

Product Specification (LF-2SM16)

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-2SM16
- (3) Construction and Appearance As shown in Fig.1,2,3 and Table 1

Fig.1 Construction and color coding

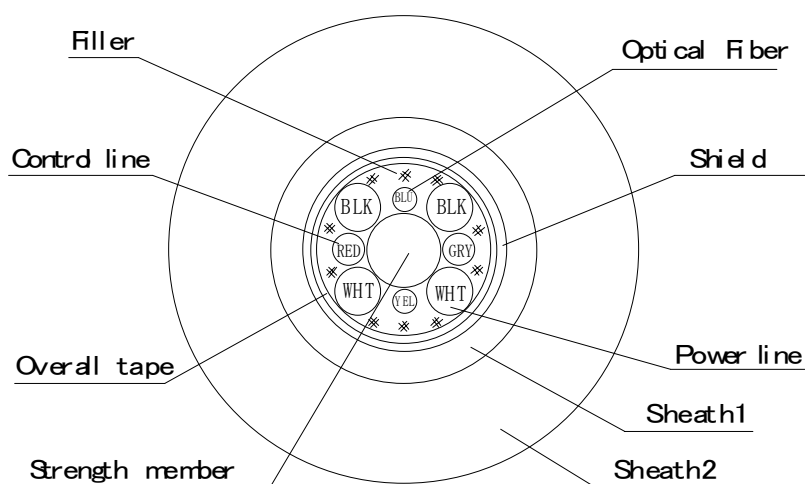


Fig.2 Optical fiber

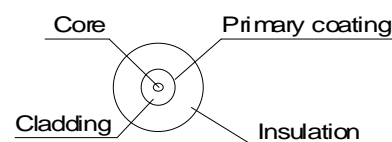


Fig.3 Power line, Control line

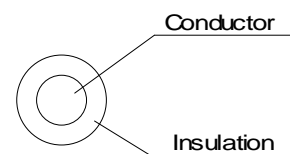


Table 1

| | | 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 (qty/mm) | 21/0.18TA | 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 (qty/mm) | 7/0.18TA | 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 (carriers/qty/mm) | 24/ 9/0.10TA | Tinned annealed copper (JIS C3152) |
| | Outer diameter (mm) | 6.7 | Coverage ≥ 91% |
| Sheath 1 | Thickness (mm) | 1.25 | Abrasion-resistant sheath |
| | Outer diameter (mm) | 9.2 | |
| Sheath 2 | Thickness (mm) | 1.4 | Abrasion-resistant sheath |
| | Color | Black | |
| | Marking | LF-2SM16 CANARE <Year code>SINGLE-MODE SMPTE311 G657A2 | |
| Outer diameter (mm) | | 16.0 ±0.4 | - |

(4) Weight: Approx. 29kg/ 100m

(5) Package 90m or less : donut roll
Over 90m : Wooden reel

4. Characteristics

4.1 Transmission performance

(1) Optical Fiber

| Item | Length (km) | Standard Value | Test method |
|---------------------------|--------------|-------------------|-------------|
| Attenuation (λ=1.31μm) | L ≥1.0 | ≤ 0.5L dB | JIS C 6823 |
| | 0.2 ≤ L <1.0 | ≤ 0.375L+0.125 dB | |
| | 0.2 > L | ≤ 0.2 dB | |

(2) Power line

| Item | Standard value | Test method |
|-----------------------|--------------------|-------------|
| Conductor resistance | ≤ 37.5Ω/km (20°C) | JIS C 3005 |
| Insulation resistance | ≥10000MΩ/km (20°C) | JIS C 3005 |
| Withstand voltage | AC 2000V/1min. | UL 758 |

(3) Control line

| Item | Standard value | Test method |
|-----------------------|--------------------|-------------|
| Conductor resistance | ≤ 113Ω/km (20°C) | JIS C 3005 |
| Insulation resistance | ≥10000MΩ/km (20°C) | JIS C 3005 |
| Withstand voltage | AC 2000V/1min. | UL 758 |

(4) Shield

| Item | Standard value | Test method |
|----------------------|-------------------|-------------|
| Conductor resistance | ≤ 17.5Ω/km (20°C) | JIS C 3005 |

(5) Environment Characteristics

| Item | Standard value | Test method |
|------------------|---|---|
| Flame Retardance | Flame must extinguish naturally within 60 seconds. | Perform inclination test according to JIS C 3005 |

5. Use conditions

(1) Temperature Range: -40 to +75°C

(2) The permission tension: ≤ 700N

(3) Permission bend radius: O.D. x6