

## Self-supporting DROP CABLE-1 G.657A1

### Cable Cross-section and Dimensions

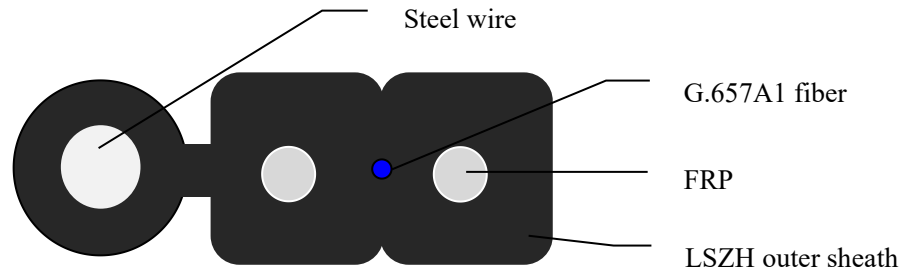


Figure. Cable Cross-Section (A-end)

Item	Material	Description
Outer sheath	LSZH	Colors of sheath: black
Strength member	FRP	Strength member Nominal diameter: 0.5mm
Messenger	steel wire	Strength member Φ: 1.0mm
Fiber	Silicon-based fiber (G.657A1)	UV fiber colored with: blue
Cable O.D.	$(3.0 \pm 2.0) * \pm 0.3\text{mm}$ (without messenger) $(5.2 \pm 2.0) * \pm 0.3\text{mm}$	
Cable weight	20±3 kg/km	

### Main Mechanical and Environmental Characteristics

Item	Specified Value	Acceptance Criteria
1	Tensile Load	600N
2	Crush	1000N/10cm
3	Temperature	-20~+60 °C
4	Application	Indoor

## Self-supporting DROP CABLE-2 G.657A1

### Cable Cross-section and Dimensions

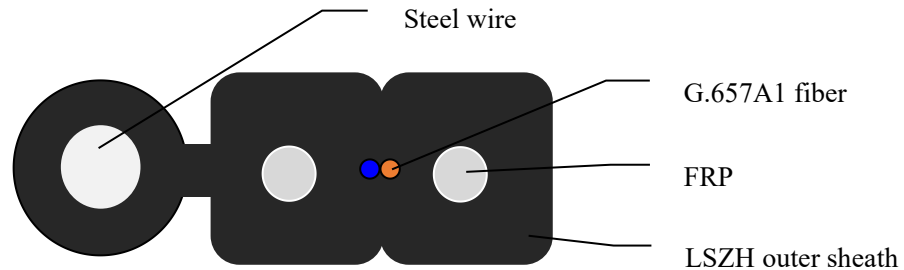


Figure. Cable Cross-Section (A-end)

Item	Material	Description
Outer sheath	LSZH	Colors of sheath: black
Strength member	FRP	Strength member Nominal diameter: 0.5mm
Messenger	steel wire	Strength member Φ: 1.0mm
Fiber	Silicon-based fiber (G.657A1)	UV fiber colored with: blue, orange
Cable O.D.	$(3.0 \pm 2.0) * \pm 0.3\text{mm}$ (without messenger) $(5.2 \pm 2.0) * \pm 0.3\text{mm}$	
Cable weight	20±3 kg/km	

### Main Mechanical and Environmental Characteristics

Item	Specified Value	Acceptance Criteria
1	Tensile Load	600N
2	Crush	1000N/10cm
3	Temperature	-20~+60 °C
4	Application	Indoor

<b>G.657 A1 fiber characteristics</b>		
<b>Optics specifications</b>		
Attenuation	@1310nm	$\leq 0.340\text{dB/km}$
	@1383nm	$\leq 0.340\text{dB/km}$
	@1550nm	$\leq 0.200\text{dB/km}$
	@1625nm	$\leq 0.240\text{dB/km}$
Attenuation(After cable)	@1310nm	$\leq 0.40\text{dB/km}$
Attenuation(After cable)	@1550nm	$\leq 0.25\text{dB/km}$
Uniformity of attenuation at 1310nm		$\leq 0.05\text{dB}$
Uniformity of attenuation at 1550nm		$\leq 0.05\text{dB}$
Cable cut-off wavelength ( $\lambda_{cc}$ )		$\leq 1260\text{nm}$
Zero-Dispersion wavelength		1300nm~1324nm
Zero-Dispersion slope		$\leq 0.092\text{ps}/(\text{nm}^2 \cdot \text{km})$
Absolute value of dispersion at 1288nm~1339nm		$\leq 3.5\text{ps}/(\text{nm} \cdot \text{km})$
Absolute value of dispersion at 1271nm~1360nm		$\leq 5.3\text{ps}/(\text{nm} \cdot \text{km})$
Dispersion at 1550nm		$\leq 18\text{ps}/(\text{nm} \cdot \text{km})$
Dispersion at 1625nm		$\leq 23\text{ps}/(\text{nm} \cdot \text{km})$
Mode field diameter (MFD) at 1310nm		8.20-8.65 $\mu\text{m}$
Polarization mode dispersion (PMD) Fiber		$\leq 0.125\text{ps}/\text{km}^{1/2}$
Polarization mode dispersion (PMD) Cable		$\leq 0.200\text{ps}/\text{km}^{1/2}$
PMD coefficient	M	20 cables
	Q	0.01%
	PMD <sub>Q</sub>	$\leq 0.200\text{ps}/\text{km}^{1/2}$
<b>Geometrical characteristics</b>		
Cladding diameter		125 $\pm 0.7\mu\text{m}$
Cladding non-circularity		$\leq 0.7\%$
Core/cladding concentricity error		$\leq 0.5\mu\text{m}$
Fiber diameter with coating (uncolored)		245 $\pm 10\mu\text{m}$
Fiber diameter with coating (colored)		250 $\pm 10\mu\text{m}$
Cladding/coating concentricity error		$\leq 12.0\mu\text{m}$
Tension test		100kpsi or 0.69GPa
Removal of the coating (N)		1.0~9.0
<b>Mechanical characteristics</b>		
Macrobend loss at 1550nm	R=15mm,10 turns	$\leq 0.25\text{dB}$
	R=10mm,1turn	$\leq 0.75\text{dB}$
Macrobend loss at 1625nm	R=15mm,10 turns	$\leq 1.0\text{dB}$
	R=10mm,1turn	$\leq 1.5\text{dB}$