# Outdoor Corrugated Steel Tape Armored Fiber Optic Cables, PE (24, 36, 48 Fibers) 



24-48 Fibers

## Description:

AMP Netconnect OSPA (Outside Plant Armored) cables are designed for campus-type environments, Aerial links (when use a messenger strand), Ducted or Directed burial underground service for long runs between buildings cables meet TIA/EIA 568-C and ISO/IEC 11801 standard requirements for optical fiber cable performance, and are designed to exceed all of the performance requirements for current and proposed applications such as 100BASE-F,Gigabit Ethernet 1000Base-SX/LX, 155/622 Mbps ATM ,AMP Netconnect distribution cables has been designed to meet or exceed the requirements of 10Gigabit while still supporting legacy LED and VCSEL The system fulfills the specifications of IEEE 802.3z, Gigabit Ethernet, IEEE 802.3ae,10Gigabit and 40/100Gbps Ethernet. The cables are available with Singlemode OS2 or $62.5 / 125 \mu \mathrm{~m}$ Extended Grade OM1 or 50/125 $\mu \mathrm{m}$ OM2 or $50 / 125 \mu \mathrm{~m}$ Laser Optimized (XG) OM3, and $50 / 125 \mu \mathrm{~m}$ OM4 Fiber.

## Specification (Text in brackets [] requires a choice.)

The optical fiber cable shall contain [24, 36, 48] [OM1, OM2, OM3, OM4 or OS2] Fibers the cable structure central PBT Loose Tube containing the fibers and a thixotropic gel. Water blocking glass yarns are placed around the perimeter of the loose tube, to provide mechanical strength to the cable, and then a corrugated steel tape (with copolymer coating on both sides) is then longitudinally applied as armored. Finally an outer sheath of black PE, with thickness of 1.7 mm is applied over the steel tape. Loose Tubes are manufactured from high strength, low shrinkage PBT Compound 2.5 mm diameter, and each tube will contain up to 12 optical fibers and a thixotropic jelly, to prevent water penetration and protect the fibers against shock. Fiber colors sequence is defined TIA/EIA 598-C color coded fibers for easy identification per EIA 359-A. For intermediate fiber counts Black PE Fillers are substituted for loose tube where necessary to retain the cable shape. The elements are stranded around a non-metallic central strength member and the formation retained with polyester binders. The cable core is of "dry core" design to prevent ingress of water. Two water blocking yarns are applied over the central strength member (one longitudinally and one helically). A water blocking tape is then longitudinally over the cable core and retained with a helically applied binder. Then non-metallic strength member Glass yarns are applied over the cable core, in order to provide the required tensile strength protection. And a corrugated steel tape (with copolymer coating on both sides) is then longitudinally applied as armored. Finally an outer sheath of black PE (HDPE available to request), with a nominal radial thickness of 1.7 mm is applied over the glass yarns.

## Part Numbers

| Description | Part Number |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | OS2 | OM1 | OM2 | OM3 | OM4 |
| OSPA Fiber Optic Cables, 24F | $\mathrm{Y}-1427435-4$ | $\mathrm{Y}-1427435-1$ | $\mathrm{Y}-1427435-2$ | $\mathrm{Y}-1427435-3$ | $\mathrm{Y}-1427435-5$ |
| OSPA Fiber Optic Cables, 36F | $\mathrm{Y}-1427443-4$ | $\mathrm{Y}-1427443-1$ | $\mathrm{Y}-1427443-2$ | $\mathrm{Y}-1427443-3$ | $\mathrm{Y}-1427443-5$ |
| OSPA Fiber Optic Cables, 48F | $\mathrm{Y}-1427444-4$ | $\mathrm{Y}-1427444-1$ | $\mathrm{Y}-1427444-2$ | $\mathrm{Y}-1427444-3$ | $\mathrm{Y}-1427444-5$ |

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## Performance Specifications

AMP Netconnect OSPA (Outside Plant Armored) fiber optic cables are designed and tested in accordance with TIA/EIA 568-C.3, IEEE 802.3 Standard ,ISO/IEC 11801,Telcordia (Bellcore) GR-20-CORE, ITU G.652D, ICEA 596, ICEA 696 Performance specifications are measured in accordance with EIA Fiber Optic Test Procedures (EIA/TIA-455 documents) and the test procedures of IEC 60793, IEC 60794, Index of Refraction 1.468.

## Mechanical Specification:

| Fiber Count | Nominal O.D. mm (in) | Nominal Weight Kg/Km | Min. Bending Radius |  | Rated Tensile Load |  | Temperature |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Installation mm | Long term mm | Installation N | $\begin{gathered} \hline \text { Long Term } \\ \mathrm{N} \\ \hline \end{gathered}$ | Crush Resistance | Installation | Operation /Storage |
| 24-fiber | 12.4 | 138 | 248 | 124 | 2700 | 890 | 2500 N/10cm |  |  |
| 36-fiber | 12.4 | 138 | 248 | 124 | 2700 | 890 | $2500 \mathrm{~N} / 10 \mathrm{~cm}$ | $\begin{gathered} -20{ }^{\circ} \mathrm{c} \text { to } \\ +60{ }^{\circ} \mathrm{C} \end{gathered}$ | $\begin{aligned} & -40{ }^{\circ} \mathrm{c} \text { to } \\ & +70{ }^{\circ} \mathrm{C} \end{aligned}$ |
| 48-fiber | 12.4 | 138 | 248 | 124 | 2700 | 890 | $2500 \mathrm{~N} / 10 \mathrm{~cm}$ |  |  |

Performance Characteristics (meet or exceed TIA/EIA 568-C. 3 and ISO/IEC 11801 requirements)

| Application | OM4 <br> $50 / 125 \mu \mathrm{~m}$ <br> $(850 / 1300)$ | OM3 <br> $50 / 125 \mu \mathrm{~m}$ <br> $(850 / 1300)$ | OM2 <br> $50 / 125 \mu \mathrm{~m}$ <br> $(850 / 1300)$ | OM1 <br> $62.5 / 125 \mu \mathrm{~m}$ <br> $(850 / 1300)$ | OS2 <br> Singlemode <br> $(1310 / 1383 / 1550)$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Typical Attenuation (dB/Km) | $2.4 / 0.6$ | $2.4 / 0.6$ | $2.6 / 1.1$ | $2.9 / 0.9$ | $0.36 / 0.36 / 0.23$ |
| Maximum Attenuation(dB/Km) | $3.5 / 1.5$ | $3.5 / 1.5$ | $3.5 / 1.5$ | $3.5 / 1.0$ | $0.4 / 0.4 / 0.4$ |
| Macro Bending Attenuation (dB)** | $\leq 0.5$ | $\leq 0.5$ | $\leq 0.5$ | $\leq 0.5$ | $\leq 0.05$ |
| OFL Bandwidth (MHzxkm) | $3500 / 500$ | $1500 / 500$ | $500 / 500$ | $200 / 600$ | $\mathrm{~N} / \mathrm{A}$ |
| 850nm Laser Bandwidth (MHz×km) | 4700 | 2000 | $\mathrm{~N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ |
| 1000Base-SX,Gigabit Ethernet,@850nm | 900 m | 900 m | 550 m | 220 m | - |
| 1000Base-LX,Gigabit Ethernet,@1300nm | 550 m | 550 m | $550 \mathrm{~m}^{*}$ | $550 \mathrm{~m}{ }^{\star}$ | 5000 m |
| 10GBase-SR,10Gbps,@850nm | 550 m | 300 m | 82 m | 33 m | - |
| 10GBASE-LX4,10Gbps,WDM,@1310nm | 300 m | 300 m | 300 m | 300 m | 10000 m |
| 10GBASE-LR,10Gbps,@1310nm | - | - | - | - | 10000 m |
| 10GBASE-ER,10Gbps,@1550nm | - | - | - | - | 40000 m |
| 40GBASE-SR4,40Gbps,@850nm | 150 m | 100 m | - | - | - |
| 40GBASE-LR4,40Gbps,@1310nm | - | - | - | - | 10000 m |
| 100GBASE-SR10,100Gbps,@850nm | 100 m | - | - | - | - |
| 100GBASE-LR4,100Gbps,@1310nm | - | - | - | - | 10000 m |
| 100GBASE-ER4,100Gbps,@1550nm | - | - | - | - | 40000 m |

* To reach 550m on traditional fiber OM2, OM3 Mode Conditioning Lunch Patch Cord is required
** Macro Bending with 100 truns on a 75 mm diameter at 850 nm and 1300 nm for multimode fiber cable Macro Bending with 100 turns on a 60 mm diameter at 1550 nm and 1625 nm for singlemode fiber cable


## Technical Details

| Approvals |  |
| ---: | :--- |
| RoHS Compliant - | RoHS |
| Tensile Load - | IEC 60794-1-2-E1 |
| Crush - | IEC 60794-1-2-E3 |
| Repeat Bending - | IEC 60794-1-2-E6 |
| Cable Bend - | IEC 60794-1-2-E11B |
| Water Penetration - | IEC 60794-1-2-F5 |
| Temperature Cycling - | IEC 60794-1-2-F1 |


[^0]:    $Y$ denotes Length: $1=1 \mathrm{Km}, 2=2 \mathrm{Km}, 3=3 \mathrm{Km}, 4=4 \mathrm{Km}$.

