34.7
25	10.6	44.4	41.3	540.8	45	24.3	35.8	32.8
31.25	11.7	42.9	39.9	541.4	45	23.6	33.9	30.9
62.5	17.0	38.4	35.4	542.5	45	21.5	27.8	24.8
100	22.0	35.3	32.3	543.0	45	20.1	23.8	20.8

RoHS Compliant

**LAN Cable**    **Cat.5e UTP Stranded LAN Cable****For Hyper-Data 1000****UL 444 & CSA-C22.2 No.214:** Type CM, 24AWG x 4P**TIA/EIA-568-B.2:** Patch Cable**Conductor:** Stranded Bare copper (7 x AWG24)**Insulation :** HDPE(CMI-75E)

Min. Avg. Thickness	0.178 mm
Min. Thickness	0.153 mm

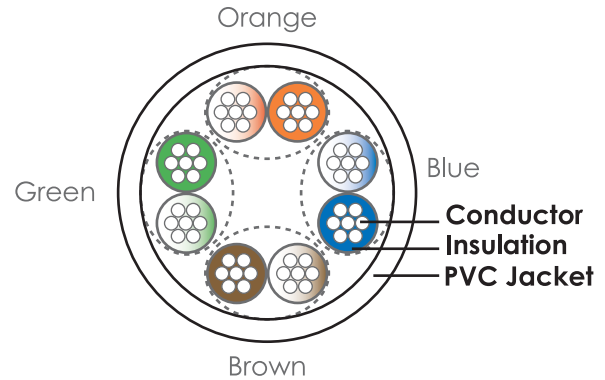
**Color Code:**

Pair 1: Blue, White/Blue

Pair 2: Orange, White/Orange

Pair 3: Green, White/Green

Pair 4: Brown, White/Brown

**Jacket:** 75 °C PVC Compound (CMI-80S)

Min. Avg. Thickness	0.585 mm
Min. Thickness	0.458 mm
Approximate O.D.	5.5 mm ± 0.3mm

**Electric Requirements:** (Cable length: 100M)

Characteristic Impedance( $Z_0$ )	85~115 $\Omega$ (1~100 MHz)
DC. Resistance Capacitance Unbalance	5%
Pair-to-Ground Capacitance Unbalance	330 pF/100M Max
Conductor Resistance	8.76 $\Omega$ / 100M 20°C Max
Mutual Capacitance	5.6 nF/m Max
Spark Test	2.5KV
Nominal Velocity of Propagation (NVP)	69 %

Frequency MHz	Att. Stranded	Pr-Pr NEXT	PS NEXT	Prop. Delay ns	Delay Skew ns	Return Loss	Pr-Pr ELFEXT	PS ELFEXT
1	2.4	65.3	62.3	538.5	45	20.0	63.8	60.8
10	7.4	50.3	47.3	545.0	45	25.0	43.8	40.8
16	9.5	47.3	44.4	539.9	45	25.0	39.7	36.7
20	10.7	45.8	42.8	540.2	45	25.0	37.7	34.7
25	12.1	44.4	41.3	540.8	45	24.2	35.8	32.8
31.25	13.7	42.9	39.9	541.4	45	23.3	33.9	30.9
62.5	20.0	38.4	35.4	542.5	45	20.7	27.8	24.8
100	26.1	35.3	32.3	543.0	45	19.0	23.8	20.8

RoHS Compliant

**LAN Cable**    **Cat.6 UTP Solid LAN Cable****For Hyper-Data 2000****UL 444 & CSA-C22.2 No.214:** Type CM, 24AWG x 4P**TIA/EIA-568-B.2-1:** Horizontal Cable**Conductor:** Solid Bare copper (1 x AWG24)**Insulation :** HDPE(CMI-75E)

Min. Avg. Thickness	0.178 mm
Min. Thickness	0.153 mm

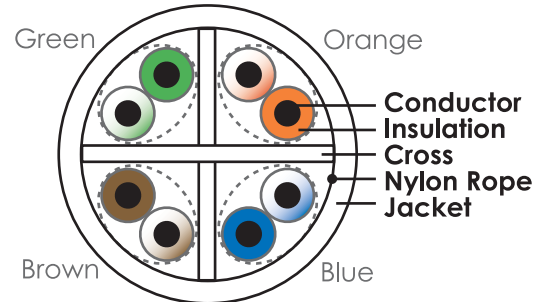
**Color Code:**

Pair 1: Blue, White/Blue

Pair 2: Orange, White/Orange

Pair 3: Green, White/Green

Pair 4: Brown, White/Brown

**Jacket:** 75 °C PVC Compound (CMI-80S)

Min. Avg. Thickness	0.585 mm
Min. Thickness	0.458 mm
Approximate O.D.	6.3 mm ± 0.3mm

**Electric Requirements:** (Cable length: 100M)

Characteristic Impedance( $Z_0$ )	85~115 $\Omega$ (1~250 MHz)
DC. Resistance Capacitance Unbalance	5%
Pair-to-Ground Capacitance Unbalance	330 pF/100M Max
Conductor Resistance	9.38 $\Omega$ / 100M 20°C Max
Mutual Capacitance	5.6 nF/m Max
Spark Test	2.5KV
Nominal Velocity of Propagation (NVP)	69 %

Frequency MHz	Att. Solid	Pr-Pr NEXT	PS NEXT	Prop. Delay ns	Delay Skew ns	Return Loss	Pr-Pr ELFEXT	PS ELFEXT
1	2.0	74.3	72.3	570	45	20.0	67.8	64.8
10	6.0	59.3	57.3	545	45	25.0	47.8	44.8
20	8.5	54.8	52.8	542	45	25.0	41.8	38.8
31.25	10.7	51.9	49.9	540.4	45	23.6	37.9	34.9
62.5	15.4	47.4	45.4	538.6	45	21.5	31.9	28.9
100	19.8	44.3	42.3	537.6	45	20.1	27.8	24.8
200	29.0	39.8	37.8	536.5	45	18.0	21.8	18.8
250	32.8	38.3	36.3	536.3	45	17.3	19.8	16.8

RoHS Compliant

**LAN Cable** Cat.6 UTP Stranded LAN Cable**For Hyper-Data 2000****UL 444 & CSA-C22.2 No.214:** Type CM, 24AWG x 4P**TIA/EIA-568-B.2-1:** Patch Cable**Conductor:** Stranded Bare copper (7 x AWG32)**Insulation :** HDPE(CMI-75E)

Min. Avg. Thickness	0.178 mm
Min. Thickness	0.153 mm

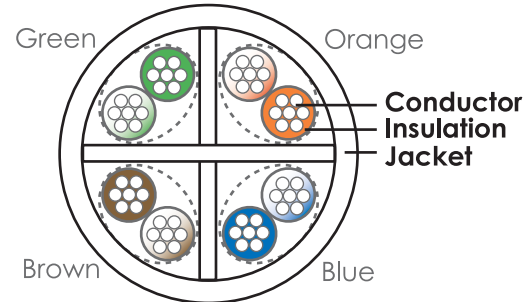
**Color Code:**

Pair 1: Blue, White/Blue

Pair 2: Orange, White/Orange

Pair 3: Green, White/Green

Pair 4: Brown, White/Brown

**Jacket:** 75 °C PVC Compound (CMI-80S)

Min. Avg. Thickness	0.585 mm
Min. Thickness	0.458 mm
Approximate O.D.	6.3 mm ± 0.3mm

**Electric Requirements:** (Cable length: 100M)

Characteristic Impedance( $Z_0$ )	85~115 $\Omega$ (1~250 MHz)
DC. Resistance Capacitance Unbalance	5%
Pair-to-Ground Capacitance Unbalance	330 pF/100M Max
Conductor Resistance	8.76 $\Omega$ / 100M 20°C Max
Mutual Capacitance	5.6 nF/m Max
Spark Test	2.5KV
Nominal Velocity of Propagation (NVP)	69 %

Frequency MHz	Att. Stranded	Pr-Pr NEXT	PS NEXT	Prop. Delay ns	Delay Skew ns	Return Loss	Pr-Pr ELFEXT	PS ELFEXT
1	2.4	74.3	72.3	538.5	45	20.0	67.8	64.8
10	7.1	59.3	57.3	545.0	45	25.0	47.8	44.8
20	10.2	54.8	52.8	539.9	45	25.0	41.8	38.8
31.25	12.8	51.9	49.9	540.2	45	23.3	37.9	34.9
62.5	18.5	47.4	45.4	540.8	45	20.7	31.9	28.9
100	23.8	44.3	42.3	541.4	45	19.0	27.8	24.8
200	34.8	39.8	37.8	542.5	45	16.4	21.8	18.8
250	39.4	38.3	36.3	543.0	45	15.6	19.8	16.8

**RoHS Compliant**



**LAN Cable**    **Cat.6A UTP LAN Cable****For Hyper-Data 10000**

	Solid	Stranded
UL 444 & CSA-C22.2 No.214	Type CM, 23AWG x 4P	Type CM, 24AWG x 4P
TIA/EIA-568-B.2-10	Solid Conductor	Stranded Conductor
Conductor	Solid Bare copper (1 x AWG23)	Stranded Bare Copper (7 x AWG32)

**Insulation : HDPE(CMI-75E)**

	Solid	Stranded
Min. Avg. Thickness	0.208 mm	0.201 mm
Min. Thickness	0.195 mm	0.175 mm

**Color Code:**

Pair 1: Blue, White/Blue

Pair 2: Orange, White/Orange

Pair 3: Green, White/Green

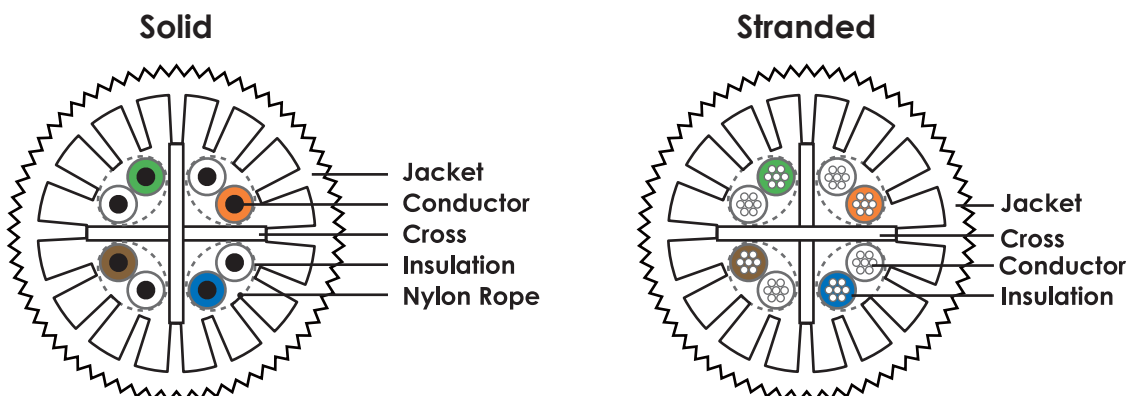
Pair 4: Brown, White/Brown

**Jacket: 75 °C PVC Compound (CMI-80S)**

Min. Avg. Thickness	0.585 mm	
Min. Thickness	0.458 mm	
Approximate O.D.	Solid	7.8 mm ± 0.3mm
	Stranded	6.6 mm ± 0.3mm

**Electric Requirements: (Cable length: 100M)**

Characteristic Impedance( $Z_0$ )	85~115 $\Omega$ (1~500 MHz)	
DC. Resistance Capacitance Unbalance	5%	
Pair-to-Ground Capacitance Unbalance	330 pF/100M Max	
Conductor Resistance	Solid	7.32 $\Omega$ / 100M 20°C Max
	Stranded	8.76 $\Omega$ / 100M 20°C Max
Mutual Capacitance	5.6 nF/m Max	
Spark Test	2.5KV	
Nominal Velocity of Propagation (NVP)	68 %	



RoHS Compliant

**MCR-28** 8"(203mm)

FOR CRIMPING MODULAR PLUG	RATCHET
8P8C/RJ-45, 6P6C/RJ-12, 6P4C/RJ-11, 4P4C&4P2C	NO

- Straight motion and precise crimping
- Cuts, strips, and crimps all kinds of modular plug WITHOUT CHANGING MODULAR (DIE) SET
- More in one for crimping SOLID & STRANDED wire
- Works with all standard plugs: AMP, SS, AT&T license...etc.
- MCR-28 is designed with 8 position punches

For crimping 8P8C plug

(This kind of 8P plug without additional cavity on each side as Fig2)

- MCR-28 parts are made of metal for durability
- Built-in cutter on rear side and stripper on front side



Fig2

**MCR-84** 7.3"(185mm)

FOR CRIMPING MODULAR PLUG	RATCHET
8P8C/RJ-45, 6P6C/RJ-12, 6P4C/RJ-11, 4P4C&4P2C	NO

- For crimping modular plug 8P8C (RJ45), 6P6C (RJ12), 6P4C (RJ11), 4P4C & 4P2C PLUGS. 4P crimper located on the back side of the tool
- Cuts & strips in one operation. Easy & effective
- Economic type, light weight. Durable & compact tool
- With round cable stripper

**MCR-82R** 7.7" (195 ± 3 mm)

COVER PLATE	CRIMPING SECTION	RATCHET
CHROME PLATING	ZINC-ALUMINUMALLOY	YES

- For crimping modular plug 8P8C (RJ45) in parallel action
- Cuts & strips in one operation. Easy & effective
- Light-weight, durable and compact tool



**MCR-44KR** 7.2" (182 ± 3 mm)

**Impact and Punch Down Tool**

- Loaded with a spring key for changing blades effectively
- Built-in combination hook/sludger for tracing and removing wires
- Adjustable On-Off impact selector

TOOL	REPLACEMENT HEAD	DESCRIPTION
MCR-44KR	MT-44KR	USE ON KRONE & 110 TERMINAL BLOCK
MCR-44W	MT-44W	USE ON BIX TYPE & 110 TERMINAL BLOCK



MT-44KR



MT-44W



**MCR-54TA** 4.6" (117 ± 2 mm)

**Non-Impact Punch Down Tool**

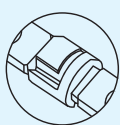




- MCR-540 series is non-impact type
- Use on 66&110/88 Type
- TPR soft-grip handle provides better comfort
- Twist-lock style holder provides quick, easy blade changes and prevents pullout
- Additional safe storage for one spare blade
- Interchangeable and reversible blades



**MCR-64TA** 6.6" (168 ± 2 mm)

**Professional Punch Down Tool**

- MCR-640R series is with impact & adjustable Hi-Lo pressure selector
- Use on 66&110/88 Type
- Built-in combination hook for tracing and removing wires
- TPR soft-grip handle provides better comfort
- Twist-lock style holder provides quick and easy blade changes and prevents pullout
- Additional safe storage for one spare blade
- Interchangeable and reversible blades

BLADE	MT-14TA	MT-14TBK	MT-14TQ	MT-14TW
For Terminal Block	66&110/88 TYPE	KRONE TYPE	QUANTE TYPE	BIX TYPE
 Twist-lock type				



### MSD-085

#### USB Precision Soldering Iron

- By **MEGA POWER® TOOLS** Blue Label
- Professional grade soldering tip
- Achieves 896°F (480°C) by using only a 9V alkaline battery (One battery-USB cable is included)
- Built-in ultra bright white LED light that illuminates your working area
- Energy efficient!  
Only consumes approx. 5W while traditional types consume approx. 40W
- Handy and portable
- Heats up instantly! In approx. 15~20 sec. only
- Accessories: Sponge Pad, 9V Battery-USB cable, USB Y Cable



Battery



mini USB



NB



PC



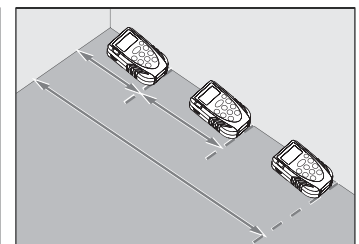
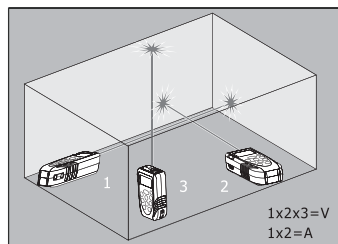
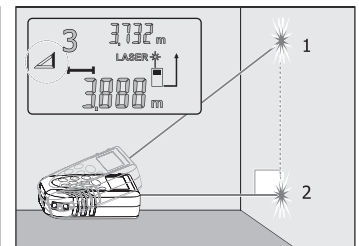
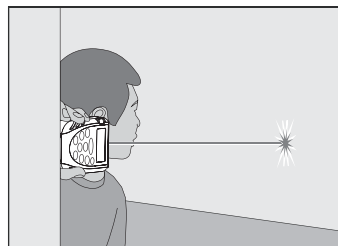
### MFG-1057-0001

#### Digital Laser Range Finder

- Ergonomic design provides comfort for measurement with flexibility, accuracy and efficiency
- **Space Calculations**  
Includes two space measurement programs for area and volume calculations
- **Indirect Measurement**  
Includes indirect height and length measurement function to record your values
- **Dyna Measurement**  
Locate your distance and find your position from a reference point with continuous measurement tracking function

#### Specification

Measure Range*	0.5M~50M
Resolution	0.001M
Accuracy	Typically: ±2mm
Measure Speed	0.5 sec.
Laser Type	650nm, Class II, <1mW
Battery	9V Block Battery
Battery Life	Up to 5000 measurements
Dimension	104.7mm×61mm×32mm
Operation Temperature	0°C~40°C
Storage Temperature	-20°C~60°C
Automatic Switch-off	
-Laser	30 seconds
-CA600	180 Seconds





## MTI-901

### LAN Cable Tester

#### Features

- Easily tests correct pin configuration of 10/100 base-T cable, 10 base-2 cable, RJ45/RJ 11 modular cables, AT&T 258 A cable, EIA/TIA 568A/568B cables and Token Ring Cable etc.
- Verifies cable continuity, open-short and miss-wired
- Tests installed cable far away either on wall patch by using the remote kit
- Includes auto and manual scan function
- Includes ground wire test
- Includes locked status wire function
- Includes buzzer sound warning for status wire

#### Accessories

User manual, Carrying case, 9V battery x1,  
One patch cable (RJ-45 to RJ-45)

#### Specification

Display	LED
Connectors	RJ-45 (8P8C) input/output
Power	9V battery
Size (mm)	130x56x38 & 72x23x24 (LxWxH)
Weight	About 250g
Remote Terminators	Sequence number# 1
Function keys	ON/OFF, TEST, AUTO, LOCK, MANU, BATT
Cable Types	<ul style="list-style-type: none"> <li>• Unshielded Twisted Pair (UTP100, Cat3,4&amp; 5)</li> <li>• Foil-screened Twisted Pair (FTP100 and 120, Cat3, 4&amp;5)</li> <li>• Shielded Twisted Pair (STP150 IBM Type 1&amp;6)</li> </ul>
Recognize Wiring Schemes	<ul style="list-style-type: none"> <li>• EIA/TIA-568A/B, USOC, 10(100) Base/HUB, BNC/10 Base-2</li> <li>• 10(100)Base-T, Token ring</li> </ul>

# MEGATONE ELECTRONICS

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Connectors, Cables, Tools**

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