

DUCT Cable GYFS-6 G652D

Cable cross-section and dimensions

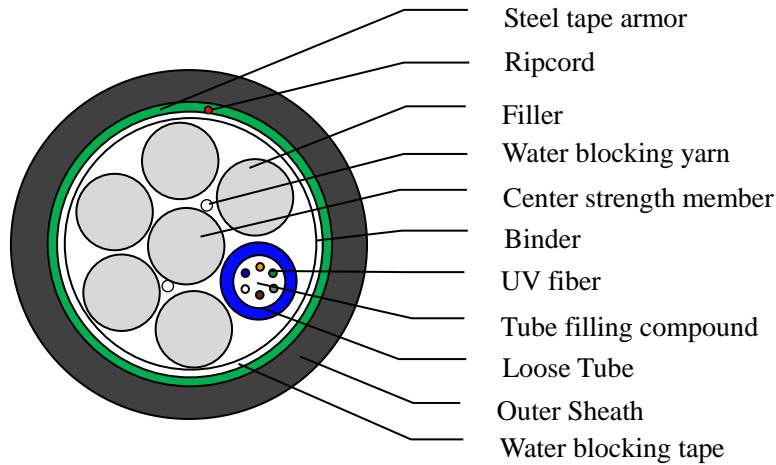


Figure. Cable Cross-Section (A-end)

Item	Material	Description
Outer sheath	HDPE	HDPE
Steel tape armor	Two side coated steel tape	Two side coated steel tape
Ripcord	Ripcord	Easy for stripping
Binder	Polyester yarn	Cable core binding
Water blocking tape	Water blocking tape	Water blocking & moisture proof
Water blocking yarn	Water blocking yarn	Water blocking & moisture proof
Loose tube	PBT	Colors of tubes: blue
Filler	PP	Diameter same as tube
Tube filling compound	Thyrotrophic gel	Water Blocking & Moisture Proof
Fiber	Silicon-based fiber(G.652D)	UV fiber, color with: blue, orange, green, brown, grey, white
Center strength member	FRP	FRP
Cable O.D.		10.8 ± 0.5 mm
Cable weight		106 ± 15kg/km

Cable main mechanical properties and application

Serial No.	Item	Requirement
1	Allowable tensile strength (N)(short term)	2000N
2	Allowable crush resistance (N) (short term)	1000N /10cm
3	Application	Duct
4	Operation temperature	-20 ℃ +65 ℃

DUCT Cable GYFS-12 G652D

Cable cross-section and dimensions

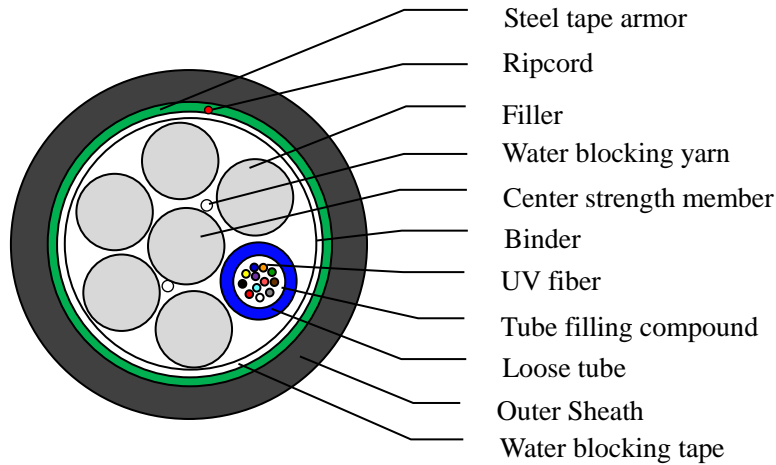


Figure. Cable Cross-Section (A-end)

Item	Material	Description
Outer sheath	HDPE	HDPE
Steel tape armor	Two side coated steel tape	Two side coated steel tape
Ripcord	Ripcord	Easy for stripping
Binder	Polyester yarn	Cable core binding
Water blocking tape	Water blocking tape	Water blocking & moisture proof
Water blocking yarn	Water blocking yarn	Water blocking & moisture proof
Loose tube	PBT	Colors of tubes: blue
Filler	PP	Diameter same as tube
Tube filling compound	Thyrotrophic gel	Water Blocking & Moisture Proof
Fiber	Silicon-based fiber(G.652D)	UV fiber, color with: blue, orange, green, brown, grey, white, red, black, yellow, purple, pink, aqua
Center strength member	FRP	FRP
Cable O.D.	11.4 ± 0.5 mm	
Cable weight	117 ± 15 kg/km	

Cable main mechanical properties and application

Serial No.	Item	Requirement
1	Allowable tensile strength (N)(short term)	2200N
2	Allowable crush resistance (N) (short term)	1000N /10cm
3	Application	Duct
4	Operation temperature	-20 ℃ +65 ℃

DUCT Cable GYFS-24 G652D

Cable cross-section and dimensions

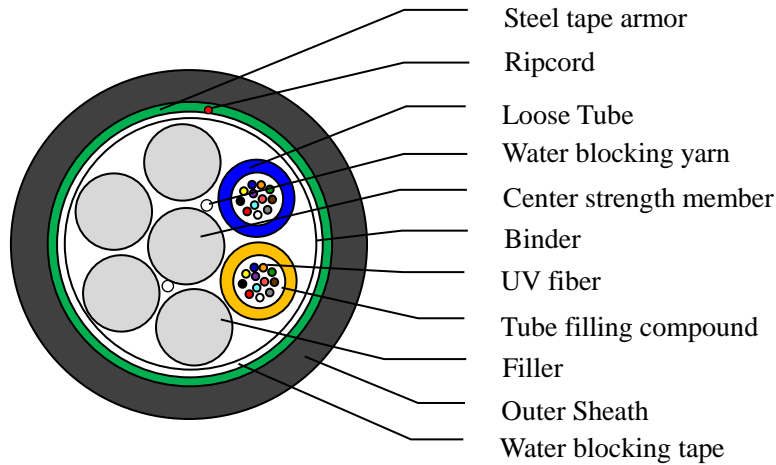


Figure. Cable Cross-Section (A-end)

Item	Material	Description
Outer sheath	HDPE	HDPE
Steel tape armor	Two side coated steel tape	Two side coated steel tape
Ripcord	Ripcord	Easy for stripping
Binder	Polyester yarn	Cable core binding
Water blocking tape	Water blocking tape	Water blocking & moisture proof
Water blocking yarn	Water blocking yarn	Water blocking & moisture proof
Loose tube	PBT	Colors of tubes: blue, orange
Filler	PP	Diameter same as tube
Tube filling compound	Thyrotrophic gel	Water Blocking & Moisture Proof
Fiber	Silicon-based fiber(G.652D)	UV fiber, color with: blue, orange, green, brown, grey, white, red, black, yellow, purple, pink, aqua
Center strength member	FRP	FRP
Cable O.D.	11.4 ± 0.5 mm	
Cable weight	117 ± 15 kg/km	

Cable main mechanical properties and application

Serial No.	Item	Requirement
1	Allowable tensile strength (N)(short term)	2200N
2	Allowable crush resistance (N) (short term)	1000N /10cm
3	Application	Duct
4	Operation temperature	-20 ℃ +65 ℃

DUCT Cable GYFS-36 G652D

Cable cross-section and dimensions

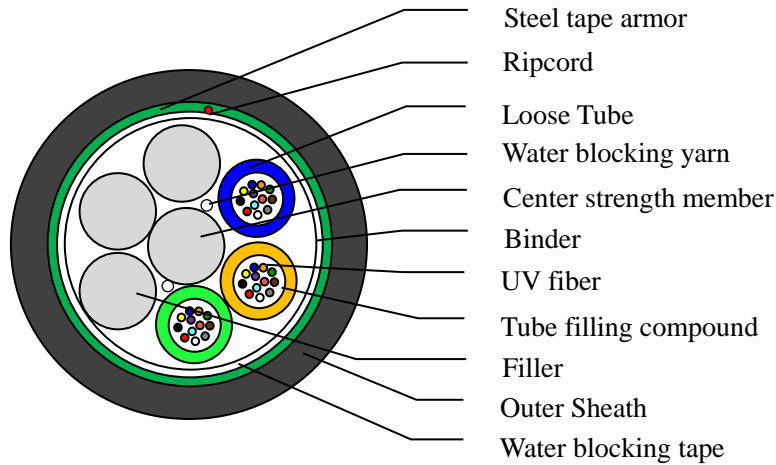


Figure. Cable Cross-Section (A-end)

Item	Material	Description
Outer sheath	HDPE	HDPE
Steel tape armor	Two side coated steel tape	Two side coated steel tape
Ripcord	Ripcord	Easy for stripping
Binder	Polyester yarn	Cable core binding
Water blocking tape	Water blocking tape	Water blocking & moisture proof
Water blocking yarn	Water blocking yarn	Water blocking & moisture proof
Loose tube	PBT	Colors of tubes: blue, orange, green,
Filler	PP	Diameter same as tube
Tube filling compound	Thyrotrophic gel	Water Blocking & Moisture Proof
Fiber	Silicon-based fiber(G.652D)	UV fiber, color with: blue, orange, green, brown, grey, white, red, black, yellow, purple, pink, aqua
Center strength member	FRP	FRP
Cable O.D.	11.4 ± 0.5 mm	
Cable weight	117 ± 15 kg/km	

Cable main mechanical properties and application

Serial No.	Item	Requirement
1	Allowable tensile strength (N)(short term)	2200N
2	Allowable crush resistance (N) (short term)	1000N /10cm
3	Application	Duct
4	Operation temperature	-20 ℃ +65 ℃

DUCT Cable GYFS-48 G652D

Cable cross-section and dimensions

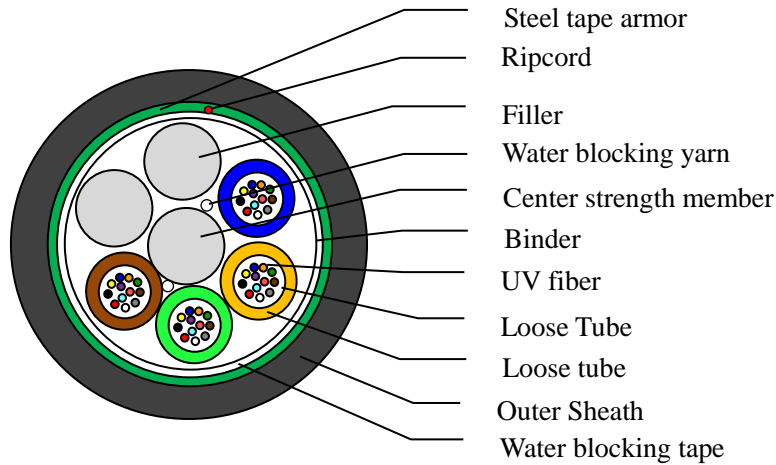


Figure. Cable Cross-Section (A-end)

Item	Material	Description
Outer sheath	HDPE	HDPE
Steel tape armor	Two side coated steel tape	Two side coated steel tape
Ripcord	Ripcord	Easy for stripping
Binder	Polyester yarn	Cable core binding
Water blocking tape	Water blocking tape	Water blocking & moisture proof
Water blocking yarn	Water blocking yarn	Water blocking & moisture proof
Loose tube	PBT	Colors of tubes: blue, orange, green, brown
Filler	PP	Diameter same as tube
Tube filling compound	Thyrotrophic gel	Water Blocking & Moisture Proof
Fiber	Silicon-based fiber(G.652D)	UV fiber, color with: blue, orange, green, brown, grey, white, red, black, yellow, purple, pink, aqua
Center strength member	FRP	FRP
Cable O.D.	11.4 ± 0.5 mm	
Cable weight	117 ± 15kg/km	

Cable main mechanical properties and application

Serial No.	Item	Requirement
1	Allowable tensile strength (N)(short term)	2200N
2	Allowable crush resistance (N) (short term)	1000N /10cm
3	Application	Duct
4	Operation temperature	-20 ℃ +65 ℃

DUCT Cable GYFS-72 G652D

Cable cross-section and dimensions

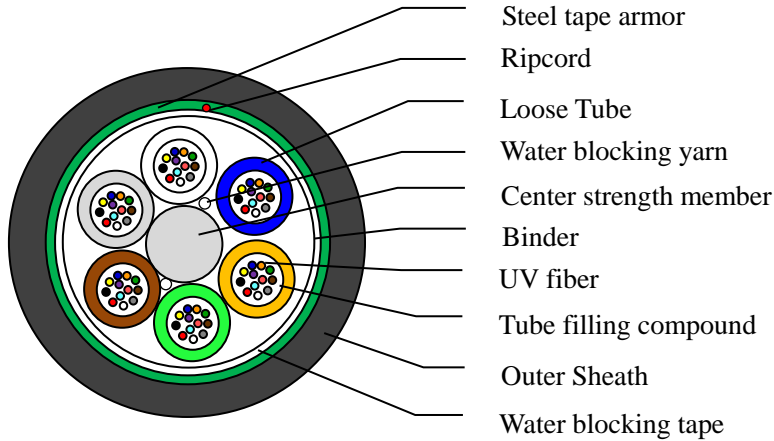


Figure. Cable Cross-Section (A-end)

Item	Material	Description
Outer sheath	HDPE	HDPE
Steel tape armor	Two side coated steel tape	Two side coated steel tape
Ripcord	Ripcord	Easy for stripping
Binder	Polyester yarn	Cable core binding
Water blocking tape	Water blocking tape	Water blocking & moisture proof
Water blocking yarn	Water blocking yarn	Water blocking & moisture proof
Loose tube	PBT	Colors of tubes: blue, orange, green, brown, gray, white
Tube filling compound	Thyrotrophic gel	Water Blocking & Moisture Proof
Fiber	Silicon-based fiber(G.652D)	UV fiber, color with: blue, orange, green, brown, grey, white, red, black, yellow, purple, pink, aqua
Center strength member	FRP	FRP
Cable O.D.	11.4 ± 0.5 mm	
Cable weight	118 ± 15 kg/km	

Cable main mechanical properties and application

Serial No.	Item	Requirement
1	Allowable tensile strength (N)(short term)	2200N
2	Allowable crush resistance (N) (short term)	1000N /10cm
3	Application	Duct
4	Operation temperature	-20 ℃ +65 ℃

G.652D fiber characteristics		
Optics specifications		
Attenuation	@ 1310nm	$\leq 0.350\text{dB/km}$
	@ 1383nm(after hydrogen aging)	$\leq 0.350\text{dB/km}$
	@ 1550nm	$\leq 0.210\text{dB/km}$
	@ 1625nm	$\leq 0.240\text{dB/km}$
Zero-Dispersion slope		$\leq 0.092\text{ps}/(\text{nm}^2 \text{ km})$
Dispersion	@ 1550nm	$\leq 18.0\text{ps}/(\text{nm km})$
	@ 1625nm	$\leq 22.0\text{ps}/(\text{nm km})$
Zero-Dispersion wavelength		1300nm~1324nm
Mode field diameter (MFD) at 1310nm		$9.2 \pm 0.6\mu\text{m}$
Mode field diameter (MFD) at 1550nm		$10.5 \pm 1.0\mu\text{m}$
Polarization Mode Dispersion	PMD (Single Value)	$\leq 0.20\text{ps}/\text{km}^{1/2}$
	$M \geq 20$	Cables
	Q	0.01%
	PMD _Q (Link Value)	$\leq 0.10\text{ps}/\text{km}^{1/2}$
Cable cutoff wavelength $\lambda_c(\text{nm})$		$1180\text{nm} \leq \lambda_c \leq 1330\text{nm}$
Cable cutoff wavelength $\lambda_{cc}(\text{nm})$		$\leq 1260\text{nm}$
Back scatter characteristics (at 1310nm&1550nm)		
Point discontinuity		$\leq 0.05\text{dB}$
Attenuation uniformity		$\leq 0.05\text{dB/km}$
Attenuation coefficient difference for bi-directional measurement		$\leq 0.05\text{dB/km}$
Geometrical characteristics		
Cladding diameter		$125 \pm 1.0\mu\text{m}$
Cladding non-circularity		$\leq 1.0\%$
Core concentricity error		$\leq 0.6\mu\text{m}$
Fiber diameter with coating (uncolored)		$245 \pm 15\mu\text{m}$
Fiber diameter with coating (colored)		$250 \pm 15\mu\text{m}$
Cladding/coating concentricity error		$\leq 12.5\mu\text{m}$
Curl		$\geq 4\text{m}$
Mechanical characteristics		
Proof stress		$\geq 0.69\text{GPa}(100\text{kpsi})$
Coating strip force (typical value)		1.4N
Dynamic stress corrosion susceptibility parameter (typical value)		≥ 20
Macrobend loss at 1550/1625nm	$\Phi 30\text{mm}, 100 \text{ turns}$	$\leq 0.10\text{dB}$
	$\Phi 16\text{mm}, 1 \text{ turns}$	$\leq 0.10\text{dB}$