# SUSPENSION OF OPGW

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<td>*</td>
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<tr>
<td>+</td>
<td>Protecting under layer</td>
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VIBRATION DAMPER

- Cable Attachment Clamp
- Damper Masses
- Messenger Wire
DOWNLEAD CLAMP ON TOWERS
OPGW JOINT BOX MOUNTING
OPGW SUSPENSION ASSEMBLY & DEAD END ASSEMBLY
Accessories : Tower Bypass

The temporarily secured cable is routed round the tower using a curved support and is then secured permanently.
CLAMPS

AGS Type Suspension Clamp  Rounded Thimble with Guy Grip
Live-Line OPGW Installation

- Laving the pulling rope with the help of pulley
- Tightening the pulling rope
- Slacking the existing earth wire
- Removing the existing earth wire and leading OPGW in
- Tightening the OPGW
- Recovery of the pulley

Existing Earth Wire
Pulling Rope
New OPGW Cable
Outdoor Optical Joint Box
Transmission properties of cabled fibers

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<tr>
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<th>Premium</th>
<th>Standard</th>
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<tr>
<td><strong>Dispersion or Back scatter pattern</strong></td>
<td>Optical fiber are homogenous, not spliced. So, there is not the possibility of reflections or irregularities of more than 0.10 dB where maximum pulse length is 50ns at the -10dB pulse level and resolution of 1 meter.</td>
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<tr>
<td><strong>Attenuation coefficient (dB/km)</strong></td>
<td>@1310nm ≤ 0.34</td>
<td>@1550nm ≤ 0.21</td>
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<tr>
<td></td>
<td>@1625nm ≤ 0.24</td>
<td></td>
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<tr>
<td><strong>Bandwidth or Cut off wavelength (MHz-km)</strong></td>
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<td>Standard</td>
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<tr>
<td></td>
<td>@850nm ≥ 600</td>
<td>≥400</td>
</tr>
<tr>
<td></td>
<td>@1300nm ≥ 1000</td>
<td>≥600</td>
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Properties of filling compound

- Silicon free, electrically non conductor.
- Prevent formation of gaseous hydrogen within the loose tube.
- Maintain its water resistance over the operating temperature.
- Free from air entrapments.
Overhead Fiber Optic Cable Test

Cable Characteristics test
- Creep Test
- Stress Strain Test
- Strain Margin Test
- Ultimate Tensile Strength Test
- DC Resistance Test

Installation Test
- Sheave Test
- Crush Test
- Bend Test
- Twist Test

In-service Test
- Aeolian Vibration Test
- Galloping Test
- Short Circuit Test
- Lightning Test
- Water Ingress Test
- Seepage of flooding Compound Test
- Temperature Cycle Test
- Salt Spray Corrosion Test
Tensile strength test

- Optical fiber can handle a tensile strength test of $\geq 0.7\text{GPa}$, maintained for 1 second with a minimum elongation of 1.1%.

**Tubing/Buffering**

*What happens to attenuation?*