Netceed is a Full-line Stocking Distributor of Traffic Signal Cable and Equipment for Over 40 Years

At Netceed, we are built differently. We are committed to delivering the best customer experience and technical expertise as a unified organization. Our unwavering focus is on increasing the speed and reliability of supply chains to open new possibilities for our customers:

- More certainty in supply availability, on-time delivery, and total cost of ownership (TCO)
- Transformatively agile and efficiency for their organizations
- Technical expertise and experience in advanced technology and traffic infrastructure solutions
- Enabling the future of connectivity with global reach and scaling potential

We are Keenly Mindful of Local APL and DOT Regulations

We only represent manufacturers that produce the highest quality local, state and federally approved and compliant products, made from materials that will stand the test of time. This is our commitment to you, and we stand behind it everyday.

We stock a full line of Traffic Signal Hardware and Equipment as well as building wire and fiber optic, coax and composite camera cable - and all of the associated accessories - with same day shipping.

Our goal has always been to create and distribute reliable, high-quality, and innovative products for the best prices - and keeping customer service our #1 priority.

FDOT Hurricane Preparation and Response

The hurricane season in the Atlantic region extends from June 1 through November 30, during which nearly 97 percent of all hurricane activity occurs. It is during this time that we are always at the ready with extra stock on the ground and manpower at the ready. Because of this preparedness, Netceed is the go-to distributor by state, city, and municipalities for traffic signals, traffic signal cable, equipment, pole line hardware, and all of the accessories to get traffic back on the road safely.

Netceed is Proud to be a Sustaining Member of the IMSA Since 2001

The International Municipal Signal Association (IMSA) is the oldest known association of its kind in the world. It dates back to 1896 and counts Thomas A. Edison and the Edison Electric Company among its esteemed members. The IMSA is dedicated to providing quality certification programs for the safe installation, operation and maintenance of public safety systems.

Moving forward, the Netceed Traffic Team’s goals and vision are always to exceed expectations and continue expansion. We’re going to grow and extend our one-stop-shop offerings and solutions throughout Netceed’s footprint and beyond. Netceed has always put the customer first with the highest quality products and services.

The great news is, with our recent expansion, we now have access to many more high-end manufacturers with a bountiful supply of new products. And now that we are bigger, our pricing will be better than ever. As well, we now have warehouses spanning the country so our footprint has expanded in the hopes of expanding yours.

For the Netceed Traffic Division, this brings a whole new world of opportunity to us, and to you.

We will continue to provide best-in-class supply chain technical expertise, outstanding customer service, and state-of-the-art products and services to our customers because our future is brighter than ever. We're looking forward to working together and are very excited about the future we can build together.

**VALUE PROPOSITION**

- More certainty in supply availability, on-time delivery, and total cost of ownership (TCO)
- Transformative agility and efficiency for their organizations
- Technical expertise and experience in advanced technology and traffic infrastructure solutions
- Enabling the future of connectivity with global reach and scaling potential

**ONE-STOP-SHOP**

**ONE-ON-ONE CONNECTIONS**

**SUSTAINING MEMBER Since 2001**
Trusted by agencies across the nation to safely connect people and places everyday. Netceed is your reliable source for Traffic Signal Wire & Cable - In Stock and Made in the USA.

Netceed stocks a wide range of Traffic Signal Wire & Cable for nearly every application in our warehouses in central Florida. All configurations of Traffic Signal Wire & Cable among the manufacturers’ products we carry have jackets rated to 90°C for both wet and dry locations. In addition, these cables are resistant to the effects of being outdoors, including fading and degradation that occurs because of moisture and sunlight. These Traffic Signal Wire & Cable products are compliant with UL Standards for overall cable construction and cold bend capabilities.

Disaster Recovery: Netceed is proud to be the go-to cable stocking distributor for government agencies, municipalities, system operators and cable companies - providing instant access to our huge inventory of cable where it’s needed, when it’s needed, in times of natural disaster. When hurricanes hit, we are open for business 24/7, ready to assist in any way possible.

Most variations of Traffic Signal Wire & Cable that Netceed stocks can be custom-cut to any length depending on your unique application needs.
Netceed is a proud Sustaining Member of the IMSA Since 2001. We offer a wide range of products for various municipal transportation applications: Traffic Communication, Inductive Loop Detection and Traffic Signal Control.

Manufactured in ISO-certified facilities, Netceed stocks state-specific cable of unsurpassed quality and reliability to ensure product consistency for every specification.

### IMSA CABLE

**Wire And Cable For:**
- Video Detection
- Traffic Signals
- Loop Detection
- Street Lighting

**Your Partner in PUBLIC SAFETY**

### VIDEO DETECTION CABLE

Netceed is a leader in custom designed cable manufacturing and special wire construction. If a standard cable won’t work for your application, we can design a cable customized to match your exact specifications. Whether you need a custom coaxial cable, special power cables or a completely new cable designed from scratch, we can provide a custom cable to fit your needs.

#### Composite Camera Cable

<table>
<thead>
<tr>
<th>Specification - Element 1</th>
<th>Specification - Element 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Component 23 AWG 6 UTP Cat 6</td>
<td>1/4 / 16 AWG 3C Shielded Cable</td>
</tr>
<tr>
<td>Jacket - PVC</td>
<td>Component 1 - 1/4 / 16 AWG 70 Strands Class C</td>
</tr>
<tr>
<td>Diameter - 0.23&quot;</td>
<td>Material - Annealed BC</td>
</tr>
<tr>
<td>Ripcord - Nylon</td>
<td>Conductor Count - 3 Conductors</td>
</tr>
<tr>
<td>Color - Blue with standard UL print</td>
<td>Color Code - Black, White, Red</td>
</tr>
</tbody>
</table>

**Features:**
- Save Time and Money: Pull only one cable to camera locations
- Power Options: Use the CAT6 (POE) or the shielded power cable
- Capable of volume control, audio/video, data transfer, networking
- Sunlight resistant and riser rated
- For security cameras and other applications
- Made in the USA

#### Multi-Conductor Camera Cable

<table>
<thead>
<tr>
<th>Specification - Coax</th>
<th>Specification - Multi-Conductors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductors - 20 AWG Solid BC</td>
<td>Component 1 - 16 AWG BC</td>
</tr>
<tr>
<td>Braid - 2 x 98% TC</td>
<td>Insulation - PVC .030 Nominal</td>
</tr>
<tr>
<td>Jacket - LDPE .304 Nominal</td>
<td>Jacket - PVC .030 Nominal</td>
</tr>
<tr>
<td>Color Code - Black, White, Green</td>
<td></td>
</tr>
</tbody>
</table>

**Specification - Coax**

<table>
<thead>
<tr>
<th>Specification - Coax</th>
<th>Specification - Multi-Conductors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductors - 20 AWG Solid BC .032</td>
<td>Component 1 - 16 AWG BC</td>
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<tr>
<td>Braid - 95% BC</td>
<td>Insulation - PVC</td>
</tr>
<tr>
<td>Jacket - PVC .224 Nominal</td>
<td>Jacket - PVC .030 Nominal</td>
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<tr>
<td>Color Code - Black, White, Red, Brown, Blue</td>
<td></td>
</tr>
</tbody>
</table>

#### Precision Video Cable

<table>
<thead>
<tr>
<th>Specification - Coax</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductors - 20AWG Solid Bare Copper</td>
<td></td>
</tr>
<tr>
<td>Braid - 2 x 98% TC</td>
<td></td>
</tr>
<tr>
<td>Jacket - PE</td>
<td></td>
</tr>
<tr>
<td>Color Code - Black</td>
<td></td>
</tr>
</tbody>
</table>
BUILDING WIRE

RHH/RHW-2 - XLP USE-2
Description: Single conductor, 90°C Wet/Dry. Insulated with chemically cross-linked polyethylene insulation.
Applications: Appropriate for use in general purpose wiring for lighting and power - residential, commercial, and industrial buildings. Suitable for applications that require superior flame retardance.
   • 600 Volt, Copper conductor
   • High-heat, moisture, and sunlight resistant
   • All size variations available

XHHW / XHHW-2
Description: Single conductor, 90°C Wet/Dry. Insulated with chemically cross-linked polyethylene insulation.
Applications: Appropriate for use in general purpose wiring for lighting and power - residential, commercial, and industrial buildings. Suitable for use in low leakage wiring for lighting and power - residential, commercial, and industrial buildings. Suitable for applications that require superior flame retardance.
   • 600 Volt, Copper conductor
   • High-heat, moisture, and sunlight resistant
   • All size variations available

THHN / THWN-2
Description: Single conductor stranded bare copper, with a PVC insulation and Nylon Jacket
Applications: Appropriate for use in general purpose wiring for lighting and power - residential, commercial, and industrial buildings. Suitable for use with machine tool and appliance wiring.
   • Construction, machine tools & control circuits
   • 600 Volts, Copper Conductor
   • Heat, moisture, gasoline, and oil resistant

PE-39 INTERCONNECT
General Cable is one of three levels of the Prysmian Group, which has a multi-brand architecture.
PE-39 Interconnect Cable is manufactured for direct burial communication system applications in accordance with the National Electric Code.
Features:
   • Intended for duct and direct buried installations where protection against water and moisture entry is required and may also be installed aerially
   • Conductors: Solid, annealed copper; sizes 19, 22, and 24 AWG
   • Insulation: Solid, high density polyethylene, color coded in accordance with telephone industry standards
   • Twisted Pairs: Insulated conductors are twisted into pairs with varying lay lengths to minimize crosstalk

STRAND WIRE
National Strand has built an unbeatable reputation. The superior qualities of National Strand's products provide exceptional reliability and long life for guy wires, overhead ground wires and messenger cables.
Guaying, Static/Grounding applications in Power Utility, Messenger, Telecommunications/CATV for years by the most demanding North American IOU’s, Munil’s, Co-Operatives, MSO’s and others. All Strand products are expertly produced to ASTM A475, A363, A855, A925, A111, A586, CSA. Netceed can arrange for custom specifications as required for your quality critical application.

<table>
<thead>
<tr>
<th>Galvanized Steel Strand</th>
<th>Minimum Break Strength in Pounds</th>
<th>Min. Weight of Coating Oz./Sq. Ft.</th>
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</thead>
<tbody>
<tr>
<td>Wire Diameter</td>
<td>Coated Diameter</td>
<td>Wires Per Strand</td>
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<tr>
<td>1/4</td>
<td>0.12</td>
<td>3</td>
</tr>
<tr>
<td>5/16</td>
<td>0.145</td>
<td>3</td>
</tr>
<tr>
<td>3/8</td>
<td>0.165</td>
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<td>0.062</td>
<td>7</td>
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<tr>
<td>7/32</td>
<td>0.065</td>
<td>7</td>
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<tr>
<td>1/4</td>
<td>0.08</td>
<td>7</td>
</tr>
<tr>
<td>9/32</td>
<td>0.093</td>
<td>7</td>
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<tr>
<td>5/16</td>
<td>0.10</td>
<td>7</td>
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<tr>
<td>7/32</td>
<td>0.109</td>
<td>7</td>
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<tr>
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<td>0.12</td>
<td>7</td>
</tr>
<tr>
<td>5/16</td>
<td>0.145</td>
<td>3</td>
</tr>
<tr>
<td>1/2</td>
<td>0.165</td>
<td>3</td>
</tr>
<tr>
<td>9/16</td>
<td>0.188</td>
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<td>0.177</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>0.2</td>
<td>10</td>
</tr>
</tbody>
</table>
**TRAFFIC CAMERA / SENSOR CABLE**

*Description:*

Category-5E Direct Burial, STP w/Drain Wire, 8-Conductor, Waterproof Outdoor Jacket, 24AWG Solid-Bare Copper. This cable is rated for direct burial applications and is designed to be buried directly beneath the ground without any additional protection, piping, or sheathing. Direct buried cable is built to tolerate heat, moisture, and other hazards that present themselves when cable is buried underground.

**Features:**

- High-Performance Data Communications Cable
- 350MHz Bandwidth for Data Applications, Fast Ethernet and 155Mbps TP-PMD/CDDI
- Category-5E Shielded Twisted Pair
- Easily Identified Color-Striped Pairs
- 24AWG Solid Copper Conductors
- Exceeds TIA/EIA-568B.2, ISO/IEC 11801
- CAN/CSA -C22.2 No. 214
- Direct Burial (Waterproof)
- ETL Listed

**Parameter Specification**

- **Rated Temperature**: 75°C (167°F)
- **Rated Voltage**: 300V
- **Flammability Test**: IEC-332-1
- **Product Standard Certification**: CMX
- **Conductor**: Solid Bare Copper
- **Size**: 24 AWG (0.51mm)
- **Insulation**: PE
- **Average Thickness (mm)**: 0.208
- **Insulation Diameter (±0.005mm)**: 0.97
- **Twisted Pair Diameter (±0.01)**: 1.92
- **Assembly Diameter**: 3.80
- **Inner Jacket (Gray)**: PVC
- **Average Thickness (mm)**: 0.40
- **Min. Point Thickness (mm)**: 0.36
- **Outer Diameter (±0.10mm)**: 4.80
- **Aluminum Foil**: Yes
- **Drain Wire (Tinned Cooper)**: 7/0.16
- **Outer Jacket (Black)**: LSZH (UV)
- **Average Thickness (mm)**: 0.60
- **Min. Point Thickness (mm)**: 0.54
- **Outer Diameter (±0.10mm)**: 6.40
- **Rip Cord**: Yes

**Color of Pairs**

- Pair 1: Blue, White-Blue
- Pair 2: Orange, White-Orange
- Pair 3: Green, White-Green
- Pair 4: Brown, White-Brown

**Mechanical Characteristics**

- **Test Object**: Jacket
- **Test Material**: LSZH (UV)
- **Before - Tensile Strength (Mpa)**: 11.8
- **Aging - Elongation (%)**: 10%
- **Aging Condition**: (17hrs)
- **After - Tensile Strength (Mpa)**: 100 + 168
- **Aging - Elongation (%)**: 100 + 168
- **Cold Bend (-20±2°C X10hrs)**: No Crack

**Electrical Characteristics**

<table>
<thead>
<tr>
<th>Freq. (MHz)</th>
<th>Ret. Loss (Min db)</th>
<th>Att Max (db/100m)</th>
<th>Next (ps/100m)</th>
<th>PSNEXT (Min db)</th>
<th>ELFEXT (Min db)</th>
<th>PSSELFEXT (Min db)</th>
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<td>4.3</td>
<td>59.3</td>
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<td>51.7</td>
<td>48.7</td>
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<tr>
<td>8</td>
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<td>5.8</td>
<td>54.6</td>
<td>48.8</td>
<td>45.7</td>
<td>42.7</td>
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<td>25.0</td>
<td>6.5</td>
<td>53.3</td>
<td>47.3</td>
<td>43.8</td>
<td>40.8</td>
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<tr>
<td>16</td>
<td>25.0</td>
<td>8.2</td>
<td>50.3</td>
<td>44.3</td>
<td>39.7</td>
<td>36.7</td>
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<tr>
<td>20</td>
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<td>48.8</td>
<td>42.8</td>
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<td>32.8</td>
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<tr>
<td>31.25</td>
<td>23.6</td>
<td>11.7</td>
<td>45.5</td>
<td>39.9</td>
<td>33.9</td>
<td>30.9</td>
</tr>
<tr>
<td>62.5</td>
<td>21.5</td>
<td>17.0</td>
<td>41.4</td>
<td>35.4</td>
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</tr>
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<td>38.3</td>
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</tr>
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<tr>
<td>350</td>
<td>16.3</td>
<td>44.9</td>
<td>30.1</td>
<td>24.2</td>
<td>12.9</td>
<td>9.9</td>
</tr>
</tbody>
</table>

**EVERYTHING FOR THE INTERSECTION AND BEYOND**

It is our mission to *Stock*. Let us know what we can stock for you.

At Netceed, our people, our philosophy and our commitment to customer service is the difference that allows us to provide our customers with comprehensive solutions to their traffic equipment needs. For over 40 years, we’ve served municipalities and contractors throughout the country - providing a comprehensive range of products from underground to overhead. We offer same-day-shiping and delivery on your urgent requests, along with the expertise to ensure that you receive exactly what you need when you need it - first time, every time. Our manufacturers and the products they produce, have earned a strong reputation for quality and reliability.
TRAFFIC & PEDESTRIAN SIGNALS, HOUSINGS & ACCESSORIES

Traffic Signals Housings

Built to last in any environment, McCain offers an extensive signal portfolio for most applications. The full line of solutions includes traffic signals, pedestrian signals, and signal accessories.

Traffic Signal Housings provide a durable and low-maintenance housing for standard LED modules as well as incandescent and low-maintenance housing for standard Traffic Signal Housings.

McCain Traffic Signal Housing Features:

- Poly and Aluminum
- Increase product durability in extreme or high-wind conditions
- Modular sections, one-piece, injection molded or cast
- 72-tooth serrated boss and reinforcing ribs, top and bottom
- Housings have a cast boss for mounting a 5 or 6-position terminal block; one side of terminal block with fast-on terminals, the other side with screw terminals

Pedestrian Signal Housings

- Poly and Aluminum
- Superior strength and durability
- Increase visibility and impact protection
- Use in any environment
- Remove, reverse or permanently attach door-hinge hardware
- Stainless steel hardware
- Terminal block

Econolite Traffic Signal Housing Features:

- Poly & Aluminum
- Tested to ITE required wind loading on single-point attachment
- Reversible door - left side standard, right side optional
- Doors equipped with two latches
- Provisions for one five-position and one six-position terminal block in each housing

Netceed Stocks a wide range of McCain products - Advanced transportation solutions, trusted by agencies across the nation to safely connect people and places everyday.

Econolite Products also Include:

- Traffic Signal Housings
- Backplates
- Tunnel Visors
- and more...

Pedestrian Push Buttons

Conforms to standards specified in ITE LED Pedestrian Signal Modules

Pelco / Engineered Castings Products also include:

- Astro-Brac Signal Mountings
- Cabinets
- Free-Swinging Signal Mountings
- Rigid Side-of-Pole
- Rigid Post Top
- Sign Mountings
- Pedestrian Push Buttons

Netceed Stocks Engineered Casting by Pelco - Adding Engineered Castings products to its extensive product line, Pelco Products has expanded to encompass all types of mounting hardware, including rigid and free-swinging signal and sign mounts, traffic parts, sign brackets, lighting, flasher cabinets, push buttons, copper theft deterrent products, and much more.

TRAFFIC & PEDESTRIAN SIGNALS, HOUSINGS & ACCESSORIES

Traffic Signals Housings

Duralight and GE have been manufacturing traffic signals and commercial traffic products almost since their invention. These manufacturer’s LED signal modules not only meet the specifications of ITE and many states/local government agencies, but also are certified by ISO9001 Quality Control System. LED traffic signal modules exceed the highest level of specifications set forth by federal, state, and local government agencies.

LED Traffic Signals

- Compliance with latest ITE specifications
- Low power consumption & long operating lifetime LEDs
- Retrofit design & UV stabilized lens
- Full compatibility with NEMA controllers/conflict monitors
- Uniform incandescent appearance

Pedestrian Countdown Lamps

- Compliant with the latest ITE specifications
- Retrofit design & UV stabilized lens
- Fully compatible with NEMA controllers/conflict monitors
- Conforms to standards specified in ITE LED Pedestrian Signal Modules

Netceed Stocks Engineered Casting by Pelco - Adding Engineered Castings products to its extensive product line, Pelco Products has expanded to encompass all types of mounting hardware, including rigid and free-swinging signal and sign mounts, traffic parts, sign brackets, lighting, flasher cabinets, push buttons, copper theft deterrent products, and much more.

Econolite Products also Include:

- Traffic Signal Housings
- Backplates
- Pole & Bases
- Poles
- Traffic Accessories
- Lighting & Pole Solutions

SIGNALS & SIGNAL HARDWARE
EVERYTHING YOU NEED IN THE INTERSECTION

- STOCKS
- PRE-ASSEMBLES
- CUSTOM CUTS
- SAME DAY SHIPPING
- DISASTER RECOVERY

MacLean Power Systems is a leading manufacturer of Pole Line Hardware and connection products, as well as insulation and protection products. Netceed stocks a wide range of MPS products, including:

**POLE LINE HARDWARE**

- **Strandvise®**
  - For deadend applications with overhead or down guy wire. Rated to hold a minimum of 90% of RBS of the strand used.
  - J1096 or SI-1740 5/8” Clamp Bolt Diameter

- **Cable Suspension Clamps**
  - Cable suspension clamp with curved ends to prevent damage to the messenger.
  - JB225 Crosby Forged Wire Rope Clip

- **Crosby Clamps**
  - A strong economical means of securing down guys and wire ropes. The steel U-bolt and malleable iron base are both hot dipped galvanized.
  - WRIN2X14 2” x 1/4” Cable Ring

- **Eynuts**
  - Hot Dip Galvanized, Twineye and Tripleye are all used with PH-style anchor rods.
  - J8563 5/8” Square Nut

- **Guy Strain Insulators**
  - Can be installed anywhere on the guy wire. Helps protect against stray current.
  - Lewis Split Grip Model LSR - Designed for all phases of suspension or pulling, where neither end of the conductor is available and ‘middle of the run’ application of the grip is desired. Available in 3/4” to 5”.

- **Screw Anchors**
  - An integral forged eye anchor with a helix welded to the shaft and for manual or machine installation.
  - J9420 5/8” x 20” Oval Eye Bolt

- **Oval & Aluminum Pedestrian Signal**
  - Designed to support heavy cables.
  - Available in various materials and sizes depending on application.

Pulling Grips from Lewis Manufacturing are Wire Mesh Grips that have been a popular and effective means of pulling power cables, fiber optics cables, and ropes overhead or underground and stress free suspension of power and data cables.

**SIGNALS & SIGNAL HARDWARE**

**POLE LINE HARDWARE**

- **MacLean Power Systems**

- **POLY & ALUMINUM PEDESTRIAN SIGNAL**
  - Designed to support heavy cables.
  - Available in various materials and sizes depending on application.

- **CABLE SUSPENSION BOLT**
  - Machine Bolt
  - Thimbleye Bolt

- **SADDLE BRACKET**
  - Adjustable Hanger Assembly
  - Cable Suspension Clamp

- **Camera Mounting Bracket**
  - Camera Span Wire Mount

- **Tether Assembly**
  - Assembly

- **Poly & Aluminum Traffic Signal Housings**
  - Reflective Backplates
  - Tunnel Visors

- **REL5202 3/8” Strand Vise**
  - J652WSCA 8” Helix 66” Shaft Screw

- **Cable Suspension Clamps**
  - Cable suspension clamp with curved ends to prevent damage to the messenger.
  - JB225 Crosby Forged Wire Rope Clip

- **Cable Rings & Cable Ring Saddles**
  - Designed to support heavy cables.
  - Available in various materials and sizes depending on application.

- **Cable Suspension Bolt**
  - Machine Bolt
  - Thimbleye Bolt

- **Oval & Aluminum Pedestrian Signal**
  - Designed to support heavy cables.
  - Available in various materials and sizes depending on application.

- **Cable Rings & Cable Ring Saddles**
  - Designed to support heavy cables.
  - Available in various materials and sizes depending on application.

- **Cable Suspension Bolt**
  - Machine Bolt
  - Thimbleye Bolt

- **No-wrench Screw Anchors**
  - An integral forged eye anchor with a helix welded to the shaft and for manual or machine installation.

- **Guy Strain Insulators**
  - Can be installed anywhere on the guy wire. Helps protect against stray current.

- **Screw Anchors**
  - An integral forged eye anchor with a helix welded to the shaft and for manual or machine installation.

- **Oval & Aluminum Pedestrian Signal**
  - Designed to support heavy cables.
  - Available in various materials and sizes depending on application.

- **Cable Suspension Bolt**
  - Machine Bolt
  - Thimbleye Bolt

- **No-wrench Screw Anchors**
  - An integral forged eye anchor with a helix welded to the shaft and for manual or machine installation.

- **Guy Strain Insulators**
  - Can be installed anywhere on the guy wire. Helps protect against stray current.

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- **Oval & Aluminum Pedestrian Signal**
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**PEDESTRIAN CROSSING HARDWARE**

Netceed provides Traffic Signal and Pedestrian Crossing Hardware that meets the needs of the traffic industry by providing the highest quality products from the industry's most respected manufacturers. Innovative designs lead the way with products that withstand the dynamic effects of nature, while adding value to any project. Netceed is dedicated to meeting the needs of our customers while adhering to regulatory requirements based on quality management principles.

**Side of Pole Kit**

Side-of-Pole assemblies are designed to mount traffic and pedestrian signals on the side of traffic signal poles with an upper and lower arm. Available in black.

**Push Button**

State-of-the-art, impact and vandal-resistant with high strength die cast construction.

**Stud Closure**

Mono Stud Close-out for pedestrian and signal housings.

**Collar Assembly**

Reinforcement collar to stabilize pedestal pole.

**Pole Cap Assembly**

Close-out for top of pole.

**Slip Fitter Assembly**

Post Top Slip Fitters are available in aluminum, 1-1/2” NPS, tri-bolt or tri-stud.

**CPI Base - Pedestrian Pole Base Kit includes:**

- Pole
- Base
- Anchors

**All available in black**

**Pedestrian Signage**

Provide advisory information for pedestrians using full-color text, symbols and pictures.

**MAST-ARM HARDWARE**

Pelco's Mast-arm mounting systems are used for signs, cameras, sensors and virtually any size or combination of signals, to mast arms and poles. The Mast-arm bracket is fitted with cables or bands and can rotate 360 degrees. Post Top, Side-of-Pole, Span Wire, or Mast Arm mounts in aluminum, iron, or bronze can provide the solution to any traffic mounting application while meeting municipalities standard specifications.

**Camera Brackets**

Netceed stocks adjustable brackets for cameras, sensors and antennas that can mount a variety of traffic industry devices. Video Detection camera brackets are available for mast arm, post top, span wire or side-of-pole applications.

**Free Swinging Mast-arm Sign Brackets**

Sign brackets in rigid and free-swinging mounts for both flat and internally illuminated signs. Most sign-bracs are available with a cable, band, or tenon mount clamp kit.
TRAFFIC ACCESSORIES

Condux International, the premier manufacturer of underground and overhead cable installation tools and equipment for the telecoms and electric power markets. Condux machines allow safe, quick and easy installation of fiber optic cable and power cables.

CONDX From Fiber Optic Cable Blowers to Pullers, and Everthing in Between

The Condux Gulfstream™ 400 Fiber Optic Cable Blower is designed for the installation of fiber optic cables with diameters from 0.23” to 1.13” into microduct. The Condux Gulfstream™ 400 Fiber Optic Cable Blower is ideal for “Last Mile” Fiber Installations.

The Condux Fiber Optic Cable Puller sets new standards for safe, accurate pulling of fiber optic cables. Only the Condux puller can offer load cell torque input for the most accurate tension measuring available.

Duct Rodders combine ease of operation and reliable performance to help increase the efficiency of your rodding operations. Cages have been designed to be lighter weight for easy handling in the field.

The Power Dart Blower provides a method to install Pull String or Pull Tape into longer duct runs without the need for an air compressor. Utilizing three independent, high volume blower motors, this unit delivers enough to blow 1/2” pull string or pull tape 2000’ into conduit up to 6” in diameter.

The TurboSlitter and Turbo Splitter Pneumatic from Condux can easily split HDPE pipe with wall thicknesses ranging from 0.097 to 0.216 inches. Available in two styles, pneumatic and cordless drill attachment. The cordless drill attachment quickly adjusts to fit almost any rechargeable drill, 14-volt and larger.

Designed to meet common dimensional specifications, the Champion Swivels are designed for underground and overhead cable pulling applications. Clevis pin is easily replaceable. Versatile clevis provides efficient link for several applications. Stainless steel construction with 10,000 lbs (44,480 N) load capacity.

Features:
- No special tools are required
- Seamless installation
- Condenses air, reducing the number of tools needed
- Premium conduit for steel winch line, tape, and rope

Advantages:
- Hydraulic boom arm extension
- Adjustable outriggers
- Easy to access maintenance components
- Traffic cone holder

TRAFFIC ACCESSORIES

The Condux Winch Line Blower is a tool for installing winch line, rope, or pull tape into the conduit. It turns the job of placing winch line into one easy step, eliminating the need to blow a string and pull back a rope.

Features:
- Using compressed air, 90 psi (6.2 bar) and 100 cfm (2.8 cmm), the winch line blower can propel steel winch line, rope, or tape into conduit from 1” to 6” in diameter. Installation is easy. No special tools are required.
- The Condux Winch Line Blower Head
- Nylatron Rollers - Super hard surface
- Anti-twist Rope - 3,000’ of 3/8” rope comes standard
- 7” Color Display - Gives all of the information you need during the pull, plus wireless remote

Traffic Cone Holder

Self-supported Boom Arm - 150° lateral & 85° vertical movement

Heavy Duty Outriggers - For maximum stability

Oil Cooler - Hydraulic puller units with oil cooler provide a smooth operation throughout the pull.

Winch Line Body

Winch Line Blower Head

Split Threaded Duct Adapter

Features:
- Hydraulic boom arm extension
- Adjustable outriggers
- Easy to access maintenance components
- Traffic cone holder

Advantages:
- Wireless remote provides maximum flexibility for operator
- Easy Set-Up
- Rugged design to withstand harsh conditions
- Easy layout for maintenance and service
- Hydraulically controlled arm and outriggers
- Superior factory service and support

Rope to Rope / Grip Clevis

Champion Swivels

Rope Venturi
TRAFFIC ACCESSORIES

A leading manufacturer of Pipeline Markers, Utility Signs and Marker Posts with over 25 years of experience in identifying and marking buried utilities. Products are made from formulated engineered resins to perform in harsh weather conditions to identify, prevent damage and dangerous accidents.

PRO-MARK
UTILITY SUPPLY INC.

ETCO Specialty Products, Inc.

ETCO is a manufacturer of specialty fittings for the traffic and utility industries.

ETCO E-Loc® Coupling

The ETCO E-Loc® Coupling is a compression coupling used to provide a watertight / airtight connection in buried or restrained applications. The ability to join dissimilar materials, such as, PVC, HDPE, fiberglass, or metal makes the E-Loc® a versatile coupling for traffic control, telephone, electrical, and cable industries. E-Loc® Couplings are available to fit conduit sizes from ½” through 8”. Couplings are watertight to 200 psi restrained on smooth wall, ribbed and corrugated duct.

HDPE CONDUIT

WL Plastics is the ideal producer of polyethylene pipe in North America. HDPE pipe provides durability to avoid the high cost of replacement or rehabilitation. WL Plastics best-in-class manufacturing processes and experienced production personnel help make WL one of the most efficient producers of HDPE pressure pipe in the industry.

Milliken's industry-leading OptiCell technology expands your network and optimizes your operational capabilities. With OptiCell, organizations can minimize the cost of their network construction by maximizing cable capacity. Fitting more cables into one conduit allows OptiCell to reduce installation times, minimize material costs and eliminate the need for new network construction.

Pull Tape

Pull Tape for cable technology, made of low friction, high tenacity - abrasion resistant yarns is a powerful new pull tape that offers unmatched levels of accuracy, legibility, softness and durability. Pull tape improves productivity and reduces total cost by eliminating rework and scrap. The unique Mprint process increases print durability and ensures print length accuracy while our production process ensures a softer feel.

Available in 1250/1800/2500 lb. options and in Standard, Detectable, and Color-coded options.

Features:

• Extraordinary print legibility and durability
• 99% print length accuracy
• Increased softness for easier knotting
• Specialty tape offered with a colored thread for easy identification when pulling cable into multiple cells
• Specialty tape offered with a 22AWG detectable wire
• Packaging: UV resistant white plastic wrap
• Detectable wire is a 22AWG solid tinned copper conductor, 23 ohms per mile resistance
• Color coded threads for easy identification - Available colors: blue or orange

Specifications:

• Tensile Strength 1250/1800/2500 lb. (Min)
• Working Load 1250/1800/2500 lb.
• Color White
• Print Color Black
• Pre-lubricated with silicone
• Printed with sequential foot markings

I am most thankful for my customers. Sometimes the questions are complicated but the answers are simple. My customers motivate me to be on the top of my game, so they are on the top of theirs.

Rob Ricks - Director of Traffic Business Development

From the moment I walk through the doors, to the time the doors swing behind me, it’s always full-speed ahead! My warehouse hums and my forklift is my best friend. If you enter, look both ways!

John Nashburn - Warehouse Supervisor and Expert Forklift Driver
STAT-A-FLEX® is a two part polyester resin loop sealant formulated for encapsulating and sealing traffic signal wire in road surfaces. STAT-A-FLEX® product can be made to resemble cement coloring as well as black for the desired circumstances. STAT-A-FLEX® is easily mixed and applied. It cures quickly and produces a tough weather and chemical resistant seal. STAT-A-FLEX® provides maximum protection of all embedded signal wire. STAT-A-FLEX is approved for use in most state DOT's for public roadway applications.

Bondo® Traffic, P-606 Flexible Loop Sealer with Hardener is highly durable and remains permanently flexible. This loop sealant can withstand the corrosive effect of road salts, automotive fluids, jet fuel, gasoline and extreme weather conditions. Bondo has been engineering and manufacturing professional products for the traffic control industry for over 37 years. During this time Bondo has remained committed to understanding customers’ needs and then developing products that meet and exceed those needs.

Bashlin’s new 88FFX4D 4 D-Ring Climbing Belt is the only belt currently on the market that allows the worker to easily adjust both upper and lower sets of D-rings for a custom fit. This unique dual semi-float design allows both the upper and lower set of D-rings to move freely to improve comfort. The innovative design allows this belt to be adjusted to fit three different D-sizes to maintain proper fit without sacrificing comfort. This adjustability lets the user quickly adjust the belt to accommodate heavier clothing in inclement weather or for changes in the user’s weight over time.
Strength, performance and quality have been hallmarks of all Hubbell underground enclosure brands for more than 40 years. The industry leader for applications in non-deliberate traffic areas, these enclosures provide rugged and cost-effective protection for a variety of electric utility, commercial & industrial, communications, water and gas equipment while meeting the specific demands of our industry.

Hubbell Quazite Pull Boxes employ a Polymer concrete made from select-grade aggregates in combination with a polymer resin system. When combined through a process of mixing, molding, and curing, an extremely powerful cross-linked bond is formed. Precast polymer concrete is reinforced with fiberglass to give it additional strength and rigidity.

Pencell Pull Boxes use structural foam molded High Density Polyethylene (HDPE), a light weight, high strength plastic molding process that provides outstanding structural integrity and durability. HDPE enclosures are mated with covers made from a variety of materials: HDPE, polymer concrete or steel. This combination creates a highly versatile choice for underground utility enclosures where low weight and high strength are necessary.

Do it right the first time. Always quality over quantity.
Lou Mennella - Netceed Warehouse Manager (and man of few words)

I have worn many hats at Netceed over the course of the years. With each job I have learned something new, and that's what makes the job enjoyable. The warehouses are the heart of the operation in my book, and I keep it pumping!
Danny Oakes - Netceed Warehouse Associate & Headend Assembly Guru

Today’s ultra-high tech networks provide the foundation necessary for delivering a wide spectrum of advanced interactive services to consumers. Netceed’s fiber optic products offer flexibility, scalability and manageability, giving them timeless value and cost-effectiveness to adapt to an ever-evolving market.

Public networks for video, data and voice are using more and more optical fiber. Fiber-based communications networks have clear advantages over other media in cost, reliability, and capacity, spurring increased deployment on high-density, high capacity networks. Smart public network applications are making wide-spread and growing use of fiber optics. This growth means that millions of fibers are terminating in Central Offices (COs) and cable-TV operation centers. Netceed stocks a full line of fiber optic networking and termination products for every application - large or small.

Gabriel Rodriguez - Netceed Warehouse Associate
**NEW MANUFACTURERS - NEW OPPORTUNITIES**

Netceed's All-Dielectric Self-Supporting (ADSS) Loose Tube Fiber Optic Cable is designed for outside plant aerial applications and is the best choice for aerial cable spans. This cable's low-cost installation, compact size and specialized design make it the ideal, cost-effective cabling solution for FTTH and self-supporting aerial applications.

**Features:**
- Custom engineered for operation under full load
- Guaranteed standards-based performance
- Immune to electromagnetic fields
- Various span distances
- Easy mid-entry is ideal for FTTH distribution applications
- Flexible buffer tubes simplify routing, storage and prep
- Available in Singlemode loose tube

**Netceed's Fiber Optic Drop Cable** uses special low-bend-sensitivity G.657A1 fiber, providing greater bandwidth and excellent communication transmission properties. Two parallel strength members (non-metallic FRP), ensures the optical fibers are protected. The low smoke zero halogen (LSZH) flame-retardant jacket allows for safety and environmental protection. The cable is lightweight with a flute design which can be easily stripped and spliced, simplifying installation and maintenance. The messenger enhances the overall tensile strength of the cable.

**Features:**
- Fiber(s) center, 2 FRP strength members (1@side, 0.5mm diameter)
- FRP strength members
- Optical Fibers
- LSZH jacket
- Loose Tube
- Core Wrapping
- Water Blocking Yarn
- Rip Cord
- Strength Member
- Armoring
- Outer Jacket
- Water Blocking Yarn
- Core Wrapping
- LSZH Jacket
- Optical Fibers
- FRP Strength Members
- Messenger / Tone wire
- Sheath Color: B-Black, W-White, G-Gray, U-Blue

**NEED TO KNOW**

- **MADSS012SM-XXX**
  - Length: 350/600 Foot Span
  - 12 fibers per tube
  - SM: Single Mode, MM: Multi-mode
  - Fiber Count: 12, 24, 48, 96, 144

- **MARMLT012SM**
  - SM: Single Mode
  - Fiber Count: 12, 24, 48, 96, 144

- **MFTTX-A-2-SMA-B-M**
  - M=Messenger/Tone Wire
  - Sheath Color: B-Black, W-White, G-Gray, U-Blue
  - Type: SM: G.657A1 Singlemode, MM: Multi-mode
  - Number of Fibers: 1-6

Netceed's armored fiber optic cable has a build-in metal armor inside the outer jacket, armored cable provides extra protection for fiber optic cable, without sacrificing flexibility or functionality within fiber networks. Armed fiber cable is more robust and reliable when encountered with rodent, moisture and other issues that may cause damage. The superior features make armored fiber cable a perfect fit for applications that require high flexibility and durability when used in harsh environments or limited space.

**Features:**
- Loose tube
- Singlemode and Multi-mode
- Fiber counts from 12 to 144
- Smaller, more flexible tubes for easier installation and routing
- PE coated armor offers additional crush resistance and protection from rodent attack
**JUMPER CABLES**

Singlemode fiber optic jumpers, or patch cables, come with a 9 micron diameter glass core. With the cladding layer, they are 125 micron, and with the buffer layer they are 250 micron.

Singlemode cables have a smaller glass core than multimode cables and because there is less dispersion of the light signal in the fiber, they can transmit the signal a greater distance.

Netceed’s Fiber Optic Jumpers have a Low Smoke Zero Halogen (LSZH) jacket, and are manufactured using either singlemode or multi-mode fiber and terminated with a range of connectors including SC/UPC, SC/APC, LC/UPC, LC/APC, FC/UPC, FC/APC, and ST/UPC. Other connector types are also available upon request.

**Features:**

- Corning fiber used in all jumpers and pigtails
- LSZH Jacket on all fiber varieties
- G.657.A2 Certified
- 2mm jacket for more flexibility and capacity in tight spaces
- Custom lengths and colors
- Meets all standard panel interfaces
- All cables serialized and test results are recorded
- High bandwidth, high tensile strength, small bend radius

**FOJ3-xM-SM-xx/yyy-S-xx/yyy-AL**

- FOJ = Fiber Optic Jumper
- xM = Length in Meters
- SM = Singlemode
- xx = 1st Connector Type (A=SC, B=FC, C=LC)
- yyy = 2nd Connector Type (A=UPC, B=APC)
- S = Simplex
- AL = Jacket Material (L=LSZH, O=OFNP, P=PVC)

**Applications:**

- Termination of optical networks via fusion or mechanical splicing
- Testing of optical devices
- Cable acceptance testing

**PIGTAILS**

**Features:**

- Machine polishing ensures highest quality connector terminations and performance
- LSZH jacket on all fiber varieties
- Bundled with jacketed connector ends as required
- Low insertion and return loss
- Traceable, standards-based testing procedures
- Geometry compliant connector endfaces that are defect and contamination free

**Applications:**

- Termination of optical networks via fusion or mechanical splicing
- Testing of optical devices
- Cable acceptance testing

**Parameter**

- Specification

**Connector**: SC/FC/LC to SC/FC/LC, and as required

**Fiber Mode**: Singlemode: G.652D, G.657A2, D51, D52 Multi-Mode: 62.5/125μm OM1, OM2, OM3

**Polish**: APC, UPC

**Fiber Type**: Simplex, Duplex

**Insertion Loss**: Singlemode: ≤0.2dB Multi-mode: ≤0.3dB

**Return Loss**: Singlemode: ≥50dB APC, ≥60dB UPC Multi-mode: ≥35

**Wavelength**: Singlemode: 1310 - 1550nm Multi-mode: 850 - 1310nm

**Jacket Material**: LSZH - IEC60332-3, IEC60754-2, IEC61034-2 Compliant

**Jacket Outside Diameter**: 2.0mm, 3.0mm

**Operating, Storage Temp**: -40 - 75°C, -45 - 85°C

**Compliance**: Telcordia GR-20-CORE, GR-326 and TIA/EIA 568C, RoHS

Netceed’s Fiber Optic Pigtails are manufactured using either Corning singlemode or multi-mode fiber and terminated with a range of single connectors including SC/UPC, SC/ APC, LC/UPC, LC/APC, FC/UPC, FC/APC, and ST/UPC. Other connector types are also available upon request.
The Netceed Variable Attenuators are designed to give the accurate attenuation required by the connected device and are available in a wide range from 0dB to 60dB of attenuation levels by turning the thumb screw.

With excellent characteristics, variable fiber optic in-line attenuators can be used in fiber optic telecommunication system and optical transmission systems. These attenuators can be applied in FTTH, CATV, LAN, fiber optical sensor and subscriber loops.

**Features:**
- High precision attenuation value
- Wide attenuation range 0 to 60dB
- Low insertion loss
- High environmental stability and reliability
- Easy installation
- RoHS compliant

### Variable Attenuators

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer Mode</td>
<td>Singlemode (SM) &amp; Multi-Mode (MM)</td>
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<tr>
<td>Operating Wavelength (nm)</td>
<td>1310-1550 (SM), 850-1300 (MM)</td>
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<td>Fiber Connector</td>
<td>LC/SC/FC/ST</td>
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<tr>
<td>Attenuation</td>
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<td>Attenuation Accuracy</td>
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<td>Minimal Insertion Loss</td>
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<td>Zirconia Ceramic</td>
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<td>Operating Temperature</td>
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<td>Storage Temperature</td>
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<td>Humidity</td>
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</tr>
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</table>

**Mating Sleeves**

- **SC/UPC to SC/UPC**
- **SC/APC to SC/APC**
- **LC/UPC to LC/UPC**
- **FC/APC to SC/APC**
- **LC Female to SC Male**
- **FC/UPC to FC/UPC**

Netceed Fiber Optic Mating Sleeves, also known as Adapters or Couplers, are used to provide a cable to cable or cable to equipment fiber optic connection. We supply a wide range of mating sleeves and hybrid adapters, including special male to female hybrid fiber optic mating sleeves.

**Features:**
- Use in Singlemode applications
- Free-hanging or panel-mount design
- Dust caps protect against debris and contamination
- RoHS Compliant

**Functions:**
- A cable to cable fiber optic connection
- Cable to equipment fiber optic connection

**Compliance**
- Telcordia GR-20-CORE, GR-326 and TIA/EIA 568C, RoHS

### Fixed Attenuators

- **FOATT-XX/XXX-XDB**
- **FOVL-XX/XXX-XDB**

Fixed-value Attenuators reduce the signal level without appreciably distorting the waveform. Available in 1dB increments. All connector types available.

### PLC Optical Splitters

- **FOSPLF-C-1/8-60/40-SM-SC/APC**
- **FOSPLF-C-1/16-60/40-SM-SC/APC**
- **FOSPLF-C-1/32-60/40-SM-SC/APC**
- **FOSPLF-C-1/64-60/40-SM-SC/APC**

The Netceed fiber optic line of PLC Splitters include Tube, Box, LGX Cassette and Rack Mount configurations. They offer superior performance and field-proven reliability in harsh environments.

Our Planar Lightwave Circuit (PLC) splitters are fabricated using silica optical waveguide technology. Features include small size, high reliability and a wide operating wavelength. The PLC Splitter is widely used in all fiber optic networks to perform optical signal power splitting. All products are GR-1221-CORE compliant.

**Features:**
- Low insertion loss
- Even or various splitting ratios
- 1x2 through 1x64 configurations
- Bidirectional, compact
- Environmentally stable
- Wide wavelength range
- High uniformity
- Telcordia GR-1221-CORE compliant
Today’s FTTH systems demand innovative products for a variety of applications. The Netceed WDM (Wavelength Division Multiplexor), supports any 2-way RFoG/PON services operating with a 1550/1490nm Forward Path and 1310/1590/1610nm Return Path - over a single fiber - for seamless integration of video, voice, and data services.

Wavelength Division Multiplexing (WDM) is a fiber-optic transmission technique that enables multiple light wavelengths to travel on one fiber at differing wavelengths or frequencies on the optical spectrum.

Applications:
The WDM is ideally suited for use in two-way and high density MDU, CATV, PON, FTTH and RFoG applications, as well as in many other fiber optic-based data, video, and voice networks.

Features:  
- Standard LGX form factor  
- Mounts in a standard LGX chassis  
- Low insertion loss  
- Ultra-high isolation  
- Wide operating temperature range  
- Telcordia GR-1221-Core compliant  
- Front-located ports for easy access  
- All connectors are SC/APC design for optimal power and reliability

Applications:
Optical Access Network, WAN, LAN, CATV Systems

Today’s FTTH systems demand innovative products for a variety of applications. The Netceed WDM (Wavelength Division Multiplexor), supports any 2-way RFoG/PON services operating with a 1550/1490nm Forward Path and 1310/1590/1610nm Return Path - over a single fiber - for seamless integration of video, voice, and data services.

Wavelength Division Multiplexing (WDM) is a fiber-optic transmission technique that enables multiple light wavelengths to travel on one fiber at differing wavelengths or frequencies on the optical spectrum.

Applications:
The WDM is ideally suited for use in two-way and high density MDU, CATV, PON, FTTH and RFoG applications, as well as in many other fiber optic-based data, video, and voice networks.

Features:  
- Standard LGX form factor  
- Mounts in a standard LGX chassis  
- Low insertion loss  
- Ultra-high isolation  
- Wide operating temperature range  
- Telcordia GR-1221-Core compliant  
- Front-located ports for easy access  
- All connectors are SC/APC design for optimal power and reliability

Applications:
Optical Access Network, WAN, LAN, CATV Systems

Netceed’s Rack-Mounted LGX Cassette Chassis is designed for use with any standard plug-and-play single, double and triple wide LGX 2 to 32 port cassette splitter modules in FTTX networks.

These chassis are ideal for use in mid-rise and high-rise Multiple Dwelling Unit (MDU) equipment rooms suited for centralized Optical Network Terminal (ONT) applications.

Features:  
- Complies with all LGX Form Factor Cassette Splitter Modules  
- 4 RU  
- Transparent dust cover on front hinge

Applications:
Optical Access Network, WAN, LAN, CATV Systems

Today’s FTTH systems demand innovative products for a variety of applications. The Netceed WDM (Wavelength Division Multiplexor), supports any 2-way RFoG/PON services operating with a 1550/1490nm Forward Path and 1310/1590/1610nm Return Path - over a single fiber - for seamless integration of video, voice, and data services.

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- Ultra-high isolation  
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Features:  
- Complies with all LGX Form Factor Cassette Splitter Modules  
- 4 RU  
- Transparent dust cover on front hinge

Applications:
Optical Access Network, WAN, LAN, CATV Systems
The Netceed 1 RU Patch & Splice Enclosure is designed to accept up to 3 LGX Adapter Panels with the ability to use a full array of connector types. This enclosure offers a flexible solution, enabling the incorporation of a multi-functional chassis that allows easy access during installation or re-work with no disturbance of the existing fiber cable - making this one of the most flexible enclosures on the market.

This Patch & Splice Enclosure can be custom loaded with the exact Adapter Panels and Pigtailed needed for your specific application, or the chassis can be purchased empty.

Features:
- Custom loaded to your specific configuration
- 1.5M Pigtailed included in loaded enclosures
- Splice tray and cable management spools included
- Hinged front and rear Plexiglass doors
- Side patch and exit ports
- Fully removable sliding-out tray for easy access
- Assorted strain relief and fiber accessories included
- Provides higher patch field density in fewer rack units saving valuable rack space
- For your specific application, or the chassis can be purchased empty.

Netceed’s Fiber Optic Adapter Panels are compatible with all LGX style rack and wall fiber distribution units. Panels are available in Simplex and Duplex adapter formats.

Features:
- LOX form factor compatible with Multilink, AFL, Wirewerks, FIS, and other rack and wall fiber distribution units
- RoHS Compliant
- Loaded with TIA/EIA-604 FOCIS-3/10 compliant adapters
- Built with ceramic split sleeves to fit specific network requirements
- 18-gauge cold rolled, electostatic polyester powder coated steel
- All panels are pre-loaded for quick deployment

Installation Example:
1. Insert the retention cap on the end of the cable and slide yellow locking slider to the unlock (leftmost) position before inserting fiber.
2. Insert the fiber along the fiber guide on the connector until it stops and arches up slightly.
3. Push the yellow locking slider into the locked (rightmost) position before inserting fiber.
4. Screw on the retention cap and add the connector housing. Clean the fiber connector end surface.
NETCEED.COM

SPLICE-ON FIBER OPTIC CONNECTORS

Low loss fusion spliced connectors are easy to prepare, splice and install in the field, making them the convenient choice for network technicians.

Once the heat shrink splice sleeve is installed on the fiber optic cable and cable housing, it forms a permanent protective bond that helps to ensure excellent network performance.

The Netceed Splice-on Fiber Optic Connectors are fusion-spliced, field-installable connectors uniquely designed for ease of use and minimal loss. The factory pre-polished zirconia ferrule eliminates the need for polishing, adhesives, and crimping in the field, decreasing the potential for operator error. These connectors utilize the Netceed MUL-FSPLICE-300 Fusion Splicer and are compatible with many other fusion splicer platforms to terminate the connector in the field, addressing return loss concerns present in optical networks. This advanced process is compliant to GR-326-CORE.

Features:
- Quickest pre-cleaved, factory terminated pigtail to prepare, splice, and install
- Splice sleeve protects your splice
- Custom strain relief retention cap holds fiber firmly in proper alignment
- Precision machined connector holders
- Available in APC and UPC versions
- Meets or exceeds industry standards for return loss
- Ferrules are made of zirconia
- Heat shrink sleeve and connector housing included

Netceed’s MUL-FSPLICE-300 uses 6 Motor Technology:
- 2 Driving Motors
- 2 Aligning Motors
- 2 Focusing Motors – These critical motors are not included in 4 Motor Fusion Splicers

Features:
- FAST 7 Second Splicing (optional)
- ULTRA-FAST 9 Second Heat Shrinking (optional)
- Drop/Impact, Dirt/Dust and Water Resistant
- 6 Motor Precision Mechanism
- 5-direction Anti-shock
- Core-to-Core, State-of-the-Art Fiber Profile Alignment System (PAS)
- 3 Year Domestic Warranty - USA Service and Support
- Quick-change Rechargeable Lithium Battery
- German Design, USA & Japanese Technology
- Titanium Alloy Body/Frame
- High Performance Processor Board

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- 2 Driving Motors
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- 3 Year Domestic Warranty - USA Service and Support
- Quick-change Rechargeable Lithium Battery
- German Design, USA & Japanese Technology
- Titanium Alloy Body/Frame
- High Performance Processor Board

The tough and rugged Netceed MUL-FSPLICE-300 Core-to-CORE Alignment Fiber Optic Fusion Splicer is drop/impact, dirt/dust and water resistant. Netceed is proud to provide a 3 Year USA Warranty, and all USA Service and Support.

The Fusion Splicer employs high-speed image processing and special positioning technology allowing the fusion splicing to be completed in as little as a FAST 7 seconds and can heat shrink in as little as an ULTRA-FAST 9 seconds. The splicer is compact in size, lightweight, and is ideal to work just about anywhere including harsh outdoor environments, dark and remote worksites.

Additional Features:
- Handy, easy-to-carry, solid and durable with shock-resistant design
- Enhanced windproof fusion area cover
- Color HD 5” LCD display and graphical interface
- English, Spanish and French languages, user-selectable
- Single X or Y view, or X and Y simultaneously - up to 400x magnification
- High quality electrodes with up to 3,500+ splicing cycles
- Easy user-replaceable electrodes design (set of spares is included)
- Wide range of fusion and heating parameter defaults and options
- Built-in temperature, humidity, air pressure sensors and automatic arc correction
- Intelligent power indicator, auto power-off and quick-change battery
- Built-in heat shrink heater: Easy to use, quick, customizable parameters
- Data reports can be downloaded to PC and system upgrades can be uploaded via USB port and cable
- Built-in work lights make optical-fiber placement easier and more accurate, even at night or in dark work areas

M-FOCON-SO-SC/XXX-EK

I’ve been working at Netceed for over 20 years, and to be honest, no two days are the same. I mean, imagine the products I was marketing two decades ago! As products evolve, I evolve - sink or swim! Dominic Ruggiero - Netceed Sales Executive and Certified Fiber to the Home Professional (CFHP)
Fiber Optic Fusion Splicer Kit

- Heavy Duty Carrying Case
- MUL-FSPLICE-300 Fiber Optic Fusion Splicer with Universal Fiber Holder
- Quick-change Rechargeable Lithium Battery
- Precision Optical Fiber Cleaver
- Splice-on Connector Adapter

Operating Manual
Cleaning Alcohol Dispenser
AC Adapter
Cleaning Bulb
Heat Shrink Cooling Tray
Work Shelf
Nonconductive Tweezers
Sheathing Stripper
Spare Electrodes
3-Hole Fiber Stripper
USB with Operating Manual

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicable Optical Fiber Types</td>
<td>SM (G652/G657), MM (G.653), DS (G.653), NZD S (G.655), EDF, BIF, UBRF</td>
</tr>
<tr>
<td>Applicable Optical Fiber Core Number</td>
<td>Single Core</td>
</tr>
<tr>
<td>Applicable Optical Fiber Diameter</td>
<td>Cladding Diameter: 80-150μm, Coating Diameter: 125-1000μm</td>
</tr>
<tr>
<td>Fusion Splice Model</td>
<td>Factory: 40 Groups, User Defined: 80 Groups</td>
</tr>
<tr>
<td>Average Fusion Splice Loss</td>
<td>0.02μm (5m), 0.01μm (10m), 0.004μm (20m), 0.004μm (NZDS)</td>
</tr>
<tr>
<td>Return Loss</td>
<td>Better than 60dB</td>
</tr>
<tr>
<td>Fusion Splice Time</td>
<td>10 Sec (Typical Mode), 7 Sec (Fast Mode)</td>
</tr>
<tr>
<td>Fusion Splice Loss Estimate</td>
<td>Displayed at completion of splice process</td>
</tr>
<tr>
<td>Heat Shrink Time</td>
<td>2mm Heating Sleeve (9-15a Adjustable)</td>
</tr>
<tr>
<td></td>
<td>4mm Heating Sleeve (11-15a Adjustable)</td>
</tr>
<tr>
<td>Heating Temperature</td>
<td>Below 230°C (446°F, customizable)</td>
</tr>
<tr>
<td>Automatic Heating Mode</td>
<td>Automatic fiber identification &amp; heat shrinking when cover is closed</td>
</tr>
<tr>
<td>Alignment Modes</td>
<td>Core alignment, Cladding alignment, Manual alignment</td>
</tr>
<tr>
<td>Applicable Optical Fiber Cable Diameter</td>
<td>2mm, 4mm, 6mm</td>
</tr>
<tr>
<td>Applicable Sleeve Length</td>
<td>60mm, 45mm, 40mm (FP-03)</td>
</tr>
<tr>
<td>Tension Test</td>
<td>±2%</td>
</tr>
<tr>
<td>Display</td>
<td>5 inch Color LCD - with English, Spanish, French (user selectable)</td>
</tr>
<tr>
<td>Optical Fiber Magnification</td>
<td>X/Y: 200 times, X or Y: 400 times</td>
</tr>
<tr>
<td>Data Storage</td>
<td>10,000 Records</td>
</tr>
<tr>
<td>Image Storage</td>
<td>10 Images</td>
</tr>
<tr>
<td>Data Interface</td>
<td>USB 2.0</td>
</tr>
<tr>
<td>Power Supply</td>
<td>11.1V Lithium Battery, 13.5V/5A AC Power Adapter</td>
</tr>
<tr>
<td>Battery</td>
<td>Typically 260+ Cycles (Splicing / Heating), Full charge: 3 Hours</td>
</tr>
<tr>
<td>Operating Environment</td>
<td>Recharge Cycle: 500 Times, Quick-change: Plug-in, 6800mAh Li-battery</td>
</tr>
<tr>
<td>Elevation</td>
<td>0 - 5000m, Relative humidity: 0 - 95%</td>
</tr>
<tr>
<td>Temperature</td>
<td>-20°C to 55°C, Maximum wind speed: 15m/s</td>
</tr>
<tr>
<td>Weight</td>
<td>1.5kg / 3.3lb (without battery), 1.81kg / 4.00lb (with battery)</td>
</tr>
<tr>
<td>Corrosion Resistance</td>
<td>Equipment components, parts and materials meet composite anti-corrosion requirements, liquid/spill resistance</td>
</tr>
<tr>
<td>Size</td>
<td>45 x 143 x 158 (mm), 5.7 x 5.6W x 6.2H (in)</td>
</tr>
<tr>
<td>Warranty</td>
<td>3 Year - Domestic, 1 Year - International</td>
</tr>
</tbody>
</table>

FUSION SPICER KIT

- Includes:
  - Fiber Optic Fusion Splicer Kit

Warranty

- 3 Year - Domestic, 1 Year - International
- Domestic, 1 Year - International

Operating Environment

- Elevation: 0 - 5000m, Relative humidity: 0 - 95%
- Temperature: -20°C to 55°C, Maximum wind speed: 15m/s

Power Supply

- 11.1V Lithium Battery, 13.5V/5A AC Power Adapter

Battery

- Typically 260+ Cycles (Splicing / Heating), Full charge: 3 Hours
- Recharge Cycle: 500 Times, Quick-change: Plug-in, 6800mAh Li-battery

Operating Environment

- Elevation: 0 - 5000m, Relative humidity: 0 - 95%
- Temperature: -20°C to 55°C, Maximum wind speed: 15m/s

Weight

- 1.5kg / 3.3lb (without battery), 1.81kg / 4.00lb (with battery)

Corrosion Resistance

- Equipment components, parts and materials meet composite anti-corrosion requirements, liquid/spill resistance

Size

- 45 x 143 x 158 (mm), 5.7 x 5.6W x 6.2H (in)

Warranty

- 3 Year - Domestic, 1 Year - International

OPTICAL TIME DOMAIN REFLECTOMETER WITH LIVE NETWORK TESTING

MUL-OTDR-2100

- The hand-held MUL-OTDR-1100 OTDR is a new generation of intelligent 1310/1550nm singlemode optical-fiber test equipment. OTDRs are widely used in the construction, maintenance, measurement, and emergency repair of optical-fiber communication networks as well as the development, manufacturing and measurement of optical fibers and optical cables.

Netceed’s OTDRs are specially designed for tough outdoor jobs. Lightweight, easy operation, low-reflection LCD and 12 hours of battery life make it perfect for testing fiber optic cable in the field.

MUL-OTDR-1100

- The MUL-FVSCOPE-400 Kit is a handheld video fiber inspection microscope tool that provides a 400x magnification. See details on page 41 for more information.

- Features:
  - MUL-OTDR-2100: Live network testing on 1625nm
  - Auto/manual testing
  - Integrated design with long battery life
  - Outdoor enhanced, smart and rugged
  - 7” anti-reflection LCD touch screen

Netceed’s 2100 Series Optical Time Domain Reflectometer (OTDR) is an enhanced model of the Netceed Series of OTDRs that includes the 1625nm wavelength that allows for live network testing. The OTDR is designed for tough outdoor jobs. Lightweight, easy operation, low-reflection TFT LCD and 12 hours of battery life make it perfect for testing fiber optic cable in the field.

MUL-OTDR-2100

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MUL-OTDR-1100

- The hand-held MUL-OTDR-1100 OTDR is a new generation of intelligent 1310/1550nm singlemode optical-fiber test equipment. OTDRs are widely used in the construction, maintenance, measurement, and emergency repair of optical-fiber communication networks as well as the development, manufacturing and measurement of optical fibers and optical cables.
The MUL-OTDR-500 Comes Equipped with an Array of Additional Features:

- **Optical Power Meter (OPM):** -50dBm to +26dBm range for 850, 980, 1300, 1310, 1490, 1550 & 1625nm wavelengths
- **Visual Fault Locator (VFL):** 10mW output power to help the user visually find fiber faults like breaks & bad splices
- **Optical Light Source (OLS):** 1310 & 1550nm wavelengths with CW, 270 & 330 Hz, 1 & 2 kHz modulation frequencies
- **RF Signal Generator:** 900 & 1900MHz, 0.5mW output power
- **Optical Power Meter (OPM):** 850, 1300, 1310, 1490, 1550, 1625nm
- **Simultaneous Power Measurement:** For XGS-PON networks
- **Fiber End-Face Inspection Microscope:** With image capture for onsite documentation & certification purposes
- **Fiber End-Face Inspection Microscope:** New XGS-PON/10GEPON services on the same PON
- **Optical Power Meter - Test Six Wavelengths:** Compatibility with all PON networks
- **Optical Power Meter - Test Six Wavelengths:** Supports co-existence of G/E-PON and XGS-PON/10G-EPON services on the same PON
- **Optical Power Meter - Test Six Wavelengths:** Simultaneous realtime power level measurements of voice, data, and RF video signals on fiber at 1410, 1550, 1577nm downstream, and 1270nm, 1310nm upstream
- **Optical Power Meter - Test Six Wavelengths:** Separate Optical Power Meter port calibrated to test single and multi-mode fiber at 850, 1300, 1310, 1490, 1550, 1625nm
- **Optical Power Meter - Test Six Wavelengths:** 10mW Visual Fault Locator
- **Optical Power Meter - Test Six Wavelengths:** Stores 10 groups of threshold values for automatic analyzing and display of pass / fail status
- **Optical Power Meter - Test Six Wavelengths:** Save and upload 1,000 records through USB to management software
- **Optical Power Meter - Test Six Wavelengths:** Fiber End-Face inspection Microscope option with image capture for onsite documentation & certification purposes

The Netceed MUL-OPM-XGPON-VFL-400 Optical Power Meter is especially designed for XGS-PON network construction and maintenance. The voice, data, video wavelengths (1270, 1310, 1490, 1550, 1577nm), can be measured synchronously and the corresponding optical power level can be displayed with this meter. The meter will also complete an automatic pass / fail analysis using user-settable thresholds for every wavelength, and both measure and store test results for downloading to a PC.

### XGS-PON POWER METER & END-FACE INSPECTOR

**New!** XGS-PON Power Meter

**Fiber End-face Inspection Microscope with Image Capture Ready**

**Optical Power Meter - Test Six Wavelengths**

**Features:**

- Supports co-existence of G/E-PON and XGS-PON/10G-EPON services on the same PON
- Simultaneous realtime power level measurements of voice, data, and RF video signals on fiber at 1410, 1550, 1577nm downstream, and 1270nm, 1310nm upstream
- Separate Optical Power Meter port calibrated to test single and multi-mode fiber at 850, 1300, 1310, 1490, 1550, 1625nm
- 10mW Visual Fault Locator
- Stores 10 groups of threshold values for automatic analyzing and display of pass / fail status
- Save and upload 1,000 records through USB to management software
- Fiber End-Face inspection Microscope option with image capture for onsite documentation & certification purposes

The Netceed MUL-OPM-XGPON-VFL-400 Optical Power Meter is especially designed for XGS-PON network construction and maintenance. The voice, data, video wavelengths (1270, 1310, 1490, 1550, 1577nm), can be measured synchronously and the corresponding optical power level can be displayed with this meter. The meter will also complete an automatic pass / fail analysis using user-settable thresholds for every wavelength, and both measure and store test results for downloading to a PC.

### FIBER END-FACE INSPECTION MICROSCOPE

**NEW!** FIBER END-FACE INSPECTION MICROSCOPE

**New XGS-PON Optical Power Meter**

**Fiber End-face Inspection Microscope with Image Capture Ready**

**Optical Power Meter - Test Six Wavelengths**

**Features:**

- Supports co-existence of G/E-PON and XGS-PON/10G-EPON services on the same PON
- Simultaneous realtime power level measurements of voice, data, and RF video signals on fiber at 1410, 1550, 1577nm downstream, and 1270nm, 1310nm upstream
- Separate Optical Power Meter port calibrated to test single and multi-mode fiber at 850, 1300, 1310, 1490, 1550, 1625nm
- 10mW Visual Fault Locator
- Stores 10 groups of threshold values for automatic analyzing and display of pass / fail status
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- Fiber End-Face inspection Microscope option with image capture for onsite documentation & certification purposes

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- Separate Optical Power Meter port calibrated to test single and multi-mode fiber at 850, 1300, 1310, 1490, 1550, 1625nm
- 10mW Visual Fault Locator
- Stores 10 groups of threshold values for automatic analyzing and display of pass / fail status
- Save and upload 1,000 records through USB to management software
- Fiber End-Face inspection Microscope option with image capture for onsite documentation & certification purposes

The Netceed MUL-OPM-XGPON-VFL-400 Optical Power Meter is especially designed for XGS-PON network construction and maintenance. The voice, data, video wavelengths (1270, 1310, 1490, 1550, 1577nm), can be measured synchronously and the corresponding optical power level can be displayed with this meter. The meter will also complete an automatic pass / fail analysis using user-settable thresholds for every wavelength, and both measure and store test results for downloading to a PC.
3-in-1 PON Optical Power Meter:

**Features:**
- Tests 3 PON wavelengths simultaneously: 1490nm, 1550nm & 1310nm, and stores the results for downloading
- Power Meter is capable of testing 850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm
- 10mW Visual Fault Locator
- Tests the burst mode RFoG upstream wavelength signal of 1310nm
- Handheld, easy to operate
- 32-bit CPU with 480 x 800 True Color screen with 65,000 colors
- Stores 10 groups of threshold values for automatic analyzing and display of pass / fail status
- Relative value choice and edit function
- USB Flashdrive with Management Software
- Save and upload 1,000 records through USB to management software
- Set the threshold value, upload data, and calibrate to management software
- Relative value choice and edit function
- Auto backlit on (according to set value)
- Auto backlit off (according to set value)
- 3.7V, 6600mAh rechargeable Lithium battery
- Power saving design (low voltage self check and power off)
- Real-time clock display

The Netceed MUL-OPM-PON-VFL-300 PON Optical Power Meter is connected between the OLT and ONT, this PON meter is capable of testing three PON wavelengths simultaneously: 1490nm, 1550nm and 1310nm. It can also test the burst mode RFoG signal of 1310nm.

**PON Power Meter**
- Connected between OLT and ONT, this PON meter is capable of testing three PON wavelengths simultaneously: 1490nm, 1550nm and 1310nm. It can also test the burst mode RFoG signal of 1310nm.
- Power saving design (low voltage self check and power off)
- Real-time clock display

**Features:**
- Tests 3 PON wavelengths simultaneously: 1490nm, 1550nm & 1310nm, and stores the results for downloading
- Power Meter is capable of testing 850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm
- 10mW Visual Fault Locator
- Tests the burst mode RFoG upstream wavelength signal of 1310nm
- Handheld, easy to operate
- 32-bit CPU with 480 x 800 True Color screen with 65,000 colors
- Stores 10 groups of threshold values for automatic analyzing and display of pass / fail status
- Relative value choice and edit function
- USB Flashdrive with Management Software
- Save and upload 1,000 records through USB to management software
- Set the threshold value, upload data, and calibrate to management software
- Relative value choice and edit function
- Auto backlit on (according to set value)
- Auto backlit off (according to set value)
- 3.7V, 6600mAh rechargeable Lithium battery
- Power saving design (low voltage self check and power off)
- Real-time clock display

The Netceed MUL-OPM-PON-VFL-300 PON Optical Power Meter is connected between the OLT and ONT, this PON meter is capable of testing three PON wavelengths simultaneously: 1490nm, 1550nm and 1310nm. It can also test the burst mode RFoG signal of 1310nm.

**Optical Power Meter**

The Netceed MUL-OPM-PON-VFL-300 PON Optical Power Meter is connected between the OLT and ONT, this PON meter is capable of testing three PON wavelengths simultaneously: 1490nm, 1550nm and 1310nm. It can also test the burst mode RFoG signal of 1310nm.

**Features:**
- Tests 3 PON wavelengths simultaneously: 1490nm, 1550nm & 1310nm, and stores the results for downloading
- Power Meter is capable of testing 850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm
- 10mW Visual Fault Locator
- Tests the burst mode RFoG upstream wavelength signal of 1310nm
- Handheld, easy to operate
- 32-bit CPU with 480 x 800 True Color screen with 65,000 colors
- Stores 10 groups of threshold values for automatic analyzing and display of pass / fail status
- Relative value choice and edit function
- USB Flashdrive with Management Software
- Save and upload 1,000 records through USB to management software
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The Netceed MUL-OPM-PON-VFL-300 PON Optical Power Meter is connected between the OLT and ONT, this PON meter is capable of testing three PON wavelengths simultaneously: 1490nm, 1550nm and 1310nm. It can also test the burst mode RFoG signal of 1310nm.

**PON Power Meter**
- Connected between OLT and ONT, this PON meter is capable of testing three PON wavelengths simultaneously: 1490nm, 1550nm and 1310nm. It can also test the burst mode RFoG signal of 1310nm.
- Power saving design (low voltage self check and power off)
- Real-time clock display

**Features:**
- Tests 3 PON wavelengths simultaneously: 1490nm, 1550nm & 1310nm, and stores the results for downloading
- Power Meter is capable of testing 850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm
- 10mW Visual Fault Locator
- Tests the burst mode RFoG upstream wavelength signal of 1310nm
- Handheld, easy to operate
- 32-bit CPU with 480 x 800 True Color screen with 65,000 colors
- Stores 10 groups of threshold values for automatic analyzing and display of pass / fail status
- Relative value choice and edit function
- USB Flashdrive with Management Software
- Save and upload 1,000 records through USB to management software
- Set the threshold value, upload data, and calibrate to management software
- Relative value choice and edit function
- Auto backlit on (according to set value)
- Auto backlit off (according to set value)
- 3.7V, 6600mAh rechargeable Lithium battery
- Power saving design (low voltage self check and power off)
- Real-time clock display
**NEW!**

**OPTICAL FIBER IDENTIFIER & VISUAL FAULT LOCATOR**

Ideal for online testing, the Netceed MUL-OFI-VFL-1MW Optical Fiber Identifier is used for nondestructive fiber identification. It is capable of detecting signal presence and direction in any location of both Singlemode and Multi-mode fiber. It also incorporates a Visual Fault Locator module with fault location function.

**Features:**
- Indicates the signal direction and power in optical fiber
- Indicates signal presence or absence (live or dark fiber)
- Efficiently identifies the traffic direction and frequency tone (270Hz, 1kHz, 2kHz) with audible warning
- Displays the relative core power
- Lower power indication
- Build in VFL function

**MUL-OFI-VFL-10MW**

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**NEW!**

**HANDHELD VIDEO FIBER INSPECTION MICROSCOPE**

The Netceed MUL-FSCOPE-400 Handheld Fiber Microscope is a low cost and high quality fiber inspection tool for inspecting fiber terminations in the field.

With 400X magnification, excellent optical performance and integrated laser safety filters, it provides the most critical view of fiber end faces. The white LED light provides coaxial illumination to connector end-faces. This illumination method produces high-resolution detail of end-face scratches, defects and contamination.

**Features:**
- Portable and easy to use, ideal for field use
- 400X magnification
- For inspection of singlemode and multi-mode fibers
- Optical Connector: 1.25 & 2.5mm universal adapter
- Color: Black
- Power Supply: 3 x AAA batteries
- Battery Life: 40 hours
- Specialized eyepiece design

**MUL-FSCOPE-400**

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**VISUAL FAULT LOCATOR**

The MUL-VFL-10MW is the easiest way to identify fibers from end to end and locate polished connector endfaces. The red laser shines through most yellow-jacketed fibers to help you precisely identify breaks, bends, faulty connectors, splices and other causes of signal loss. The MUL-VFL locates faults visually by creating a bright red glow at the exact location of the fault on both singlemode or multi-mode fibers.

Robust design: Due to its small size and durable yet lightweight design, this handy tool can accompany you to the most demanding environments. To ensure ruggedness, it features rubber seals, a fully enclosed laser head and a long-lasting operations switch. It has been tested to provide reliable operation under intensive use and harsh conditions.

**Features:**
- Bright red laser at 650 ±10nm
- Continuous Wave (CW)/Pulse operation
- Batteries last 50 hours (typical)
- Standard AAA alkaline batteries
- Rugged and weatherproof
- 2.5mm universal connector
- 1mw, 10mw, 30mw or 50mw

**MUL-VFL-10MW**

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**FIBER OPTICS**
### HIGH PRECISION FIBER OPTIC CLEAVERS

The High Precision MUL-FO-CLEAV-200 is ideal for single fiber and ribbon fiber FTTx applications. The 16-position blade yields 48,000 single-fiber cleaves, or 4,000 12-fiber ribbon cleaves before requiring replacement. The easy-to-use precision cleaver provides reliable, repeatable results and includes safety features to protect the operator and extend the life of the tool.

**Features:**
- Compact body and high precision design
- Applicable for single fiber and up to 12-count fiber ribbon
- For use on Singlemode and Multi-mode fiber
- 48,000 fiber cleaves (1,000 cleaves x 3 heights x 16 positions)
- Includes hard carrying case and additional fiber holder

**MUL-FO-CLEAV-200**

The MUL-FO-CLEAV-150 is ideal for single fiber FTTx applications. The 16-position blade yields 48,000 single-fiber cleaves before requiring replacement. The easy-to-use precision cleaver provides reliable, repeatable results and includes safety features to protect the operator and extend the life of the tool.

**Features:**
- Compact body and high precision design
- Applicable for single fiber
- For use on Singlemode and Multi-mode fiber
- 48,000 fiber cleaves (1,000 cleaves x 3 heights x 16 positions)
- Includes carrying case, fiber guide, hex tool, and fiber refuse collection bin

**MUL-FO-CLEAV-150**

The economical MUL-FO-CLEAV-100 is ideal for single fiber FTTx applications. The 12-position blade yields 36,000 single-fiber cleaves before requiring replacement. This easy-to-use precision cleaver provides reliable, repeatable results.

**Features:**
- Compact body and high precision design
- Applicable for single fiber
- For use on Singlemode and Multi-mode fiber
- 36,000 fiber cleaves (1,000 cleaves x 3 heights x 12 positions)
- Includes soft carrying case and fiber guide tool

**MUL-FO-CLEAV-100**

### FIBER OPTIC CLEANER - CASSETTE

The MUL-FO-CLEAN-CASS Fiber Optic Cleaner Cassette is the most effective high-end cleaning solution available. This cassette cleaner features a 25 foot densely-woven dry cloth reel which provides superior cleaning performance while minimizing static charge. This long-life fiber optic cleaner cassette can be used for over 500 cleaning cycles.

**Features:**
- Minimizes static attraction
- Ultra clean micro-fiber cloth captures debris and other contamination
- The cloth is robust, it does not fray or leave any fibrous materials behind

**MUL-FO-CLEAN-CASS**

### FIBER SHEARS

The MUL-FO-SHEAR-K Fiber Optic Kevlar Cutters, or Shears, are specifically designed for cutting fiber optic kevlar. The cutting blades are micro-serrated, especially designed to avoid sliding or slipping when cutting kevlar. The handle is made from molded and durable plastic making these shears easy to grip and operate.

**Features:**
- Made of carbon steel
- Ergonomic handle

**MUL-FO-SHEAR-K**

### SPLICE SLEEVES

The 60mm translucent plastic tube and stainless steel rod Fiber Optic Splice Sleeves are designed to prevent stress and protect fusion fiber optic splices in both field and factory operations.

**Features:**
- Provide protection and increased stability to splices
- 60mm, heat activated, translucent

**MUL-FO-SP-SLEEVE**
We are proud to represent Netceed Products, and the following manufacturers:

- Prysmian Group
- CORNING
- COMMSCOPE
- BAND-IT
- General Cable
- More... (listed on the page)

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**LINE CARD**

- **CORNING**
- **BAND-IT**
- **General Cable**

**RESOURCES**

- **Netceed Pocket Reference Card**
  - The Netceed Pocket Reference Card is a handy to have with you all the time. They are made from durable plastic and fit in your pocket. Give us a call at 800-423-2594 and ask for one - they’re free!

**Your Traffic Control and Cable Experts**

- **www.netceed.com**
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**TRAFFIC DETECTOR CABLE & WIRE**

<table>
<thead>
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<th>Insulation</th>
<th>Type</th>
<th>Voltage Rating</th>
<th>Design Features</th>
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<tr>
<td>PE</td>
<td>Loop Detector Lead-in Cable</td>
<td>10-2</td>
<td>600</td>
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<tr>
<td>PVC</td>
<td>Loop Detector Wire</td>
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<td>600</td>
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**LINE WIRES, COPPER-CLAD STEEL**

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<th>Type</th>
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<th>Design Features</th>
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</thead>
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<td>26-3</td>
<td>600</td>
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**FILLED TWISTED PAIR, PE INSULATED SIGNAL / COMMUNICATION CABLE W/COPPER SHIELD**

<table>
<thead>
<tr>
<th>Insulation</th>
<th>Type</th>
<th>Voltage Rating</th>
<th>Design Features</th>
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</thead>
<tbody>
<tr>
<td>PVC</td>
<td>PE Insulated Signal / Communication Cable with Copper Shield</td>
<td>59-2</td>
<td>300</td>
</tr>
</tbody>
</table>

**FILLED, TWISTED PAIR, PE INSULATED SIGNAL / COMMUNICATION CABLE W/COPPER SHIELD**

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