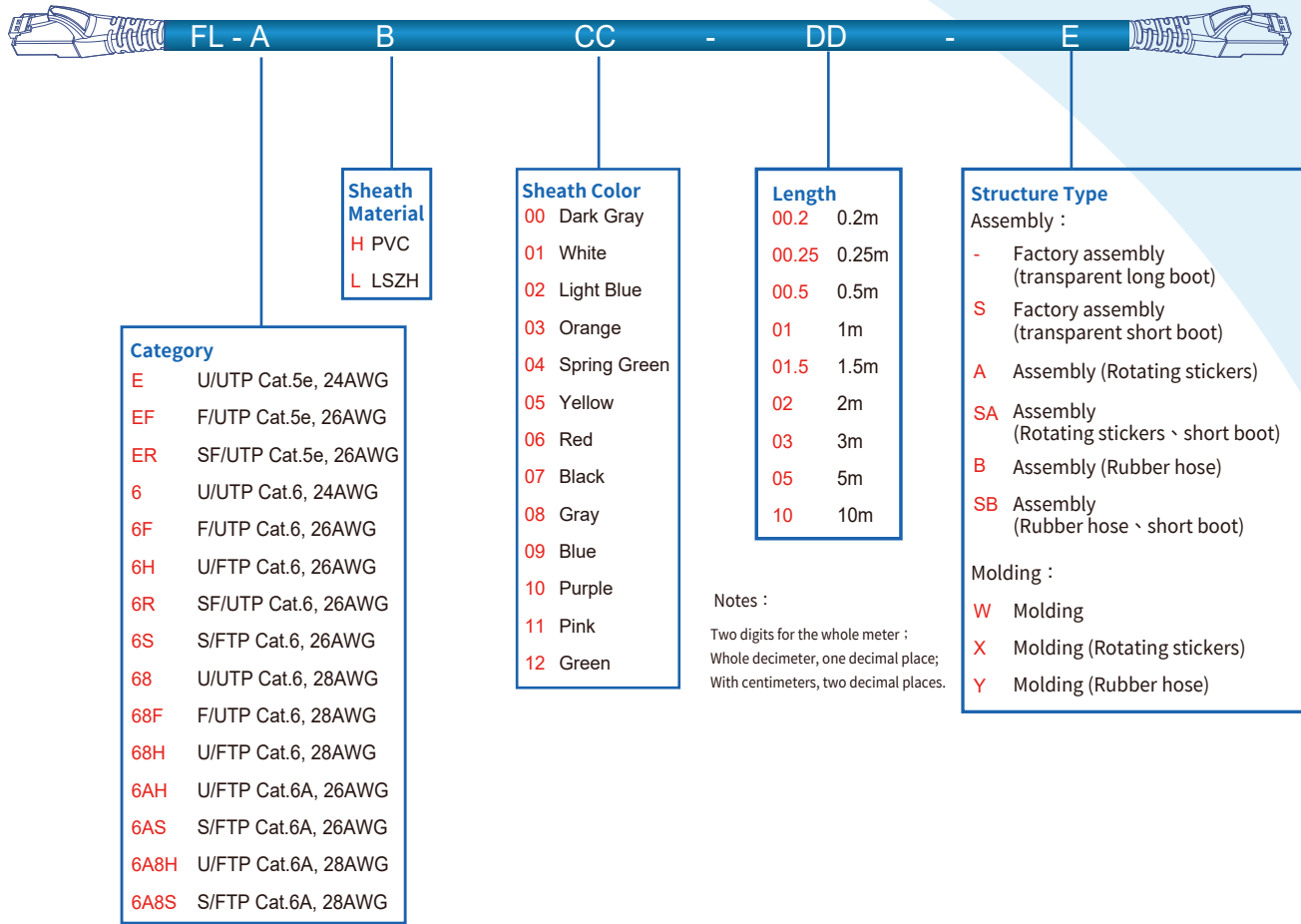


## Copper Patch Cord Order Process :



ANSI/TIA-568-C.2

### 6.2 Channel transmission performance

This clause contains the transmission performance specifications for balanced twisted-pair channels. The channel test configuration is illustrated in figure 3. See Annex J for worst case modeling configurations.

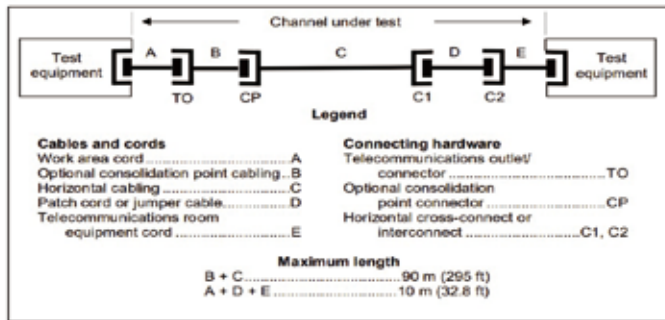


Figure 3 - Supplemental schematic representation of a channel test configuration

According to the relevant provisions of the ANSI/TIA-568-C.2 international standard on channel transmission performance:

- The total length of the Channel channel cannot exceed 100 meters;
- The total length of the permanent link part B (CP transfer point to TO)+C cannot exceed 90 meters;
- The total length of the user patch cord and the management patch cord (A (user patch cord)+D (dual rack management patch cord)+E (device patch cord)) cannot exceed 10 meters.

Note: If the permanent link (B+C) section is less than 90 meters, the total length of the jumper can be appropriately extended, but it needs to be calculated by the formula based on the degradation factor of different specifications of cables.

According to ANSI/TIA-568-C.2 standard 6.6.3 Insertion loss:

- The de-rating factor for 24AWG cables is 1.2;
- The de-rating factor for 26AWG cables is 1.5.

TIA de-rating from horizontal length (H)

$$C \leq (102-H) / D$$

	24AWG	26AWG
H	D=1.2	D=1.5
90.0	10.0	8.0
80.0	18.3	14.7
70.0	26.7	21.3
60.0	35.0	28.0
50.0	43.3	34.7
40.0	51.7	41.3
30.0	60.0	48.0
20.0	68.3	54.7
10.0	76.7	61.3
0.0	85.0	68.0

Calculate using the cord length formula  $[C \leq (102-H)/D]$  (see table above for details),

- Total length of 24AWG Cord cannot exceed 85 meters (H=0 meters);
- Total length of 26AWG Cord cannot exceed 68 meters (H=0 meters).

Attachment: The total length of cord obtained through formula calculation is still relatively long. However, in practical engineering, due to factors such as processing technology and environmental temperature, we suggest

- The length of 24AWG Cord should be controlled within 30 meters;
- The length of 26AWG Cord should be controlled within 20 meters;
- The length of 26AWG Cord should not exceed 10 meters (preferably within 5 meters); ;
- Longer Cord worse performance , and the more unstable it becomes. Therefore, it is strictly prohibited to customize jumpers with excessive length (only ensuring continuity);
- The minimum limit for Fluke testing is 50cm (no matter how short it is, it cannot be recognized by a single unit), and the minimum limit for customized jumper is 20cm.