



DATA SHEET

Elliptical Waveguide

Kabelwerk

EUPEN AG

Rev.: 03/2015-12-02

cable

EU 52

CHARACTERISTICS

Construction

- **Construction**
 - Description **Elliptical corrugated copper tube**
- **Jacket**
 - Material **UV resistant, black polyethylene**
 - Thickness, *mm (in)* **1.8 (0.07)**
- **Dimensions**
 - Outer dimensions, *mm (in)* **56 x 32.4 (2.20 x 1.28)**

Mechanical characteristics

- **Minimum bending radius, without rebending**
 - E plane, *mm (in)* **200 (7.9)**
 - H plane, *mm (in)* **500 (19.7)**
- **Minimum bending radius, with rebending**
 - E plane, *mm (in)* **300 (11.8)**
 - H plane, *mm (in)* **800 (31.5)**
- **Min. drum core diameter, *mm (in)*** **1200 (47)**
- **Maximum operating pressure, *bar (psi)*** **0.5 (7.3)**
- **Max. pulling length per hoisting grip, *m (ft)*** **60 (197)**
- **Recommended temperature range**
 - Installation, °C (°F) **-20 to +60 (-4 to +140)**
 - Operation, °C (°F) **-40 to +80 (-40 to +176)**
- **Weight, *kg/m (lb/ft)*** **1.045 (0.7)**

Electrical characteristics

- **Frequency range, GHz** **4.6 - 6.425**
- **TE₁₁ Mode cutoff frequency, GHz** **3.7**
- **Attenuation, group velocity of propagation, power**

Frequency GHz	Attenuation ^[1] dB/100m (dB/100ft)	Group velocity %	Av. Power ^[2] kW
4.6	4.88 (1.49)	59.4	4.56
4.7	4.70 (1.43)	61.7	4.73
4.8	4.55 (1.39)	63.7	4.89
4.9	4.42 (1.35)	65.6	5.03
5.0	4.31 (1.31)	67.3	5.16
5.1	4.21 (1.28)	68.8	5.28
5.2	4.13 (1.26)	70.3	5.39
5.3	4.05 (1.23)	71.6	5.49
5.4	3.98 (1.21)	72.8	5.59
5.5	3.92 (1.19)	74.0	5.68
5.6	3.86 (1.18)	75.1	5.76
5.7	3.81 (1.16)	76.1	5.83
5.8	3.77 (1.15)	77.0	5.91
5.9	3.72 (1.13)	77.9	5.97
6.0	3.68 (1.12)	78.7	6.04
6.1	3.65 (1.11)	79.5	6.10
6.2	3.61 (1.10)	80.2	6.15
6.3	3.58 (1.09)	80.9	6.21
6.425	3.55 (1.08)	81.8	6.27
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

[1] Attenuation at 20°C (68°F)

[2] Average power ratings based on VSWR 1.0, 82°C (180 °F) inner temperature, 40°C (104 °F) ambient temperature.

