



# DATA SHEET

## Elliptical Waveguide

Kabelwerk

**EUPEN** AG

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cable

# EU 127

## CHARACTERISTICS

### Construction

- **Construction**
  - Description **Elliptical corrugated copper tube**
- **Jacket**
  - Material **UV resistant, black polyethylene**
  - Thickness, *mm (in)* **1.3 (0.05)**
- **Dimensions**
  - Outer dimensions, *mm (in)* **28.5 x 17.3 (1.12 x 0.68)**

### Mechanical characteristics

- **Minimum bending radius, without rebending**
  - E plane, *mm (in)* **125 (4.9)**
  - H plane, *mm (in)* **250 (9.8)**
- **Minimum bending radius, with rebending**
  - E plane, *mm (in)* **150 (5.9)**
  - H plane, *mm (in)* **400 (15.7)**
- **Min. drum core diameter, *mm (in)*** **1000 (39)**
- **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)*** **0.36 (0.24)**

### Electrical characteristics

- **Frequency range, GHz** **11.7 - 13.25**
- **HE<sub>C11</sub> Mode cutoff frequency, GHz** **7.75**
- **Attenuation, group velocity of propagation, power**

Frequency GHz	Attenuation <sup>[1]</sup> dB/100m (dB/100ft)	Group velocity %	Av. Power <sup>[2]</sup> kW
11.7	12.41 (3.78)	74.9	1.16
11.8	12.33 (3.76)	75.4	1.17
11.9	12.26 (3.74)	75.9	1.18
12.0	12.18 (3.71)	76.3	1.19
12.1	12.11 (3.69)	76.8	1.19
12.2	12.04 (3.67)	77.2	1.20
12.3	11.98 (3.65)	77.7	1.21
12.4	11.91 (3.63)	78.1	1.21
12.5	11.85 (3.61)	78.5	1.22
12.6	11.80 (3.60)	78.8	1.23
12.7	11.74 (3.58)	79.2	1.23
12.8	11.69 (3.56)	79.6	1.24
12.9	11.63 (3.55)	79.9	1.24
13.0	11.58 (3.53)	80.3	1.25
13.1	11.54 (3.52)	80.6	1.25
13.2	11.49 (3.50)	80.9	1.26

[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.

