

Product Specification

(LF-2SM9N)

SAQ024E

Ver.2.3

Canare Electric Co., Ltd

1. Scope

This product specification covers the performance of Hybrid Electrical and Fiber-Optic Camera Cable for studio and broadcast use.

2. Applicable standard

SMPTE 311-2009

ARIB BTA S-1005B (color coding is in accordance with SMPTE 311-2009)

3. General Specifications

(1)Product Name Hybrid Electrical and Fiber-Optic Camera Cable

(2)Model Name LF-2SM9N

(3)Construction and Appearance As shown in Fig.1,2,3 and Table 1

Fig.1 Construction and color coding

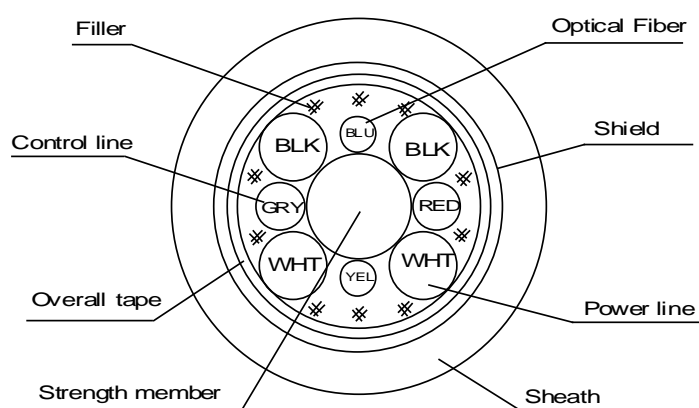


Fig.2 Optical fiber

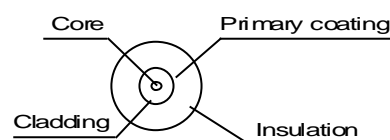


Fig.3 Power line, Control line

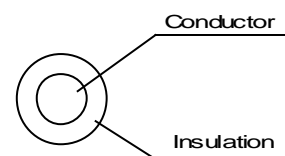


Table 1

		Item	Standard value	Remarks	
Configuration of inner units	Optical fiber	Number of units		2	Color coding/ Blu, Yel
		Fiber	Mode field OD (μm)	8.6±0.4	Standards/ ITU-T G.652.D ITU-T G.657.A2
			Cladding OD (μm)	125±0.7	
			Concentricity error (μm)	≤ 0.5	
			Cladding non-circular ratio (%)	≤ 0.7	
			Cut-off wavelength (μm)	≤ 1.26	
			Outer diameter (mm)	0.9±0.05	
	Power line	Number of units		4	Color coding/ Blk, Wht
		Conductor	Construction (mm/qty)	TA0.18 / 21	Tinned annealed copper (JIS C3152) 20AWG
			Nom. cross sec. area (mm ²)	0.53	
			Outer diameter (mm)	0.90	
	Insulation	Outer diameter (mm)	1.7	Polyethylene	
	Control line	Number of units		2	Color: Red, Gry
		Conductor	Construction (mm/qty)	TA0.18 / 7	Tinned annealed copper (JIS C3152) 25AWG
Nom. cross sec. area (mm ²)			0.18		
Outer diameter (mm)			0.55		
Insulation	Outer diameter (mm)	1.2	-		
Strength member		Outer diameter (mm)	2.6	Polyethylene coated steel wire	
Filler		Material	Cotton yarn	-	
Overall tape		Thickness (mm)	0.08	Non-woven fabric	

Table 1 (continued)

Item		Standard value	Remarks
Shield	Construction (mm/qty/carriers)	TA0.10 / 9 / 24	Tinned annealed copper (JIS C3152)
	Outer diameter (mm)	6.7	Coverage ≥ 91%
Sheath	Thickness (mm)	1.25	Abrasion-resistant sheath
	Color	Black	
	Marking	LF-2SM9N CANARE <Year code>SINGLE-MODE SMPTE311 G657A2 E***** AWM <Style No.> VW-1	
Outer diameter (mm)		9.2±0.3	-

(4)Weight/ Approx. 12kg/100m

(5)Package 200m or less/donut roll
Over 200m/Wooden reel**4. Flame Retardancy**

UL AWM (VW-1)

5. Characteristics**4.1 Transmission performance**

(1)Optical Fiber

Item	Length (km)	Standard Value	Test method
Attenuation ($\lambda=1.31\mu\text{m}$)	$L \geq 1.0$	$\leq 0.5L\text{dB/km}$	JIS C 6823
	$0.2 \leq L < 1.0$	$\leq 0.375L + 0.125\text{dB}$	
	$0.2 > L$	$\leq 0.2\text{dB}$	

(2)Power line

Item	Standard value	Test method
Conductor resistance	$\leq 37.5\Omega/\text{km}(20^\circ\text{C})$	JIS C 3005
Insulation resistance	$\geq 10000\text{M}\Omega/\text{km}(20^\circ\text{C})$	JIS C 3005
Withstand voltage	AC 2000V/1min.	UL758

(3)Control line

Item	Standard value	Test method
Conductor resistance	$\leq 113\Omega/\text{km}(20^\circ\text{C})$	JIS C 3005
Insulation resistance	$\geq 10000\text{M}\Omega/\text{km}(20^\circ\text{C})$	JIS C 3005
Withstand voltage	AC 2000V/1min.	UL758

(4)Shield

Item	Standard value	Test method
Conductor resistance	$\leq 17.5\Omega/\text{km}(20^\circ\text{C})$	JIS C 3005

(5)Environment Characteristics

Item	Standard value	Test method
Conductor resistance	<ul style="list-style-type: none"> • Flame shall extinguish naturally within 60 seconds. • The indicator flag should not burn away. • Shall not ignite the cotton. 	UL758 VW-1

6. Use conditions

- (1) Temperature Range : -40~+75°C
- (2) The permission tension : $\leq 700\text{N}$
- (3) Permission bend radius : O.D x6

Note: Testing must be performed under standard conditions set down in “JIS C 60068-1 General Environmental Testing Rules(Electric/Electronics).”

Standard Conditions: Unless otherwise specified, all tests and measurements should be performed within a normal temperature range of 15-35°C, a relative humidity of 25-75%, and an atmospheric pressure of 86-106kPa.

End