



A Breakthrough in mmWave Power



Amaranth
Multi-Domain
100 W at V-Band
250 mm x 200 mm x 50 mm
3.3 kg



Scarlet
Multi-Domain
300 W at V-Band
320 mm x 320 mm x 90 mm
8.4 kg



Teal
Space Product
100 W at V-Band (20 Gbps ISL)
280 mm x 220 mm x 50 mm
4.0 kg



Glacier
Space Product
100 W at Q-Band
280 mm x 220 mm x 50 mm
4.0 kg

Unlocking Access to mmWave Power

Communications - Gbps data links

Imaging and radar - Centimeter scale resolution

Electronic warfare - Precision targeting

Energy beaming - High efficiency

4R's of the "Elve Process"

Performance and business advantages

Robust: Suitable for the most extreme shock, vibration, temperature, and other harsh environmental conditions

Resilient: High power allows burn-through for cases of weather-based atmospheric signal attenuation

Reliable: Designed for a ten-year lifetime

Repeatable: Manufacturing based on the Elve Process delivers consistent products for volume deployment

Rapid Design - Test Cycle

Design, Build, Test in under 15 days

- Any mmWave frequency with 10% bandwidth
- Three Power platforms: 25 W, 100 W, 300 W
- High efficiency 30% - 40%
- Compact 40 mW/cm³ multi-domain packaging

Key technology discriminators

Full vertical integration

- Nanocomposite emitters provide a long lifetime
- High-efficiency electronic power conditioner enables unprecedented SWaP
- Planar geometry with ribbon-like electron beam facilitates high performance
- All metal structures ensure robust operation over harsh environmental conditions

First Light



 info@elvespeed.com

 elvespeed.com

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