

LP-OC03120124ZC Fiber Optical cable with 12 Singlemode ITU-T G.652.D, 9/125, Full spectrum, low water peak fibers, Loose tubes, double PE jacket, central strength member of FRP, corrugated steel tape, dry water block cable core and Ripcord

LPOC03120124ZC _SS_ENB01W

Features

- Loose tube gel-filled construction for superior fiber protection.
- UV- and moisture-resistant design.
- Rodent-resistant construction.
- GEL Water Block cable core for protection against moisture filling cavity between FRP strength member and inner PE sheath. (Optional).
- One or Two Water block tapes are applied contra helically between corrugated steel tape and inner PE sheath.
- Buffer tubes are stranded around the dielectric central strength member using the reverse oscillation or "S-Z", stranding process.
- Two polyester yarn binders are applied contra helically with sufficient tension to secure the buffer tubes layer to the dielectric central strength member without crushing the buffer tubes. These binders are non-hygroscopic, non wicking and dielectric with low shrinkage.

Applications

- Usable in Direct burial or Aerial.
- Long-haul communication systems.
- Junction communication systems.
- Subscriber network systems.
- Local area network systems.



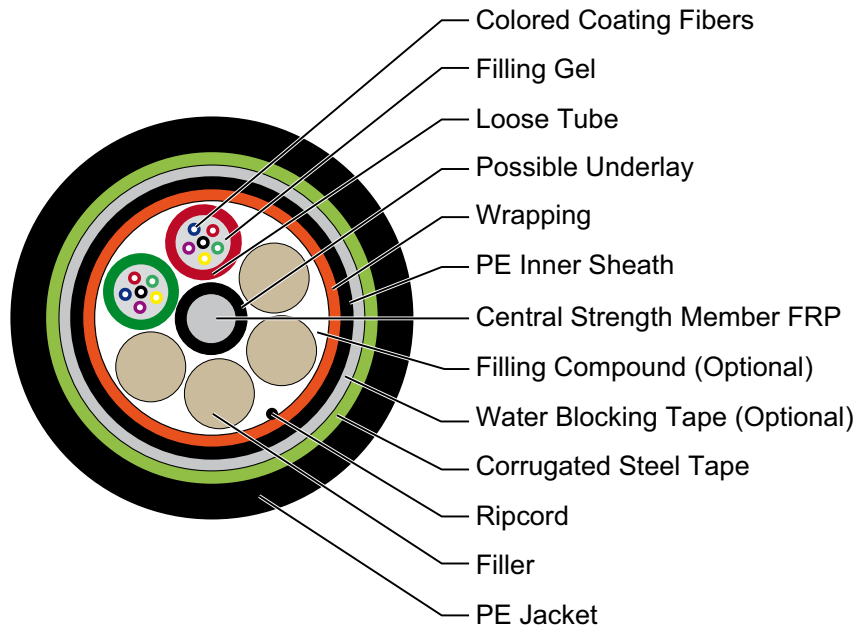
Rhino™

**LP-OC03120124ZC
Fiber Optical cable with 12 Singlemode ITU-T G.652.D,
9/125, Full spectrum, low water peak fibers, Loose tubes,
double PE jacket, central strength member of FRP,
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The **LP-OC03120124ZC** is family of Fiber optic cables that the industry calls an Outside Plant Cable, made sturdy enough for laying directly buried or in underground conduits, ducts or in aerial/lashed deployment.

Loose tube style, optical fiber cable with non-metallic central strength member of FRP and moisture barrier inner sheathed. Cable protected by a corrugated steel armoring and black PE over sheath for protection against mechanical damage and termite or rodent attack, suitable for direct buried or aerial application. Tubes contain optical single-mode or multimode fibers color coded as per color coding scheme.

A Sección de corte



B Product Construction

Fiber	12 fibers. Loose tube gel-filled. Color-coding per TIA/EIA 598 B.
Loose tube material	PBT 2.0mm
Central Strength Member	FRP 2.0
Inner Jacket	Polyethylene (PE).
Armor	Corrugated steel armored
Outer Jacket	Black UV- and moisture-resistant polyethylene (PE). Sequential meter markings standard/ Footage optional
Temperature	Storage -40°C (-40°F) to +70°C (+158°F) Installation -40°C (-40°F) to +70°C (+158°F) Operating -40°C (-40°F) to +70°C (+158°F)

C Dimension and Characteristics

Fiber Core	12
No of loose tube	2
No of filler	4
Fiber No. per tube	6
Cable OD mm ±0.2	13.0
Cable weight kg/km	130

D Mechanical & Environmental

Allowable Tensile Load(N)	Short term:2000 Long term:1500
Crush resistance	Short term 3000 N/100mm Long term :1000N/100MM
Minimal installation bending radius	20 x OD
Minimal operation bending radius	10 x OD

E Optical Characteristics

Mode Field Diameter @ 1310 nm	8.7-9.5 um
Mode Field Diameter @ 1550 nm	9.8-10.8 um
Cladding diameter	125.0 ± 0.7 m
Core/cladding concentricity error	0.6 um
Cladding non-circularity	1.0 %
Refractive index profile	Step
Design	Matched cladding
Primary coating material	UV curable acrylate
Primary coating Diameter	235-250um

Optical Characteristics

Attenuation	@ 1310nm	0.36 dB/km (cabling)
	@ 1383 3nm	0.34 dB/k
	@ 1550nm	0.22dB/km (cabling)
Dispersion	@ 1288 ~ 1339nm	3.5 ps/nm km
	@ 1550nm	18 ps/nm km
Zero dispersion wavelength	1300 - 1324 nm	
Dispersion slope at zero dispersion wavelength	0.092 ps/nm ² km	
Cabled cut-off wavelength (cc)	1260 nm	
Polarization mode dispersion link value	0.2 ps/√km	








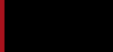




Mechanical Characteristics

Proof stress level	≥0.69 GPa
The loss increases of 100 turns of fiber loosely wound with 25mm radius	0.05dB (a 1550nm)
Effective group index of refraction Neff	1.466(a 1310nm)
Effective group index of refraction Neff	1.467 (a 1550nm)

F Identification

The fibers shall be marked by a colored coating with 12 different colors according to EIA/TIA 598:

Fiber #1: Blue	Fiber #7: Red
Fiber #2: Orange	Fiber #8: Black (natural with being marked)
Fiber #3: Green	Fiber #9: Yellow
Fiber #4: Brown	Fiber #10: Violet
Fiber #5: Grey	Fiber #11: Pink
Fiber #6: White	Fiber #12: Aqua (Light Blue)

No	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua
												

G Main mechanical Factory Routine Test

Parameter	Test method	Test conditions	Acceptance criteria*
Tensile strength	IEC 60794-1-21-E1	As per cable maximum tensile strength (max. Working tension) in table above	After 30 minutes the maximum strain on the fibers should not exceed 0,33% and no attenuation change throughout test
Crush	IEC 60794-1-21-E3	Short time: 10 min long time: 120 min Load: As per maximum crush resistance n table above Number of positions: 3 adjacent sections (ensuring one over tube and one over lay reversal)	No damage to the sheath or to the core structure and no attenuation change throughout test
Impact	IEC 60794-1-21-E4	Weight: 1.5kg Height: 1.0m Anvil radius: 12.5mm Impacts: 1	After 5 minutes no fiber breaks, no damage to the sheath or to the core structure and no attenuation change throughout test
Torsion	IEC 60794-1-21-E7	Sample length: 1 m Rotation: a) 180° clockwise, b) return to starting position, c) 180° anticlockwise, d) return to starting position. Four movements constitute one cycle). Complete 10 cycles (a to d) in one minute maximum	During the final tenth cycle at a), c) and after completion (no rotation) check transmitting fibers. No fiber breaks, no damage to the sheath or to the core structure and no attenuation change throughout test
Bend Bend under tension	IEC 60794-1-21-E11 Concurrent to tensile test IEC 60794-1-21-E18A	Mandrel diameter: 30 x Cable OD Bend: 360° (1turn) Mandrel diameter: 40 x Cable OD Bend: 360° (1turn)	No attenuation change throughout test After 1 minute no fibre breaks, no damage to the sheath or to the core structure and no attenuation change throughout test
Temperature cycling	IEC 60794-1-22-F1	Sample length: 1000m (minimum) Temperature range: - 10°C to +70°C	

H How to order

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