

**AKSH TECHNOLOGIES LIMITED**

PART No.: B-12/SM/UT(2SW&G)-CCSTP-B9.0

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CABLE TYPE: 12F SM OPTICAL FIBRE CABLE

**DESIGN & DATA SPECIFICATION SHEET**

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**1. FIBRE PROPERTIES:**

CHARACTERISTICS	UNIT	VALUE
ATTENUATION @ 1310 nm	dB/km	≤ 0.38 Max & ≤ 0.35 Average
@ 1550 nm		≤ 0.25 Max & ≤ 0.22 Average
CHROMATIC DISPERSION 1285-1330 nm	ps/nm.km	≤ 3.5
At 1550 nm		≤ 18.0
ZERO DISPERSION WAVELENGTH	nm	1300 to 1324
ZERO DISPERSION SLOPE	ps/nm <sup>2</sup> .km	≤ 0.092
CUT OFF WAVELENGTH	nm	≤ 1320
POLARISATION MODE DISPERSION	ps/root km	≤ 0.2
MODE FIELD DIAMETER at 1310 nm	um	9.3 ± 0.5
CORE- CLAD CONCENTRICITY ERROR	um	≤ 0.8
CLADDING NON CIRCULARITY	%	≤ 1.0
CLADDING DIAMETER	um	125 ± 1.0
COATING DIAMETER	um	245 ± 10

**2. MECHANICAL & ENVIRONMENTAL PROPERTIES**

A. MAX. OPERATING TENSION -- LONG TERM	:	1500 Newton
-- SHORT TERM	:	3000 Newton
B. CRUSH RESISTANCE	:	4000 Newton/10 cm
C. MINIMUM BENDING RADIUS -- LONG TERM	:	180 mm
--SHORT TERM	:	90 mm
D. MAX. OPERATING/ INSTALLATION TEMPERATURE	:	- 30 °C to + 70 °C

**3. PHYSICAL & DIMENSIONS PROPERTIES**

NO. OF FIBRES	12F
TYPE OF FIBRE	SM G652 D
LOOSE TUBE DIAMETER	2.8 mm Nominal
STRENGTH MEMBER	STEEL WIRE & GLASS YARN REINFORCEMENT
COLOUR OF FIBRE	BLUE, ORANGE, GREEN, BROWN, SLATE, WHITE, RED, BLACK, YELLOW, VIOLET, PINK & AQUA
OUTER SHEATH MATERIAL	H.D.P.E.
OUTER SHEATH THICKNESS	≥ 1.8 mm
OUTER CABLE DIAMETER	9.0 ± 0.5 mm
CABLE WEIGHT	85 ± 9 Kg/Km
PRINTING ON CABLE	AS PER CUSTOMER REQUIREMENT
STANDARD LENGTH	2,3,4 ± 10% KMS

**CROSS SECTIONAL VIEW:**

OUTER SHEATH (H.D.P.E)

CORRUGATED STEEL TAPE

FILLING JELLY

OPTICAL FIBRE

GLASS YARN REINFORCEMENT

LOOSE TUBE WITH FIBRES

STEEL WIRE

