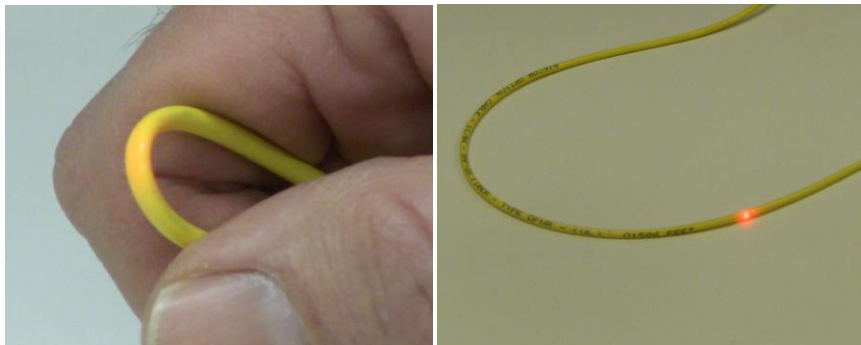


Application Note

Safe Visual Fault Locating

The Tempo Communications 500XL Visual Fault Locator (VFL) is a 5mW maximum power output device that is used to visually identify damaged or cut fiber optic cables, contaminated or damaged fiber optic connectors and Macro bends on a fiber optic cable. The 100XL and 180XL are both 1mW devices and are used to in the same manner but with a reduced visual range.



Macrobend

Fiber Break

The VFL can also be used to perform visual continuity of a fiber optic cable.

The 500XL is approved by the FDA as a CLASS 3R device as defined by **IEC60825**. A CLASS 3R device could potentially be a hazardous to a persons eyesight if used improperly. The technician will be safe as long as they follow all safety precautions such as not looking directly into the bulkhead, not looking directly into a connected fiber and not viewing directly with an optical microscope.

The 100XL and 180XL is approved by the FDA as a Class 2 device as defined by **IEC60825**. A CLASS 2 device is deemed to be safe as the users "blink reflex" will protect the user from eye damage due to accidental exposure.



As part of FDA compliance, the applicant is required to provide statements of how the design includes various fail-safe circuitry, safety notifications and safety interlocks. Once there is FDA approval the applicant receives an ACCESSION NUMBER. Many times, customers ask for the ACCESSION NUMBER as it proves that the VFL does provide a high level of guidance for user safety.

Reputable manufacturers and distributors ensure that the VFL is labelled with the appropriate CLASS of laser. It is then incumbent on the end user to make sure that all safety precautions are taken when using the VFL.

Visual Fault Locators that are sourced from offshore suppliers almost always do not have an ACCESSION NUMBER from the FDA or an IEC classification. These VFL's should never be used as the end user could potentially not be aware of appropriate safety precautions.

Some VFL suppliers and manufacturers will provide product that is up to 40mW output power to perform continuity confirmation. These should never be used as they will cause permanent eye damage. An optical power meter with a laser source should be used to perform continuity measurements where the technician can quantify the actual loss.