ROV FIBER OPTIC HYBRID CABLE

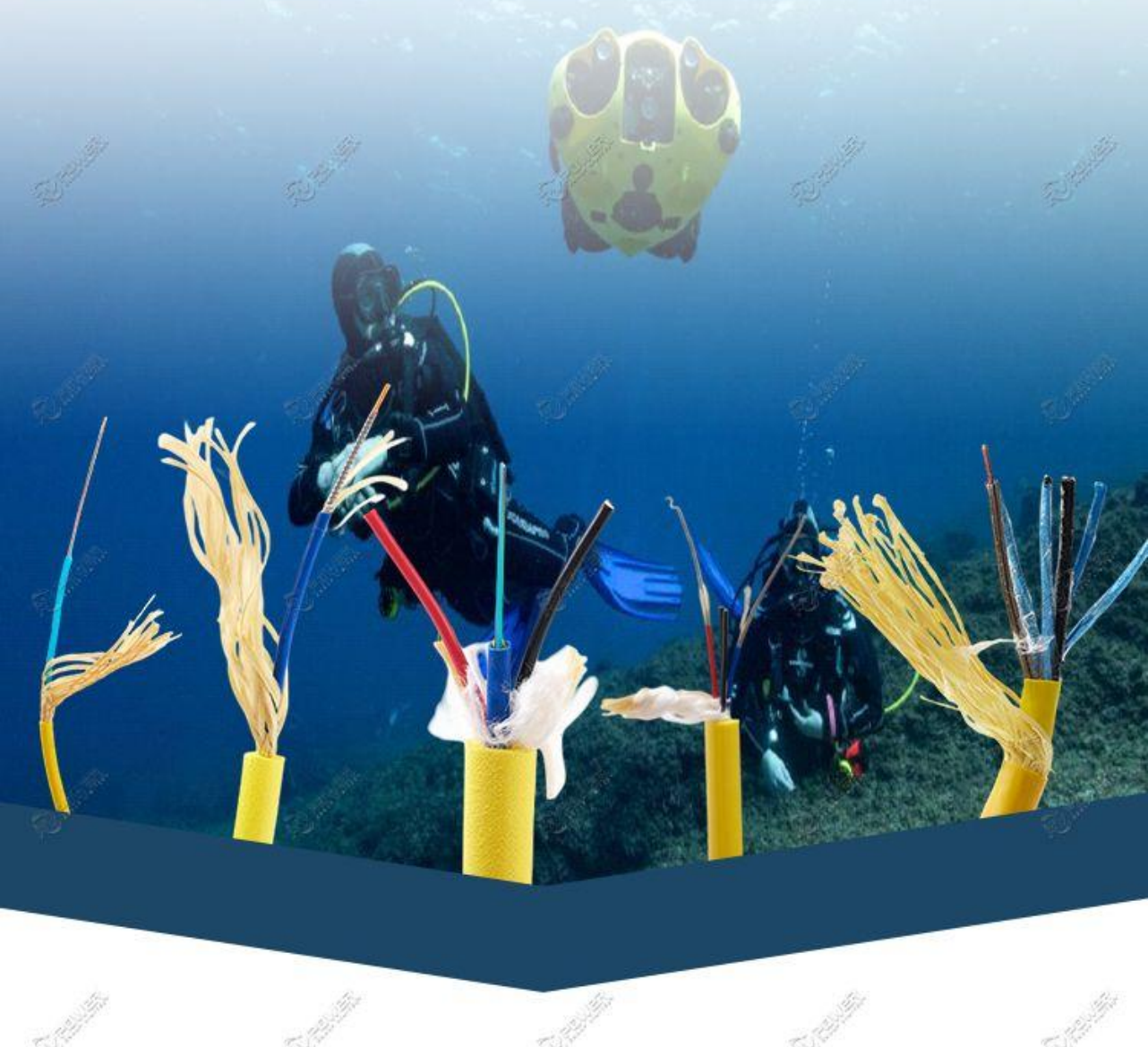
TETHERS & UMBILICALS FOR REMOTELY OPERATED VEHICLES (ROVS)

Optional Ordering
- Increased Strength
- Neutral Buoyant
- Bend Insensitive Fibers
- Optional Colors

ROV FIBER OPTIC HYBRID CABLE has extreme toughness with a unique, high modulus coating for better survivability in harsh environments.
ROV FIBER OPTIC HYBRID CABLE designs are solid, com-pression resistant constructions withstanding hydrostatic pressures at depths to 7 Km.

Fiber Type: Single Mode 9/125um , Multimode 62.5/125um Multimode 50/125um + KEVLAR + FOAM PUR Material + Polyurethane Jacket

Flexible fiber tether with high modulus coated fiber, Kevlar strength member and hard polyurethane jacket.
Compact designs with semi-rigid center strength core, waterblocked interstices and hard polyurethane jacket.
Increased strength designs including steel armor may be ordered.



OUR ADVANTAGES

EASY SOLUTIONS

ADAPTABILITY IS ONE OF OUR BEST QUALITESIT PERMIT US TO COPE WITH YOUR REQUE STON A SHORT NOTICE AND EFFEC TIVELY.

NO PRICE FIGHTS

WE ESCAPED THE OLASSICAL REBATE UNTILYOU DROP " POLICY . WE ARE PRICE WISE SINCETHE BEGINNING

HIGH LEVEL EXPERIENCE

QUR TECHNLAL CAPABILITIES HAVE BEENTESTED FOR MORE THAN 30 YEARS ANDIN-DRECT CONNECTION WITH END USERS . SO TOSAY

ENDLESS INVESTIGATION

WE CONTINUOUSY MEASURE EVERYTHINGTEST . TEST AND TESTAGAIN . THIS HELPS NUNDERSTAND RISKS AND REWARDS . ANDBEPREPARED

NO FORTUNE TELLER

WE BASE OUR DECISIONS ON CLEAR BUSIESSPLANS , THINKING BEFORE MAKING OUR STEPSAND KEEPIN-GA'NOTTODO LISTFOR EVERY-OVE OF THEM

TEAM BUILDING

OUR TEAMIS MADE NOT ONLY BY OUR STAFFBUTIT INCLUDES ALSO ALL OUR CUSTOMERSWEACT LIKEA TEAM WEGROW LKEA TEAMWE WINLIKE A TEAM

ROV FIBER OPTIC HYBRID CABLE

ROV Tether Cable

Typical ROV Tethers include power conductors, shielded data pairs and video using coax, TSP, or fi ber optics. Designs avail able in several configurations, including Neutral Buoyancy.A varied degree of strength designs available depending onworkloads and handling system. The sample cables listed be low are proven working designs for vehicles used worldwide.

Design Variations

RV POWER GROUP manufactures many custom ROV cables using tried and proven components for power, video, data, etc., which are available for your design, providing shorter lead times.

Cable Properties

Conductors: Stranded tin copper conductors for flexibility and corrosion resistance. Light weight, low dielectric copolymer insulation with great mechanical and moisture resistance.

Strength Layer: Light weight Kevlar fibers are designed into each cable construction to meet specific ROV intended use for maximum strength and longevity.

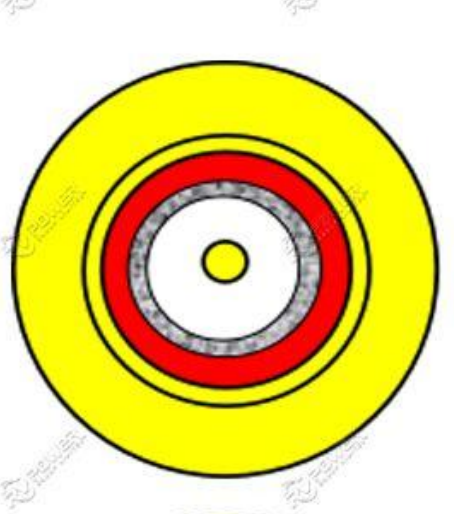
Jacket Materials are chosen for optimal bonding, moisture and mechanical resistance. Each ROV cable is uniquely designed for specifi c ROV types using PE, TPE, PUR, and foam variations for flotation.

Custom ROV cables using tried and proven components for power, video, data, etc., which are available for your design, providing shorter lead times

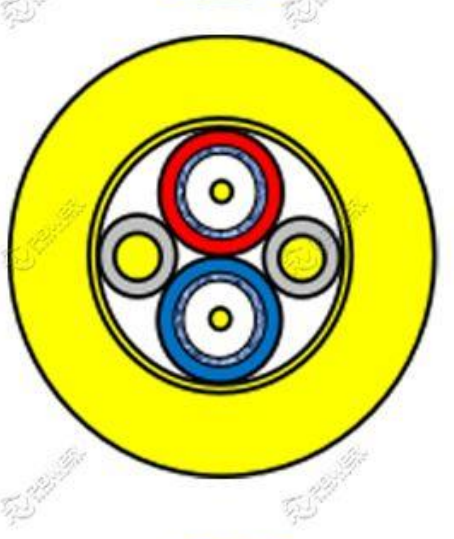
COMPONENTS AND MATERIALS:

- Optical fibers in SS steel tubes /Plastic Tube from 1-24 fibers, single mode, multi-mode,
- Data signals using Ethernet Cat5e and Cat6 signal pairs, RS-232, RS-485, analog, coaxial, shielded components
- Power conductors from 300V to 3.0kv,
- Water block Material : Block water Yarn / Block water Glue
- Strength layers of Synthetic fibers including Kevlar, Vectran
- Jacket compounds :Polyurethane, PE, HDPE, Light weight TPE, foam PE or Foam PUR

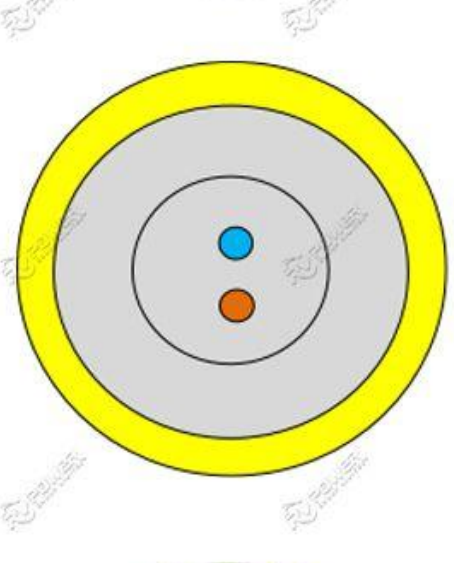
PRODUCT MIX



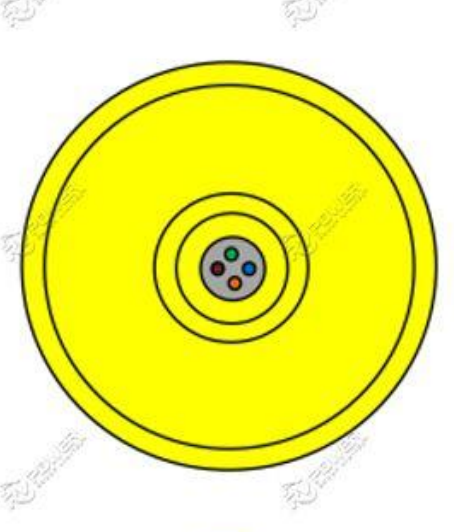
ROV Fiber Optic cable
1CORE FIBER OPITCAL Overall diameter:4.7mm



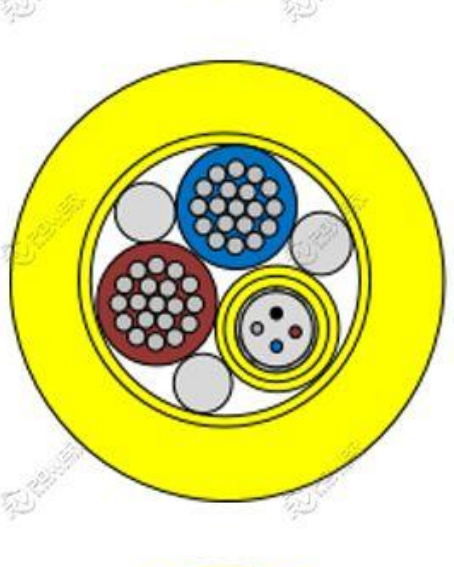
ROV Fiber Optic cable
2CORE FIBER OPITCAL
Overall diameter:7.5mm



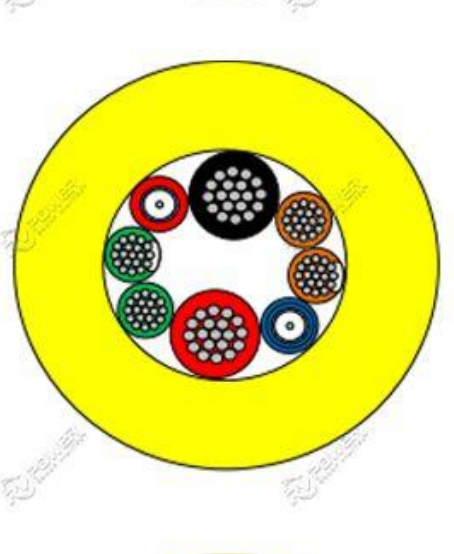
ROV Fiber Optic cable
2 CORE FIBER OPITCAL
Overall diameter:3.9mm



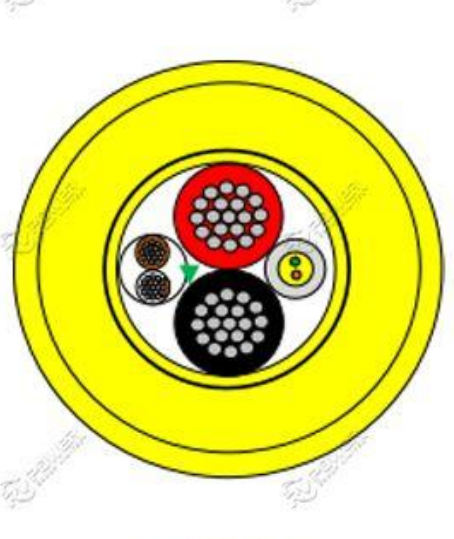
ROV Fiber Optic cable
4CORE FIBER OPITCAL
Overall diameter:7.5mm



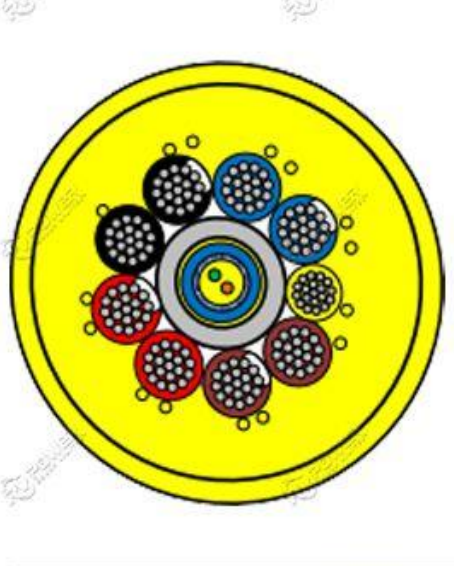
Neutrally buoyant ROV cable
2 POWER Cable
4 Core optical fiber
Overall diameter: 8.0 mm



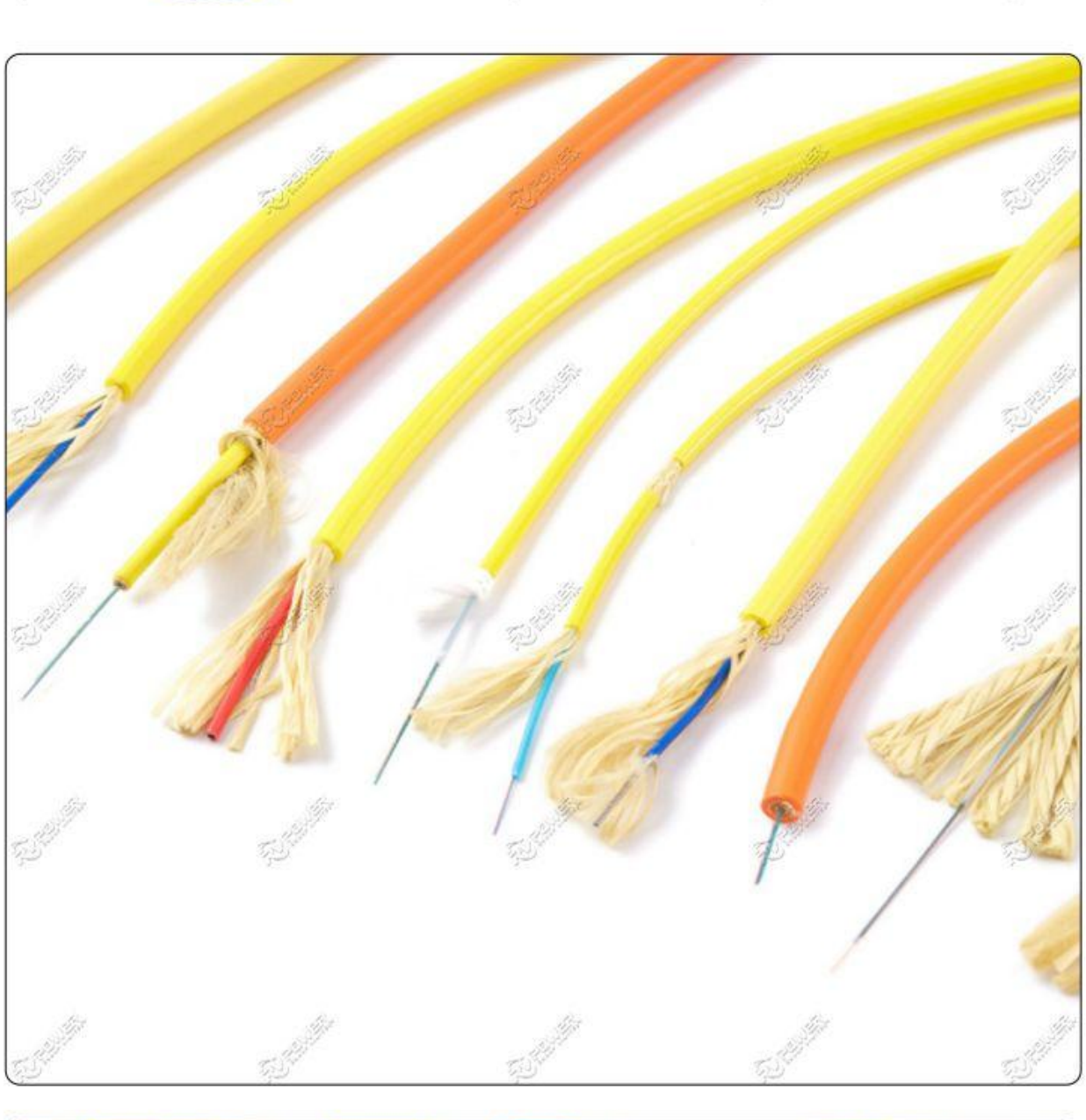
Neutrally buoyant ROV cable
2 POWER Cable
2 PAIRS SIGNAL DATE Cable
2 Core optical fiber
Overall diameter: 8.0 mm



Neutrally buoyant ROV cable
2 POWER Cable
1 PAIRS SIGNAL DATE Cable
2 Core optical fiber
Overall diameter: 8.0 mm



Neutrally buoyant ROV cable
9 POWER Cable
2 Core optical fiber
Overall diameter: 25 mm



SPECIFICATION FOR ENHANCED LOW MACROBENDING SENSITIVE, LOW WATER PEAKSINGLEMODE OPTICAL FIBER

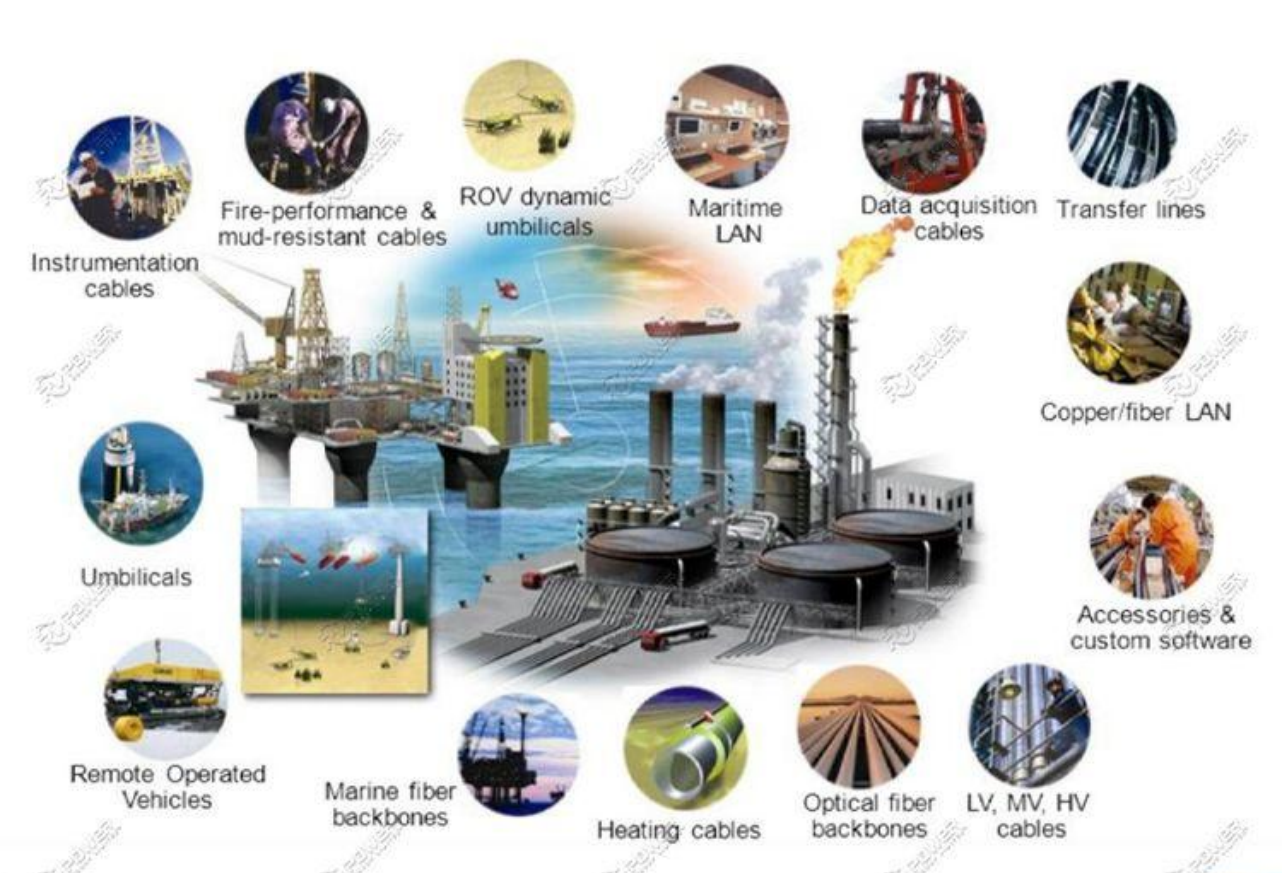
OPTICAL PROPERTIES		
Fiber Selected to Meet Cabled Attenuation	@ 1310 nm	≤ 0.38 dB/km
	@ 1550 nm	≤ 0.25 dB/km
Attenuation Uniformity	Point or step defect	≤ 0.1 dB
	Extended variations	≤ 0.1 dB
Mode Field Diameter	@ 1310nm	8.8 ± 0.4 μm
Cut-Off Wavelength	λccf	≤1260 nm
Zero Dispersion Wavelength		1300 - 1324 nm
Slope at Zero Dispersion Wavelength		≤ 0.092 ps/nm2.km
Un-cabled Fiber – Individual		≤ 0.1 ps/√km
Link Design Value PMDq		≤ 0.2 ps/√km
Effective Group Index	@1310/1550 nm	1.467/1.468
MACROBENDING PROPERTIES		
10 Turns Around 30mm Diameter	@ 1550 nm	≤ 0.03 dB/km
10 Turns Around 30mm Diameter	@ 1625 nm	≤ 0.1 dB/km
1 Turn Around 20mm Diameter	@ 1550 nm	≤ 0.1 dB/km
1 Turn Around 20mm Diameter	@ 1625 nm	≤ 0.2 dB/km
1 Turn Around 15mm Diameter	@ 1550 nm	≤ 0.5 dB/km
1 Turn Around 15mm Diameter	@ 1625 nm	≤ 1.0 dB/km
GEOMETRICAL PROPERTIES		
Cladding Diameter	125 ± 0.7 μm	
Glass Concentricity Error	≤ 0.5 μm	
Cladding Non-Circularity	≤ 0.7 %	
Coating Diameter	242 ± 7 μm	
Coating Concentricity Error	≤ 12.0 μm	
Coating Non-Circularity	≤ 5 %	
MECHANICAL PROPERTIES		
Proof Test Level	≥ 0.69 GPa / ≥ 1.0 %	

CABLES FOR MARITIME AND UNDERWATER TECHNOLOGIES

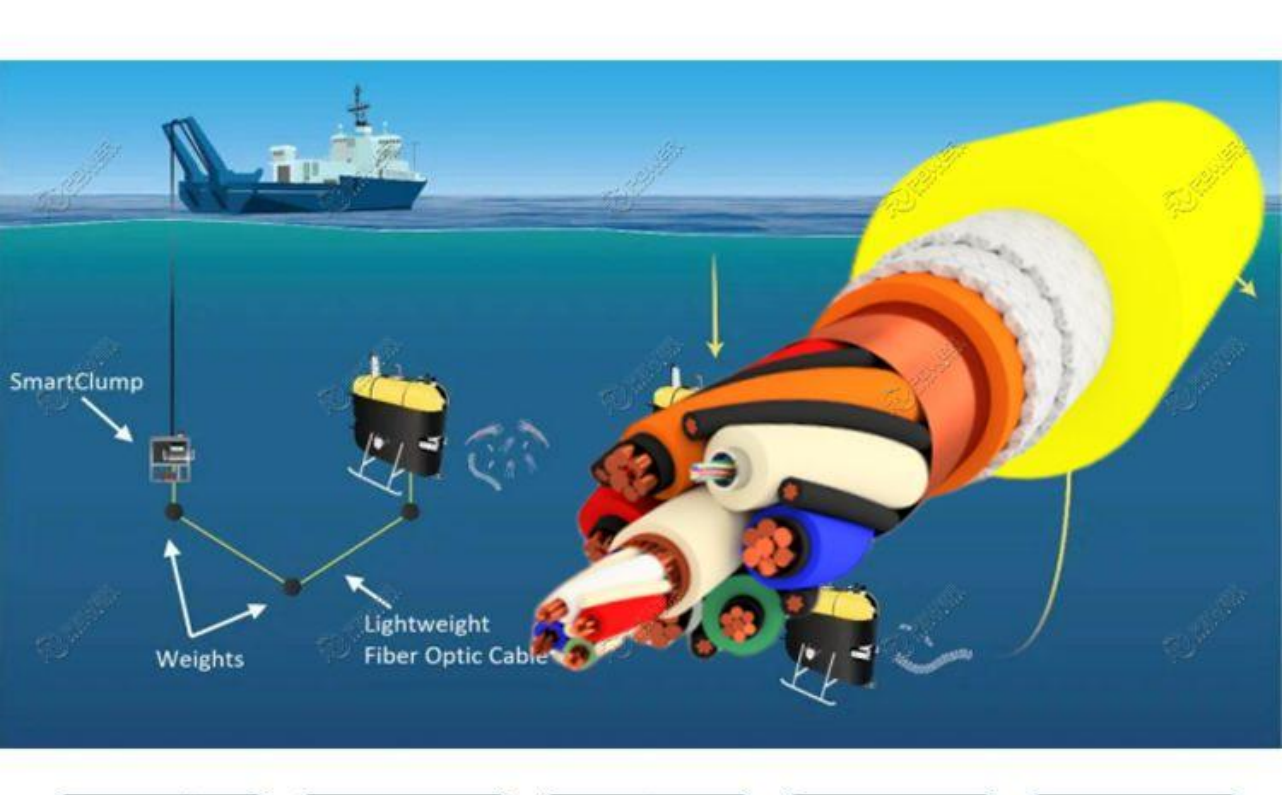
Underwater technology, especially at great depths, is challenging. ROVs, used for underwater inspection, survey and search work,Require cables with high performance and reliability for efficient and accurate control, providing the required strength to support the vehicle.Cables and tethers used for Remotely Operated Vehicles represent the vital connection between the vehicle and the vessel.These products include: neutrally buoyant tethers, Kevlar strength member cables, hybrid cables.
We has many years of knowledge and experience manufacturing cables for the ROV.We offer a complete range of standard communication, video, power and combined service cables, designed to meet the extreme pressures of the subsea environment. Whatever your diving application needs, we can create flexible, cost-effective engineering solutions to suit your requirements and your budget.

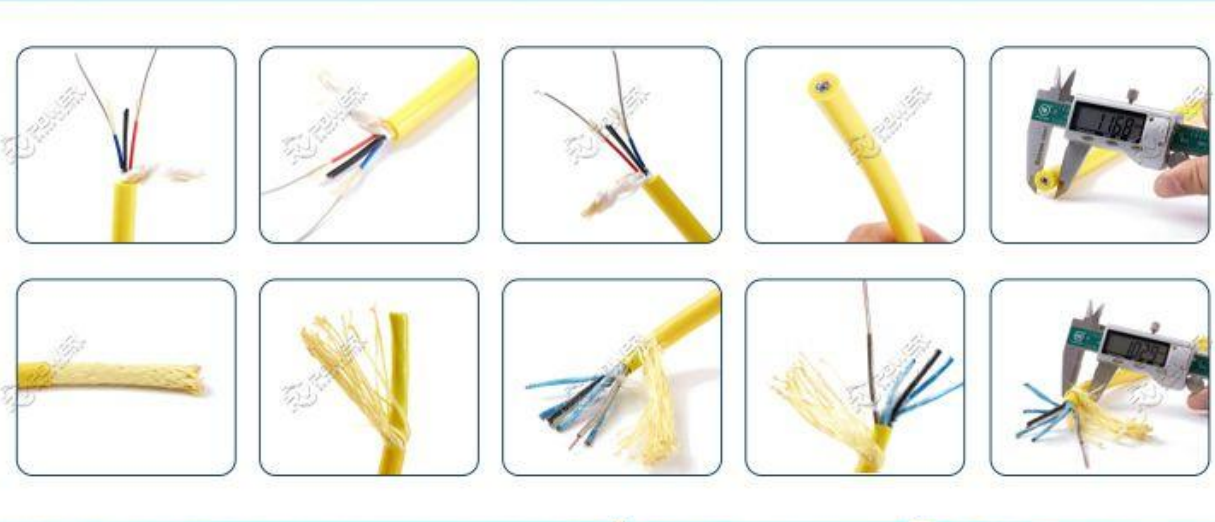
SUBSEA CABLES TYPE

- ROV Tether Cable
- ROV Umbilicals Cable
- Diver umbilical
- Pool robotic cleaner cable
- Neutrally Buoyant Cables
- Diver Communications Cable
- Underwater Video Cable – Diver
- CCTV Inspection Crawler Video Cables
- Underwater Fiber Optic Cable
- Underwater Instrumentation Cable
- Underwater Multiconductor Power & Control Cable
- Underwater Ethernet Cable
- Sidescan Sonar Tow Cable
- Coax Oceanoghraphic Tow Cable
- Push-rod Cables
- Polyurethane or Polyethylene Jacketed Cables
- Composite Underwater Communication Cables
- PUR underwater umbilical hybrid Optical
- Custom Cable Designs



ROV FIBER OPTIC HYBRID CABLE





DETAIL DISPLAY

ONE

ENHANCED LOW MACROBENDING SENSITIVE

Single Mode 9/125um , Multimode 62.5/125um Multimode 50/125um

TWO

RESILIENT, FLEXIBLE AND NEUTRALLY BOUYANT

Custom ROV cables using tried and proven components for power, video, data, etc., which areavailable for your design, providing shorter lead times.

THREE

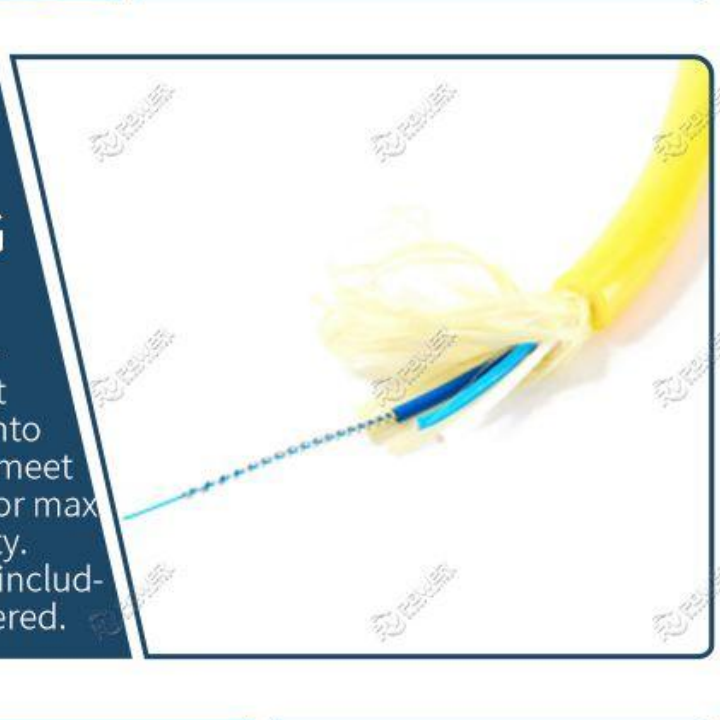
ONE SINGLE LONG CONTINUOUS LENGTH REQUIRED

solid, com-pression resistant constructions withstanding hydrostatic pressures at depths to 7 Km.

FOUR

HIGH BREAKING STRENGTH

Strength Layer: Light weight Kevlar fibers are designed into each cable construction to meet specific ROV intended use for maximum strength and longevity. Increased strength designs including steel armor may be ordered.



FIVE

SMALL SIZED. LIGHT . PRESSURE RESISTANT . ABRASION/ EROSION RESISTANT

Jacket Materials are chosen for optimal bonding, moisture and mechanical resistance. Each ROV cable is uniquely designed for specific ROV types using PE, TPE, PUR, and foam variations for flotation.

- OIL RESISTANT
- FLAE RESISTANT
- HALOGEN FREE
- COLD RESISTANT
- ABRASION RESISTANT
- OZONE RESISTANT
- UV RESISTANT
- MICROBE RESISTANT
- MUD RESISTANT
- WATER RESISTANT