Ultra-wide dynamic range
Protocol transparent – transmits all video, data and audio modulation formats
Superior linear performance
Transmission distances of >50km
Interfaces with M&C systems for remote monitoring
Multiple carrier transmission
BDC voltage feed via the fibre optic transmitter RF input
DC block on receiver allows fibre disconnect/reconnect whilst power is on

Broadcast Technology

The ViaLiteHD DVB-T fibre optic link enables broadcast operators to transport multiple RF DVB-T feeds over optical fibre.

- Suitable for all modulation types
- Operation independent of data format
- Ultra-wide dynamic range means wireless cameras can roam freely without problems caused by signal variance.
- Negligible signal degradation due to effects of noise and inter-modulation
- Inherently low phase noise
- Suitable for almost any type of analogue or digital signal modulation including FM and QPSK.
- Automatic gain control mode maintains constant power output.

The DVB fibre optic link system is inserted between the antenna or down-converter and the electrical receiver. The fibre is lightweight with a small diameter and a cross site cable can provide power to the remote end. The fibre optic transmitter can be used to power the antenna / down-converter via a voltage feed from the RF input.

In situations where dual or quad diversity is being used, all RF channels can be transported over a single fibre using the ViaLite high isolation WDM or CWDM technology, where all channels are transmitted through a single fibre at a separate optical wavelengths.

Specifications include:-
- Electrical connectors: 75Ω BNC or MCX
- Optical connectors: FC/APC or SC/APC
- 1310/1550nm and ITU CWDM wavelengths

Options include:-
- Blind-mate optical and RF connectivity (SC/APC and SMA/BNC only)
- Serial digital channel to 20kb/s on same optical path.
- Variable gain and auto-gain control (AGC)
- LC/PC, SC/PC and ST/PC connectors are available on request

A ViaLiteHD 19" 3U rack system accepts up to 13 RF cards plus an SNMP control card. A 1U chassis accepts up to three cards. ViaLiteHD small form factor modules offer a compact, single link solution and Edge OEM modules allow system integrators and equipment manufacturers to build RF/optical interfaces into their own design. A wide range of support modules and accessories including indoor rack equipment and outdoor enclosures are also available.
RF Performance Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>DVB-T link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>470 – 860MHz</td>
</tr>
<tr>
<td>Impedance/RF Connector</td>
<td>75Ω BNC</td>
</tr>
<tr>
<td>Tx gain adjustment range</td>
<td>15.5dB (typ)</td>
</tr>
<tr>
<td>Gain adjustment step size Rx and Tx</td>
<td>0.5dB (typ)</td>
</tr>
<tr>
<td>Flatness, full band</td>
<td>±0.4dB (typ)</td>
</tr>
<tr>
<td>P1dB input</td>
<td>2dBm (typ)</td>
</tr>
<tr>
<td>Noise figure at default gain</td>
<td>23dBm (typ)</td>
</tr>
<tr>
<td>SFDR</td>
<td>110dB/Hz² (typ)</td>
</tr>
<tr>
<td>LNA power</td>
<td>Internal 12V @ 300mA (fused)</td>
</tr>
</tbody>
</table>

Optical Performance Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>DVB-T link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser Type</td>
<td>DFB (Distributed Feedback)</td>
</tr>
<tr>
<td>Optical Wavelength</td>
<td>1310nm ± 20nm (1550nm/CWDM options)</td>
</tr>
<tr>
<td>Optical Power Output</td>
<td>4.5dBm (typ)</td>
</tr>
</tbody>
</table>

Temperature Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>DVB-T link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>-20°C to +50°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C to +70°C</td>
</tr>
</tbody>
</table>

Part Numbers and Options

```
H R T - D 3 - 8 D - 2 5 - S 1310
```

**Module type**
- R, T: receiver, transmitter
- D: dual channel
- 8 D: 8 channel
- 3: optical connector
- 25: optical power output
- 1310: wavelength

**Laser Type**
- DFB (Distributed Feedback)
- CWDM (optional)
- 1550nm (optional)

**Module packages**
- 1: standard
- 2: dual-modulated laser
- 3: CWDM
- 4: CWDM dual-modulated laser

Mechanical Dimensions

- Small form factor module: 43mm x 68mm x 21.5mm
- Rack Card: 179mm x 25.4mm x 133mm
- OEM Edge module: 65mm x 40mm x 20mm

This document contains information about RF and optical performance characteristics, temperature characteristics, part numbers, and mechanical dimensions for a device named Vialite. It includes specifications such as frequency range, impedance, gain, flatness, noise figure, and temperature ranges, as well as details on the laser type and electrical connector types. The part numbers and module packages are also listed. The mechanical dimensions of the different components are provided, including small form factor, rack card, and OEM edge module sizes.