# High-Power LPDA

## 30 – 520 MHz
## Product Code: LPDA-A0087

**VERSION: 1.2**

**PRELIMINARY SPECIFICATIONS:**

| | | |
|---|---|---|
| **Product versions:** | | |
| **LPDA-A0087** | Standard product with isolator pole and polarisation adjustment capability | |
| **LPDA-A0087-01** | Fixed vertical-polarisation product, no isolator pole. | |
| **Electrical:** | | |
| Frequency range | 30 – 520 MHz | |
| VSWR | < 2:1 typical | |
| Nominal input impedance | 50 Ω | |
| Connector | 7/16 female | |
| Feed power handling | 1000 W continuous | |
| Gain | 5 dBi, typical<br>> 3.5 dBi, 30 – 50 MHz | |
| E-plane 3 dB beamwidth | 60º | |
| H-plane 3 dB beamwidth | 100º | |
| Polarisation | Linear (vertical or horizontal) | |
| Front-to-back ratio | ≥ 12 dB | |
| | | |
| **Mechanical:** | **LPDA-A0087** | **LPDA-A0087-01** |
| Weight | 50 kg | 20 kg |
| Mounting method | Bracket onto a mast | Mast adapter that enables mounting at a 35º angle. |
| Dimensions (L x W) | 3600 mm x 4000 mm | |
| Packaged dimensions (L x W x H) | 2300 mm x 400 mm x 300 mm | |
| Packaging | Canvas bag for elements | |
| Material | Aluminium, stainless steel, Tufnol, fibreglass | |
| MTBF | 100,000 h | |
| | | |
| **Environmental:** | | |
| Operating temperature | -20 ºC to +65 ºC | |
| Storage temperature | -40 ºC to +71 ºC | |
| Wind survival on mast | 140 km/h (calculated) | |
| Vibration | MIL-STD-810F, method 514.5 | |
| Shock | MIL-STD-810F notice 2 | |

**FEATURES:**

- Low frequency coverage up to 520 MHz in a single antenna
- Low VSWR
- High gain of 5 dBi over most of the band
- High feed power handling of 1000 W
- Easy construction of detachable elements with spring fasteners
- Compact storage as unit is easily broken into smaller parts

**APPLICATIONS:**

- Wideband monitoring
- Jamming

**PRODUCT DESCRIPTION:**

This high-powered LPDA is a directional log-periodic dipole array primarily designed for EW applications. It covers the frequency band from 30 to 520 MHz. It can handle a continuous input power of 1000 W and has a typical gain of 5 dBi.

In the LPDA-A0087 version, the polarisation is adjustable between vertical and horizontal. The LPDA-A0087-01 version is fixed vertical polarisation only.

The antenna breaks into three parts for compact storage and can be erected from packaging in less than 10 minutes.



sales@poynting.co.za
**www.poynting.co.za**



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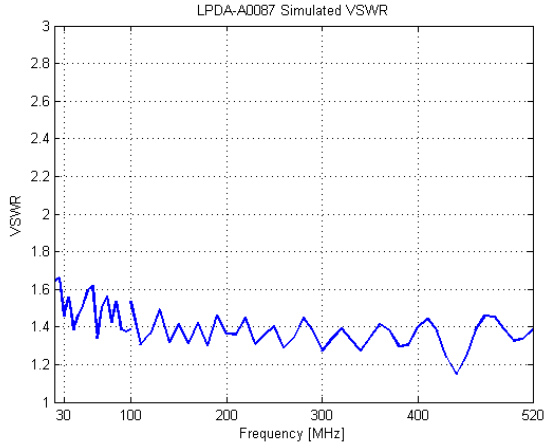
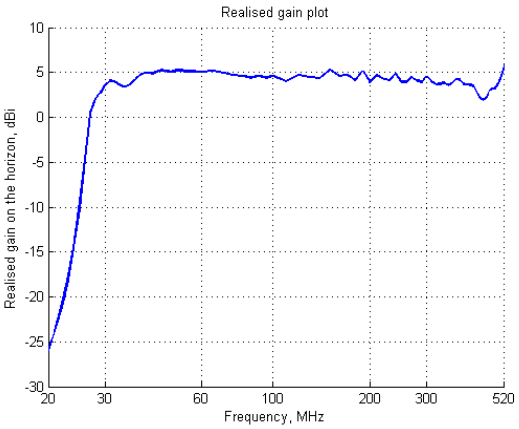
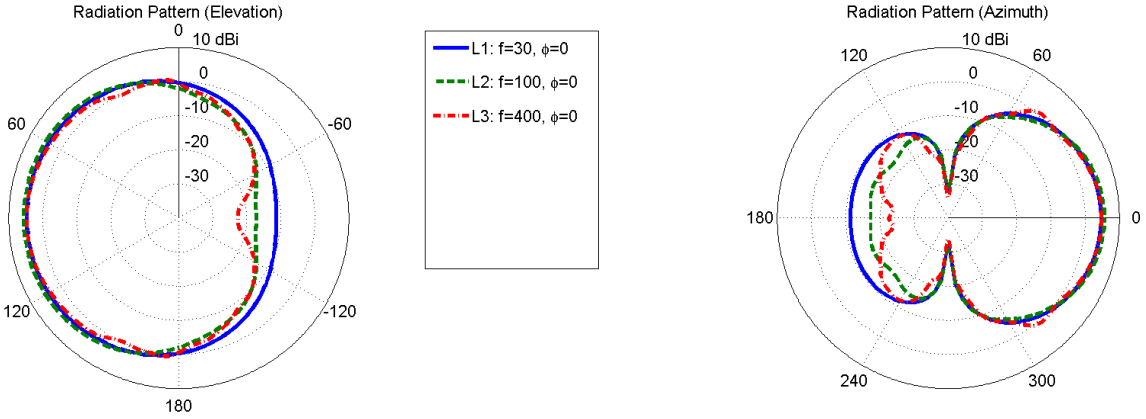
## SIMULATED VSWR




## SIMULATED GAIN




## RADIATION PATTERNS




Blue = 30 MHz. Green = 100 MHz, Red = 400 MHz (typical for high frequencies)





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