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Applications
Engineering Note

Buffer Tube Identification

AEN180, Revision 0

The intent of this document is to be a guide for buffer tube identification in loose tube cables with more than one buffer tube of the same color without a factory differentiating marking, i.e. black or another colored stripe.

Summary

In loose tube cables the standard color code is followed starting with blue and ending with aqua to identify 12 buffer tubes. If there are more than 12 buffer tubes the color code will repeat, starting with blue in the same layer.

In cables with multiple layers of buffer tubes, the first layer of buffer tubes starts with blue following the standard color code. The second layer starts with blue following the standard color code, followed by blue again on the 13th tube, repeating the color code in the same layer. In this case there can be multiple repeated colors of tubes in a cable without differentiating markings. The method of identifying buffer tubes without factory marking is recommended in this AE Note.

Method of Identifying Multiple Color Buffer Tubes

1. After the cable is accessed using SRP 004-077 for Corning ALTOS cable and SRP 004-197 for Corning MiniXtend cable, examine the outer layer to determine if there are multiple color buffer tubes.

2. If multiple buffer tubes of the same color exist, mark the repeating colors tubes in order of the color code. Figure 1 shows an example of a dual layered 288 fiber cable. The first blue, orange, and green tubes in the layer (tube numbers 10, 11, and 12) are marked with 1 line (using a permanent marker), and the second blue, orange, and green tubes in the layer (tube numbers 22, 23, and 24) are marked with 2 lines (using a permanent marker). The inner layer of buffer tubes contains less than 12 tubes and remains unmarked.

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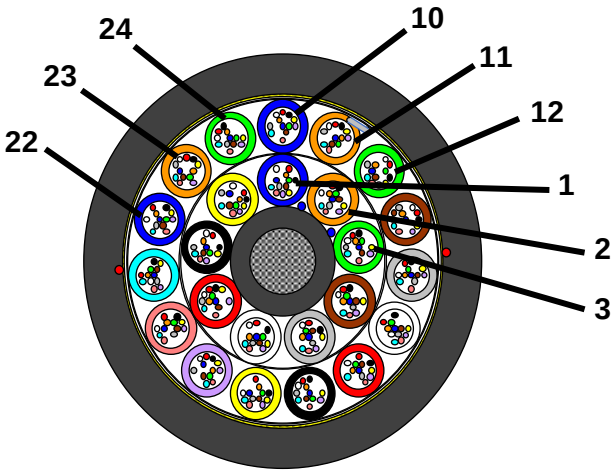


Figure 1: Field marking of repeating color buffer tubes.

Summary of this cables structure:
288 fiber cable with 24 buffer tubes

- First Layer: 9 buffer tubes, blue to yellow – no buffer tube marking is required on blue, orange, and green tubes.
- Second Layer: 15 buffer tubes, blue to aqua and blue to green – tube marking is required for blue, orange, and green tubes.

Marking to identify buffer tubes in cables without tracer markings on buffer tubes is required at each splice or access location.

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