

# 55 elements Yagi antenna

## 1240 to 1260 MHz

## Part Nr. 20650



### Electrical data

#### Radiation at 1255 MHz

Effective electrical length .....	: 19.3 $\lambda$
Isotropic gain .....	: 21.8 dBi
Aperture angle @ -3 dB	
- E-plane .....	: 2 x 6.6°
- H-plane .....	: 2 x 8.7°
First side lobe set	
- E-plane .....	: - 10 dB @ 17°
- H-plane .....	: - 9.6 dB @ 17°
Rear protection .....	: - 24.6 dB
Average stray radiation	
- E-plane .....	: - 42 dB
- H-plane .....	: - 32 dB

### Bandwidth

Gain @ -1 dB .....	: 1233 to 1271 MHz
Nominal impedance .....	: 50 $\Omega$
Impedance match bandwidth @ SWR <1.3/1.....	: 1250 to 1260 MHz
Acceptable RF power (continuous duty) .....	: 300 W

### Array of 2 or 4 antennas

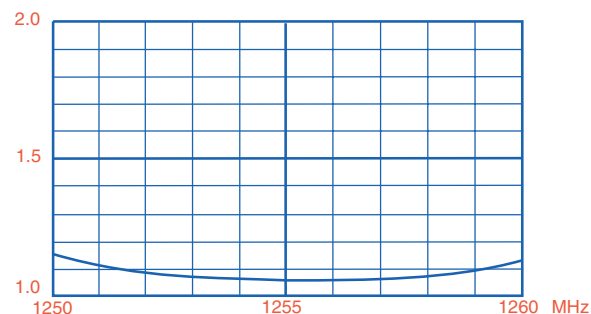
(optimized stacking distance. from center to center of elements. for minimal side lobe radiation)

- E plane - Electrical distance .....	: 4.40 $\lambda$
- Pratical distance .....	: 1.05 m
- H plane - Electrical distance .....	: 4.40 $\lambda$
- Pratical distance .....	: 1.05 m

### Mechanical data

Connector .....	: N
Overall length .....	: 4.64 m
Mass .....	: 4.0 kg
Effective wind load	
- Horizontal polarization .....	: 0.20 m <sup>2</sup>
- Vertical polarization .....	: 0.12 m <sup>2</sup>
Approximate wind load (25 m/s - 55 mph)	
- Horizontal polarization .....	: 7.5 daN
- Vertical polarization .....	: 4.8 daN
Approximate wind load (45 m/s - 100 mph)	
- Horizontal polarization .....	: 24.6 daN
- Vertical polarization .....	: 15.2 daN

### SWR curve



### Radiation patterns

