

Liquid Crystal Electromagnetic Radiation Generation

ID: 2018-026

Executive Statement:

A groundbreaking method for generating and modulating electromagnetic radiation frequencies using liquid crystals.

Technology Overview:

This technology introduces an innovative use of liquid crystals for generating electromagnetic radiation frequencies, leveraging processes such as optical rectification and difference frequency generation. It offers a versatile approach to dynamically produce and adjust electromagnetic frequencies, promising high efficiency and the ability to toggle generation capabilities on and off.

Key Advantages:

- High efficiency in generating electromagnetic radiation
- Dynamic adjustment and modification of radiation characteristics
- Flexibility to switch generation capabilities on and off
- Ability to overcome challenges with live structural modifications and crystallization in existing technologies

Problems Addressed:

- Static and inflexible generation of electromagnetic frequencies
- Difficulties in modifying radiation characteristics in real-time
- Limited efficiency and adaptability in existing electromagnetic radiation generation technologies

Market Applications:

- Advanced telecommunications systems
- Medical imaging and diagnostics
- Security screening technologies
- Research and development in physical sciences