Make a Custom Fiber Test Limit

Custom limits let you enter minimum and maximum values for tests you do with CertiFiber Pro OLTS and OptiFiber Pro OTDR modules and FiberInspector probes. This lets you use customer requirements to pass or fail fiber links or components such as patch cords and connectors. For OLTS tests, you can also select a fixed loss budget or a loss budget that the tester calculates based on the length of the link.

You can make up to 20 custom test limits for fiber cable. The tester keeps custom limits with the other limits in the main tester (not in the module). The names of custom limits have an asterisk (*) at the start and end.

To make a custom fiber test limit:

1. On the home screen, tap the test setup panel.
2. On the **CHANGE TEST** screen, tap a fiber test, then tap **EDIT**.

   Note

   You must select a test before you make a custom test limit, but you can use the limit you make in any test that has the fiber types that the limit supports.

3. On the **TEST SETUP** screen, tap **Test Limit**, tap **MORE**, tap **Custom**, then tap **MANAGE**.
4. On the **MANAGE CUSTOM** screen, tap the **Create** panel.

   For a custom FiberInspector test, the **USE DEFAULTS FROM** screen shows. Select **Multimode** or **Singlemode**.

5. On the **NEW CUSTOM LIMIT** screen, tap **Enter New Limit Name**, use the keyboard to enter a name, then tap **DONE**.
6. Select or enter settings as necessary for the limit. See Table 1 for OLTS settings, Table 2 for OTDR settings, and Table 3 for FiberInspector tests.

7 When you have entered all necessary limits, tap **SAVE** on the **NEW CUSTOM LIMIT** screen. The tester adds an asterisk (*) to the start and end of the custom fiber limit name.

Table 1. Custom Test Limit Settings for Loss/Length Tests

Setting	Description
Length	Enter a maximum length for the link.
Loss Budget	**Fixed**: The tester compares the loss of the link to a fixed value to give a **PASS** or **FAIL** result for the loss test. You enter maximum values of **Overall Loss** for each applicable wavelength under **Wavelength specific settings**. **Length Based**: The tester uses values you enter for **Connector**, **Splice**, and **Loss/km** and the measured length of the link to calculate a limit for the loss test.
Loss Type (for **Length Based Loss Budget** only)	**Connector**: Select this if the link uses standard connectors, such as SC, LC, ST, or FC connectors. For the **Connection Loss (dB)**, enter the maximum loss for one connection. **MPO Module**: Select this if the link uses MPO modules. **Connection Loss (dB)** changes to **MPO Module Loss (dB)**. For **MPO Module Loss (dB)**, enter the maximum loss for one MPO module.
Splice Loss (for **Length Based Loss Budget** only)	Enter a maximum value for the loss of one splice.
Wavelength specific settings	For a fixed loss budget, enter maximum values of **Overall Loss** for a link for each applicable wavelength. For a length-based loss budget, enter maximum values of **Loss/km** for the fiber type for each applicable wavelength.

Table 1. Custom Test Limit Settings for Loss/Length Tests (cont.)

Setting	Description
Length	Enter a maximum length for the link.
General Settings: **Overall Loss**	Enter a maximum value for the loss of all components and fiber in the link. Enter a minimum loss value if receiver saturation is possibly a problem in the installation.
General Settings: **ORL**	Optical return loss is the total reflectance for all components in the link. This includes fiber segments, connectors, splices, and faults. ORL is the ratio of the light from the source to the light that the link reflects back to the source. ORL values are in units of positive dB. A larger ORL value shows that less light is reflected back to the source. For example, a link with an ORL of 45 dB reflects less light back to the source than a link with an ORL of 30 dB. Enter a minimum for the total reflectance for the link.
General Settings: **Segment Attenuation Coefficient**	Enter maximum and minimum values of attenuation per kilometer for a fiber segment in the link. Fibers that are not within these limits may be of poor quality or the wrong type *Note* *In some situations, the tester cannot measure the segment attenuation coefficient for short segments (50 m to 500 m, depending on wavelength and fiber characteristics).*

(continued)

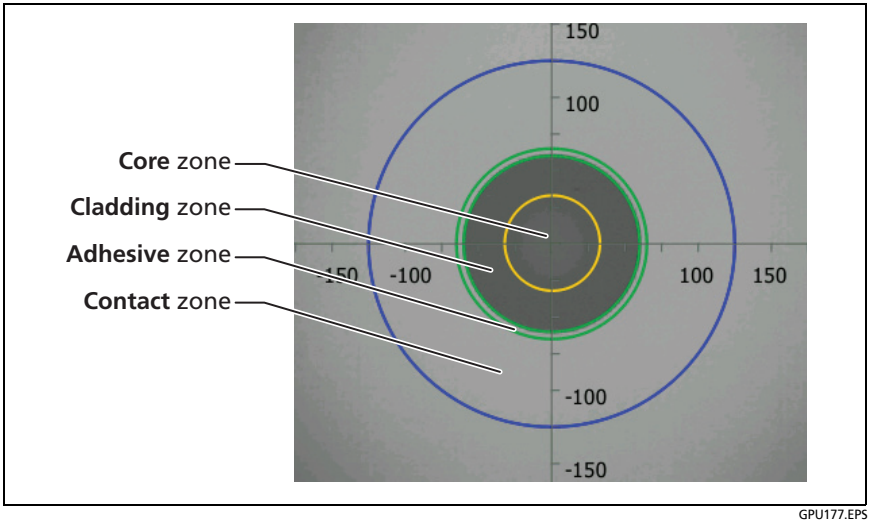
Table 2. Custom Test Limit Settings for OTDR Tests

Setting	Description
Event Settings: Connector Loss	Enter maximum and minimum* values as necessary for the loss of one connector.
Event Settings: Splice Loss	Enter maximum and minimum* values as necessary for the loss of one splice.
Event Settings: Reflectance	Reflectance is the return loss for one event. It is the ratio of the light reflected at one point on the fiber to the light that gets to that point from the source. Reflectance values are in units of negative dB. A smaller (more negative) reflectance value shows that less light is reflected back to the source. For example, a reflectance of -45 dB shows for a good multimode connection. A reflectance of -20 dB shows for a bad multimode connection that reflects more light back to the OTDR. Enter maximum and minimum* values of reflectance as necessary for one event.
Splitter Settings: **Splitter Reflectance** (for **Auto PON OTDR** and **Manual PON OTDR** tests)	Enter a maximum value of reflectance for a splitter for each wavelength. To use the same value for all wavelengths, tap **Use one value for all wavelengths**, then enter a value.
N/A	The tester will not compare the measurement to this value and will not give the measurement a **PASS** or **FAIL** result.

* Usually, minimum values are not necessary, but they are available for special situations. For example, the power at the receiving end of a link may need to be within a certain range for equipment to operate correctly. The loss budget for such a link may include minimum values for components.

Table 3. Custom Test Limit Settings for FiberInspector Tests

Setting	Description
Zones	These panels show the widths of the zones on the endface. The ranges for the widths See Figure . **A: Core**: The core typically has a diameter of 50 µm or 62.5 µm for multimode fiber or 9 µm for singlemode fiber. The ranges for the diameter of the core zone are 0 µm to 65 µm for multimode and 0 µm to 25 µm for singlemode. **B: Cladding**: The cladding zone starts at the edge of the core zone. The range for the outside diameter of the cladding zone is 110 µm to 120 µm for multimode and singlemode. **C: Adhesive**: The adhesive zone is between the cladding and contact zones. The tester does not have settings for this zone because standards for endface analysis do not require an analysis of defects in the adhesive zone. The tester shows only the width of the zone, which depends on the diameters of the cladding and contact zones. **D: Contact**: The range for the inside diameter of the contact zone is 130 µm to 140 µm for singlemode and multimode. The outside diameter of the contact zone is always 250 µm.
Zone Diameter	Change the minimum or maximum diameter to change the width of the zone.
Defects Scratches	Defects include dirt particles, chips, and pits. **Size** and **Width**: You can specify up to five sizes of defects and widths of scratches. To specify another size, tap **ADD SIZE** or **ADD SCRATCH**. The maximum size or width you can specify is 250 µm. The lists of defects and scratches include one for all defects or scratches larger than the largest one you specify. For this one, you can specify the number allowed. **Number Allowed**: You can allow from 0 to 10 of each size of defect or scratch, or select **Any** to allow any number of a defect. To delete a defect or scratch, tap  .



Zones on a Fiber Endface (Single Fiber shown)

Select a Custom Fiber Type or a Custom Limit

1. On the home screen, tap the test setup panel.
2. On the **CHANGE TEST** screen, tap the test, then tap **EDIT**.
3. Select a custom fiber type or limit:
   - On the **TEST SETUP** screen, tap **Fiber Type**, tap **MORE**, tap **Custom**, then tap a custom fiber type.
   - On the **TEST SETUP** screen, tap **Test Limit**, tap **MORE**, tap **Custom**, then tap a custom limit.
4. On the **TEST SETUP** screen, tap **SAVE**.

Edit an Existing Custom Fiber Type or Test Limit

1. On the home screen, tap the test setup panel.
2. On the **CHANGE TEST** screen, tap the test, then tap **EDIT**.
3. On the **TEST SETUP** screen, tap **Fiber Type** or **Test Limit**, tap **MORE**, tap **Custom**, then tap **MANAGE**.
4. On the **MANAGE CUSTOM** screen, tap the **Edit** panel, then tap the fiber type or test limit you want to edit.

Delete a Custom Fiber Type or Test Limit

1. On the home screen, tap the test setup panel.
2. On the **CHANGE TEST** screen, tap the test, then tap **EDIT**.
3. On the **TEST SETUP** screen, tap **Test Limit**, tap **MORE**, tap **Custom**, then tap **MANAGE**.

On the **MANAGE CUSTOM** screen, tap the **Delete** panel, tap the fiber type or test limit you want to delete, then tap **DONE**.