SMPTE STANDARD

for Television ----
Hybrid Electrical and Fiber-Optic Camera Cable

1 Scope

1.1 Definition

This standard describes the minimum performance for a hybrid cable containing single-mode optical fibers and electrical conductors to convey signal and control in a variety of environments where moisture, weather, and ozone resistance are required. This document is not intended to be a cable manufacturing design standard. The cable described in this standard is intended to be used to interconnect cameras and base stations in conjunction with the connector interface standard.

1.2 Provisions

In this document, "shall" denotes a mandatory provision of the standard, "should" denotes a provision that is recommended but not mandatory, and "may" denotes features included at the option of the designer, whose incorporation makes the system performance, cost, and/or convenience of installation more attractive to the user.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the edition indicated was valid. All documents are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standard listed below.

ANSI/EIA 492B000-1988, Sectional Specification for Class IV Single-Mode Optical Waveguide Fibers

3 Temperature and humidity

The cable shall retain the optical and mechanical properties detailed within this standard, over the following conditions:

FOTP-162

Temperature: -- 40°C to + 75°C
Humidity: 0 to 95%

4 Optical fibers

4.1 Single-mode optical fibers

There shall be two optical fibers. The optical fibers shall conform to ANSI/EIA 492B000 requirements. Table 1 is shown as reference only (see clause 7).

Table 1 -- Single-mode optical fibers

Item	Construction
Fiber type	Single-mode (SM) fiber, nondispersion shifted
Mode field diameter	9.5 ± 1 micron
Cladding diameter	125 ± 1 micron
Concentricity error	≤ to 1 micron
Coating material	Acrylate
Buffer material	Thermoplastic
Buffer diameter	0.90 ± 0.05 mm

4.2 Optical characteristics

4.2.1 Single-mode optical fibers shall be as follows:

Approved
September 29, 1998